March Inland Port
Riverside, California

Proposed General Aviation Development
Final Environmental Assessment
August 2012

Prepared For:
March Joint Powers Authority
At March Inland Port, Riverside, CA

Federal Aviation Administration
Los Angeles Airport District Office
15000 Aviation Blvd., Room 3000, Lawndale, CA 90261

This environmental assessment becomes a federal document when evaluated, signed, and dated by the responsible FAA official.

Responsible FAA Official: ___________________________ Date: _________________
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1 PURPOSE AND NEED

1.1 Introduction

This Environmental Assessment (EA) has been prepared to meet the requirements of the National Environmental Policy Act (NEPA) of 1969. The purpose of this act is to ensure that all environmental, social, and economic factors have been taken into consideration during the development decision. This EA follows the guidelines and organizational structure recommended in Federal Aviation Administration (FAA) Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions, for preparation of an EA, and FAA Order 1050.1E, Environmental Impacts: Policies and Procedures, for the analysis of impacts.

1.2 Background

The March Inland Port (RIV or Airport) is located in Riverside County adjacent to Interstate 215 and can be accessed via Cactus Avenue or Harley Knox Blvd. (see Figure 1-1). The Airport is located in an unincorporated area of Riverside County, approximately ten miles southeast of downtown Riverside. The Airport shares essential aviation facilities (e.g., air traffic control tower, taxiways, runways, navigational aids (NAVAIDS), and aircraft rescue and fire fighting facilities) with the U.S. Air Force Reserve. The Airport and March Air Reserve Base (MARB) encompasses approximately 2,400 acres; approximately 300 acres are designated for civilian use. The Airport consists of two runways, Runway 14-32 and Runway 12-30. Runway 14-32 is the primary runway and is 13,300 feet long and 200 feet wide. Runway 12-30 is 3,010 feet long and 100 feet wide and is capable of serving smaller single-engine aircraft. However, civilian or public use is currently limited to Runway 14-32 because of the munitions and explosives operations on and around Runway 12-30. As stated in the U.S. Air Force (USAF) response letter to the General Aviation Facility Design Plan (see Page 166 of Appendices, within Appendix F – MJPA Support Documentation), “any public encroachment would pose a potentially serious public hazard and numerous significant violations outlined within the current Unified Facilities Criteria and Department of Defense (DOD) Regulations.”

As part of the 1993 Defense Base Realignment and Closure Commission (BRAC) process the March Air Force Base was realigned and converted into the MARB. As part of the realignment, jurisdictions surrounding MARB united and created the March Joint Powers Authority (MJPA)
to oversee the use and reuse of approximately 300 acres of land made available for redevelopment as a result of the BRAC process. On May 7, 1997, a Joint Use Agreement ("Agreement," see also Appendix F – MJPA Support Documentation) was established between the MJPA and the USAF pursuant to Air Force Instruction (AFI) 10-002, Agreements for Civil Aircraft Use of Air Force Airfields.¹ The Agreement charged the MJPA with developing aviation related uses and improvements associated with supporting civil aircraft operations on surplus USAF properties contiguous to MARB. The Agreement further outlined the sharing of flying facilities that include the airport traffic control tower (ATCT), taxiways, navigational aids (NAVAIDs) and runways, as well as aircraft rescue and fire fighting (ARFF) facilities and designated jointly used flying facilities as “public use” facilities. Pursuant to AFI 10-002, Civil Aviation is defined as “all aircraft of any national registry, including: commercial aviation (civil aircraft that transport passengers or cargo for hire) and general aviation (GA) (civil aircraft that do not transport passengers or cargo for hire). On May 7, 1997, the civilian airport under the MJPA was named the “March Inland Port” and was given the FAA airport code RIV. Additionally, the March Inland Port Airport Authority (MIPAA) was established as the governing body under the governance umbrella of the MJPA. MIPAA is responsible for the development and operation of the Airport, now a joint use aviation facility. While the intent of the 1997 Agreement is to establish a civilian airport that benefited the public, it did not identify provisions for a GA facility at the Airport. As a result, the agreement was later amended in February of 2001 and then again in June of 2008, to allow for the operations of GA aircraft.

Existing operations at RIV are categorized exclusively as “military.” These include operations by military aircraft, U.S. Customs, and the March Aero Club. (Up until 2008 there were also commercial air cargo operations that have since ceased.) Operations by U.S Customs and the March Aero Club are restricted to only existing and retired military pilots. While the Airport is well suited to serve military and cargo operations, there are no existing facilities that can accommodate GA activities. The 2009 March Inland Port General Aviation Assessment (see Appendix E – General Aviation Assessment) indicates that the region in which the Airport is located is forecasted to experience a 1.7 percent annual increase in GA activity through the year 2025. This increase would result in an estimated total of 8,400 annual operations in 2025 by GA aircraft.

In order to properly serve future demand for GA aircraft and meet its obligations under federal law, its commitments pursuant to its existing federal grant assurances, and the terms of the Joint Use Agreement, the MJPA has proposed the construction of a GA aircraft parking apron and associated aviation support facilities.
1.3 Proposed Action

The 2007 Airport Layout Plan (ALP) (see Appendix D – Airport Layout Plan) shows the designated land uses for MJPA-owned property and the area proposed for facilities to accommodate GA activity.

The Proposed Action, which is the subject of this EA, is the development of a GA apron and its associated support facilities on MJPA owned parcels. This will enable the Airport to fulfill its existing and future role within the National Plan of Integrated Airport Systems (NPIAS)\(^2\) by means authorized in the Joint Use Agreement.\(^3\)

The EA will evaluate the potential environmental impacts associated with the following Proposed Action at the Airport, which is comprised of the following projects (see Figure 1-2):

- Construction of 150,000 sq. ft. concrete apron
- Construction of taxilane to access Taxiway A
- Construction of 5,000 sq. ft. GA terminal facility
- Construction of 2 corporate hangars
- Installation of aboveground fuel storage tank (AST)
- Demolition of abandoned, 2,000 sq.ft. structure (previously a recreation center for military pilots and their families).
- Construction of entry road and parking lot (approximately 34,000 sq. ft. of pavement)
- Realignment of airport service/emergency road
- Security fence
- Drainage improvements, which include a detention basin/drainage ditch, catch basin, and underground storm drain

All construction activities will take place within the MJPA owned property line. Access to the construction site will be obtained through access along Heacock Street. The estimated development schedule includes five to six months for project design, beginning upon project

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\(^2\) U.S. Department of Transportation, Federal Aviation Administration, *Report to Congress, National Plan of Integrated Airport Systems (NPIAS)*.

\(^3\) The National Plan of Integrated Airport Systems (NPIAS) identifies nearly 3,400 existing and proposed airports that are significant to national air transportation and thus eligible to receive Federal grants under the Airport Improvement Program (AIP).
approval, and construction beginning in the winter of 2013 and continuing for approximately ten months ending in December 2013.

1.4 Requested Federal Action

The requested federal action associated with the EA is:

- Unconditional approval of the portion of the ALP that depicts the proposed Airport project pursuant to 49 U.S.C. Section §40103(b), 44718 and 47107(a)(16) and 14 CFR Part 77. The ALP depicting the proposed improvements has been processed by the FAA to determine conformance with FAA design criteria and implications for federal grant agreements.
- Determine under 49 U.S.C. Section §44502(b) that the Airport development is reasonably necessary for use in air commerce or in the interests of national defense.
- Continued close coordination with the March Joint Powers Authority and appropriate FAA and Air Force program offices, as required, to maintain aviation and airfield safety during construction.
- Determination under 49 U.S.C. Section §47106 and 47107 relating to the eligibility of the Proposed Action for federal funding under the Airport Improvement Program (AIP) of eligible development items shown on the ALP.

In addition to the approval of the Proposed Action under NEPA, there are a number of additional activities that may be initiated prior to construction of the Proposed Action. Those activities include the completion of the ALP, property acquisition, environmental permitting and mitigation permitting, and preparation of formal design documents.
1.5 Purpose and Need

The 2007 quitclaim deed (as deeded to the March Joint Powers Redevelopment Agency and subsequently assigned to the MIPAA from the Secretary of the United States Air Force) created for Land Parcel D-1 (the proposed project area) states that the property “shall be used for public airport purposes for the use and benefit of the public.” As part of the Joint Use Agreement the MJPA is authorized to develop a public use airport capable of accommodating, in a safe and efficient manner, civilian aircraft activity. Currently the infrastructure needed to accommodate these activities is inadequate as there are no facilities available to provide aircraft fueling, parking and storage for GA aircraft.

Additionally, the NPIAS identifies RIV as a Reliever Airport.4 Due to different operating requirements between small GA aircraft and large commercial service aircraft, GA pilots often find it difficult to use congested commercial service airports. Therefore, the FAA has encouraged the development of high-capacity GA airports in major metropolitan areas to serve as reliever airports.5 In its current condition, the Airport is not equipped to accommodate GA activity or fulfill its role within the NPIAS.

The March Joint Powers Authority prepared the General Aviation Assessment (see Appendix E – General Aviation Assessment) in March 2010 to gauge and address potential demand for General Aviation (GA) activity at March Inland Port. The assessment indicates that the region (Riverside-San Bernardino-Ontario metropolitan area) in which the Airport is located is forecasted to experience a 1.7 percent annual increase in GA activity through the year 2025. This increase would result in an estimated total of 5,850 annual operations in 2016 and 8,400 annual operations in 2025 by GA aircraft. The MJPA proposes to accommodate this forecasted aviation demand for the purposes of aviation-related development, pursuant to property deed covenants transferring the property from the U.S. Air Force to the MJPA. The development of theses parcels has been financed in part from the FAA’s AIP. In order to continue to receive grant monies from the AIP program the MJPA must abide by a set of grant assurances set forth by the FAA. Specifically, the MJPA must,

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4 Reliever Airports are airports designated by the FAA to relieve congestion at Commercial Service Airports and to provide improved general aviation access to the overall community. These may be publicly or privately-owned. <http://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/categories/>.

“...make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities...”\(^6\)

Additionally, a combination of ground lease agreements with existing leaseholders, including the MJPA’s commitment to build an apron area for GA aircraft, compatibility with military operations which restrict the civilian use of certain runways, taxiways and apron areas and compliance with Airport Traffic Control (ATCT) make it impractical to utilize existing on-airport infrastructure to accommodate the forecasted GA demand.

The purpose of the Proposed Action is to provide a public-use airport that would fully accommodate the forecasted demand for GA aircraft as authorized in the Joint Use Agreement, fulfill its role within the NPIAS and meet all applicable FAA grant assurances and property deed covenants. The Airport currently does not provide the necessary facilities to accommodate GA aircraft activity. In order for the MJPA to alleviate these deficiencies, they propose to construct infrastructure to fuel, park, and store GA aircraft.

**Federal Purpose and Need**

The FAA’s statutory mission is to ensure the safe and efficient use of navigable airspace in the United States. The FAA must ensure the proposed action meets FAA Airport Design Standards as described in FAA Advisory Circular 150/5300-13, Airport Design.\(^7\)

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2 ALTERNATIVES

2.1 General

The Council on Environmental Quality (CEQ) regulations for implementing the National Environmental Policy Act (NEPA), state that alternatives are the heart of the environmental process. Those regulations, as outlined in 40 C.F.R. Parts 1500-1508, require that the federal decision-maker, here the Federal Aviation Administration (FAA), perform the following tasks:

- Rigorously explore and objectively evaluate all reasonable alternatives (“reasonable” meaning alternatives that are practicable or feasible from a technical, economical, and rational standpoint), including alternatives not within the jurisdiction of the federal agency. For alternatives that were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.
- Dedicate substantial treatment to each alternative considered in detail, including the No-Action Alternative, so that reviewers may evaluate their comparative merits. Identify the sponsor’s Proposed Action.

This section evaluates four build alternatives and one no-build alternative. The four build alternatives were selected through a planning exercise that evaluated the Airport’s needs while staying consistent with the general aviation (GA) facilities development plans outlined on the FAA-conditionally approved Airport Layout Plan (ALP) (see Appendix D – Airport Layout Plan). (FAA approval of projects depicted on the ALP is conditional pending the completion and approval of NEPA analysis for the proposed projects.) An in-depth screening analysis is conducted in this section in order to select a Proposed Alternative, which would include the Proposed Action. If an alternative is considered and found not to meet the purpose and need, it would not be advanced for further analysis. As required per CEQ Regulations 1502.14(d), the No-Action Alternative should be advanced through the alternatives analysis as a basis of comparison against which the impacts of the other alternatives can be evaluated.

An additional alternative was analyzed to determine if other airports within the Southern California region could be used to accommodate the forecasted demand for civilian aircraft traffic at March Inland Port (RIV or Airport). This alternative would include the transfer of operations of aircraft from the Airport to nearby facilities that have the infrastructure available to

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support these aircraft operations in an unrestricted manner. However, it was determined that the purpose and need of the Proposed Action could never be fulfilled under this alternative scenario as FAA grant assurances to open the Airport to civilian aircraft users could not be met. Therefore, this alternative was not retained for further examination.

### 2.2 Description of Alternatives

**Figure 2-1** provides an overview of the proposed locations for the build alternatives. This section provides an evaluation of each proposed location and its associated elements.
March Air Reserve Base Boundary
AVGAS Fuel Tank for Alternatives 2, 3, 4 & 5
March Joint Powers Authority
March Inland Port
Proposed Project Alternative Layouts
Figure 2-1
2.2-1 Alternative 1 - No Action

This alternative represents a scenario where no action is taken by the March Joint Powers Authority (MJPA) (see Figure 2-2). As a result of Alternative 1 the MJPA would not:

- Accommodate forecasted general aviation (GA) demand at the Airport;
- Fulfill its role within the National Plan of Integrated Airport Systems (NPIAS);
- Meet FAA grant assurances.

In order to meet NEPA’s requirements and as required per CEQ Regulations for implementing NEPA, the No-Action Alternative will be evaluated throughout the EA for comparison purposes with other alternatives.
March Inland Port
Alternative 1 (No Action)
Figure 2-2
2.2-2 Alternative 2 - Proposed Action

Alternative 2 is presented on Figure 2-3. This alternative would locate a 150,000 square-foot (sq. ft.) GA apron on the north side of the designated GA area. The location was analyzed to determine compliance with Department of Defense (DOD) development criteria for “ navigable spaces,” defined for MARB in the 2005 Air Installation Compatibility Use Zone (AICUZ) Study (see Appendix F – MJPA Support Documentation). According to the Study, this alternative is located within RIV’s transitional surface (as defined by Title 14 Code of Federal Regulations Part 77, Objects Affecting Navigable Airspace), which is located parallel to Runway 14-32 and slopes away from the runway centerline at a ratio of 7:1 feet until it reaches 150 feet above airfield elevation. However, the alternative is positioned at a distance from the Runway 14-32 centerline that allows any development associated with it to easily be designed at a height below the 7:1 transitional surface, as required by the DOD’s Unified Facilities Criteria – Airfield and Heliport Planning and Design. The proposed area lies adjacent to the existing fuel storage facility, and existing infrastructure and utilities. Additionally, a 50 ft. wide and 300 ft. long taxilane would provide direct access to the GA apron from the intersection of Taxiway “A”. A 5,000 sq. ft. terminal facility would be located directly opposite of the taxilane entrance providing easily recognizable access for transient aircraft. The development of Alternative 2 would allow for a natural expansion of GA support facilities to the southeast, if such development is necessary as a result of future aviation demand.

In addition to the above-mentioned elements, Alternative 2 would include the following infrastructure improvements needed to accommodate forecasted general aviation demand:

- Two (2) 10,000 sq. ft. conventional hangars adjacent to the terminal
- Above-ground aviation gasoline (AVGAS) fuel storage tank located within the existing fuel storage facility
- Approximately 1,300 lineal feet of new security fencing
- A 12’ wide service and emergency access road
- A 30’ wide access road encompassing 25,500 sq. ft. of pavement
- An approximately 9,500 sq. ft. auto parking lot
- Demolition of abandoned building in designated GA area

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10 Federal Aviation Regulation Part 77, Objects Affecting Navigable Airspace.
Based on a preliminary drainage study, drainage improvements may include a half acre detention basin and 331 foot long underground storm drain.

Probable project costs were identified to reflect the anticipated expenditure for the above-mentioned elements (see Table 2-1).

<table>
<thead>
<tr>
<th>Project Elements</th>
<th>Costs (2011 dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>150,000 sq. ft. Concrete Apron and Access Taxilane</td>
<td>2,500,000</td>
</tr>
<tr>
<td>5,000 sq. ft. GA Terminal Building</td>
<td>1,350,000</td>
</tr>
<tr>
<td>(2) 100x100 Hangars</td>
<td>1,900,000</td>
</tr>
<tr>
<td>10,000 gallon AVGAS Fuel Tank</td>
<td>125,000</td>
</tr>
<tr>
<td>Security Fence</td>
<td>60,000</td>
</tr>
<tr>
<td>Access Roadway</td>
<td>75,000</td>
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<td>Service Roadway</td>
<td>50,000</td>
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<tr>
<td>Parking Lot</td>
<td>100,000</td>
</tr>
<tr>
<td>Existing Building Demolition</td>
<td>50,000</td>
</tr>
<tr>
<td>Drainage Improvements</td>
<td>150,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$6,360,000</strong></td>
</tr>
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Source: C&S Engineers, Inc.
2.2-3 Alternative 3

Alternative 3 is presented on Figure 2-4. This alternative would locate a 150,000 sq. ft. GA apron on the south side of the designated GA area, positioned at a distance from the Runway 14-32 centerline that allows any development associated with it to easily be designed at a height below the 7:1 transitional surface in order to meet DOD development criteria for navigable spaces. Additionally, a 50 ft. wide and 300 ft. long taxi lane would provide direct access to the GA apron from the intersection of Taxiway “A.” A 5,000 sq. ft. terminal facility and two (2) 100’ x 100’ bay hangars will be located on the east side of the apron.

In addition to the above-mentioned elements, Alternative 3 would include the following infrastructure improvements needed to accommodate forecasted general aviation demand:

- Above-ground AVGAS fuel storage tank located within the existing fuel storage facility
- Approximately 1,500 lineal feet of new security fencing
- A 12’ wide service and emergency access road
- A 30’ wide access road encompassing 25,500 sq. ft. of pavement
- An approximately 9,500 sq. ft. auto parking lot
- Demolition of abandoned building in designated GA area
- Based on a preliminary drainage study, drainage improvements may include a half acre detention basin and 331 foot long underground storm drain

Probable project costs were identified to reflect the anticipated expenditure for the above-mentioned elements (see Table 2-2).

### TABLE 2-2
**ALTERNATIVE 3 DEVELOPMENT COSTS**

<table>
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<tr>
<th>Project Elements</th>
<th>Costs (2011 dollars)</th>
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<td>1,900,000</td>
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<tr>
<td>5,000 gallon AVGAS Fuel Tank</td>
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<tr>
<td>Security Fence</td>
<td>69,000</td>
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<tr>
<td>Access Roadway</td>
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<td>Service Roadway</td>
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<td>Parking Lot</td>
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<td>Existing Building Demolition</td>
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<td>Drainage Improvements</td>
<td>150,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$6,419,000</strong></td>
</tr>
</tbody>
</table>

Source: C&S Engineers, Inc.

2.2-4 Alternative 4

Alternative 4 considers placing the proposed GA development on the north side of the existing cargo development positioned at a distance from the Runway 14-32 centerline that allows any facility development associated with it to easily be design at a height below the 7:1 transitional surface\(^{13}\) (see Figure 2-5). This location would allow for future expansion of the GA area to the east. The GA development is included on the U.S. Air Force approved and FAA conditionally approved ALP as a Civilian Aviation Area. (ALP approval by the FAA is conditional pending NEPA analysis for the proposed project.)

A 50 ft. wide and 340 ft. long taxilane would provide direct access to a 150,000 sq. ft. GA apron from the cargo access taxilane. A 5,000 sq. ft. terminal facility and two (2) 100’ x 100’ bay hangars will be located on the south side of the apron.

In addition to the above-mentioned elements, Alternative 4 would include the following infrastructure improvements needed to accommodate forecasted general aviation demand:

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- Above-ground AVGAS fuel storage tank located within the existing fuel storage facility
- Approximately 782 lineal feet of new security fencing
- A 12’ wide service and emergency access road
- A 30’ wide access road encompassing 25,500 sq. ft. of pavement
- An approximately 9,500 sq. ft. auto parking lot
- Based on a preliminary drainage study, drainage improvements may include a half acre detention basin and 331 foot long underground storm drain

Probable project costs were identified to reflect the anticipated expenditure for the elements associated with the development of Alternative 4 (see Table 2-3).

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<tr>
<td>Parking Lot</td>
<td>100,000</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$6,136,000</td>
</tr>
</tbody>
</table>

Source: C&S Engineers, Inc.
March Inland Port
Proposed General Aviation Facilities Alternative 4
Figure 2-5
2.2-5 Alternative 5

Alternative 5 considers placing the proposed GA development on the west side of Runway 14-32 (see Figure 2-6) positioned at a distance from the Runway 14-32 centerline that allows any development associated with it to easily be design at a height below the 7:1 transitional surface.\(^{14}\) This location would allow for future expansion of the GA area. The GA development is included on the U.S. Air Force approved and FAA conditionally approved ALP as a Civilian Aviation Area. (ALP approval by the FAA is conditional pending NEPA analysis for the proposed project.)

An approximately 350 feet long by 50 feet wide taxilane will provide access from the airfield to the 150,000 sq. ft. concrete apron. A 5,000 sq. ft. terminal facility and two (2) 10,000 sq. ft. bay hangars will be located on the west side of the apron.

In addition to the above-mentioned elements, the site would require significant infrastructure improvements in order to accommodate forecasted general aviation demand, should the Proposed Action be located in this area. These infrastructure improvements include:

- The development of a full parallel taxiway (13,300 ft.) on the west side of Runway 14-32 in order to provide airfield access
- The development of a 30 foot wide new roadway from Oleander Avenue (approximately 0.6 miles) would be required to provide landside access to the site
- The extension of utilities from the existing March Field Air Museum [approximately one (1) mile]
- Above-ground AVGAS fuel storage tank located within the existing fuel storage facility
- Approximately 1,388 lineal feet of new security fencing
- An approximately 22,000 sq. ft. auto parking area

Probable project costs were identified to reflect the anticipated expenditure for the elements associated with the development of Alternative 5 (see Table 2-4).

<table>
<thead>
<tr>
<th>Project Elements</th>
<th>Costs (2011 dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>150,000 sq. ft. Concrete Apron and Access Taxi lane</td>
<td>2,533,000</td>
</tr>
<tr>
<td>5,000 sq. ft. GA Terminal Building</td>
<td>1,350,000</td>
</tr>
<tr>
<td>(2) 100x100 Hangars</td>
<td>1,900,000</td>
</tr>
<tr>
<td>5,000 gallon AVGAS Fuel Tank</td>
<td>125,000</td>
</tr>
<tr>
<td>Security Fence</td>
<td>60,000</td>
</tr>
<tr>
<td>Access Roadway (to Oleander Ave.)</td>
<td>400,000</td>
</tr>
<tr>
<td>Parking Lot</td>
<td>100,000</td>
</tr>
<tr>
<td>Full Parallel Taxiway</td>
<td>28,000,000</td>
</tr>
<tr>
<td>Utilities</td>
<td>250,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$34,718,000</strong></td>
</tr>
</tbody>
</table>

Source: C&S Engineers, Inc.

### 2.2-6 Airport Operational Parameters

The alternatives analysis included a review of airport operational parameters that could potentially be used to regulate the use of the GA apron. These included limiting the time of day in which the GA apron development would be open to civilian users and limiting specific aircraft types from using the proposed facilities. However, to meet its grant assurances the MJPA must make the Airport available for public use on reasonable terms and without unjust discrimination to all types, kinds, and classes of aeronautical activities.\(^{15}\)

As a FAA designated NPIAS airport the MJPA cannot mandatorily limit or restrict the use of the Airport. See, e.g., Airport Noise and Capacity Act of 1990 (ANCA)\(^{16}\) and Federal Air Regulation (FAR) Part 161.\(^{17}\)


\(^{16}\) U.S. Code, Title 49, Chapter 475, Subchapter II – National Aviation Noise Policy.

\(^{17}\) U.S. Code, Title 49, Chapter 106(g), 47523–47527, 47533.
2.3 Alternatives Evaluation

The alternatives evaluation involves using a screening process. The first step addresses whether the alternatives are reasonable; reasonable depends upon the extent to which it meets the purpose and need for the Proposed Action as identified in Section 1 – Purpose and Need. The alternatives that meet the criteria in the first phase of the screening process will then be compared to determine if they are potentially feasible. Feasibility is an initial measure of whether the alternatives make sense and are likely achievable from an economic, technical, and environmental standpoint. Alternatives that are deemed both reasonable and potentially feasible will be retained for further detailed environmental evaluation in Section 4 - Environmental Consequences.

2.3-1 Step 1 Criteria: Reasonable

The first phase of evaluating the various alternatives is determining if they are reasonable. Whether a proposed alternative is reasonable depends upon the extent to which it meets the purpose and need for the Proposed Action. The purpose and need for the action as identified in Section 1 - Purpose and Need included the following:

- Open the Airport up to civilian aircraft users;
- Accommodate GA aircraft activity and fulfill its role in the NPIAS by providing facilities for civilian aircraft users; and
- Meet FAA grant assurances by developing portions of the Airport as a public use airport without discrimination to certain aeronautical users.

Alternatives must be consistent with the Joint Use Agreement to be considered reasonable.

For an alternative to continue to the second step in the screening process, it had to meet the Step 1 criteria. Those alternatives that do not meet all of the criteria will not be retained for further evaluation in the EA.

2.3-2 Step 2 Criteria: Feasible

The second phase of the evaluation focuses on which alternatives are considered feasible alternatives for the Proposed Action based on technical and rational factors. These factors include the following:
**Comparative costs:**

Is the alternative economically feasible and is there an alternative that meets the criteria set forth under in Step 1 that can be completed at a lower cost when compared to the other alternatives? Although cost is not a determining factor in eliminating alternatives it can be used to compare similar alternatives with equal environmental impacts.

The evaluation of comparative costs for each alternative involved an analysis of the probable development costs. Unit construction costs were prepared based on the anticipated year of construction. This consisted of developing probable costs based upon the consultant's knowledge and experience.

**Ability to Accommodate:**

Does the alternative provide the necessary infrastructure to meet the anticipated aviation demand by aircraft users while also taking into account the existing aircraft operating environment?

Each alternative was reviewed to determine if the proposed layout could accommodate the GA activity forecasted for the Airport. Alternatives that could meet the infrastructure demand while minimizing impacts to existing military and possible future air cargo operations and limit the actions development footprint were considered more feasible alternatives.

**Environmental impacts:**

Based on environmental analysis on what anticipated impacts will the alternative have on the surrounding environment and is there an alternative that meets the criteria set forth under Step 1 that is anticipated to have less of an impact on the environmental when compared to the other alternatives?

This part of the evaluation focused on environmental impact categories that may be affected by the Proposed Action. The potential areas of impact were identified through scoping and correspondence with environmental agencies and are discussed in further detail in Section 3 - Affected Environment, and Section 4 - Environmental Consequences. In this phase of the screening process, alternatives with fewer impacts to the environment were considered more feasible than those with more impacts to the environment.
Safety Considerations:

Will the alternative safely accommodate the Proposed Action?

2.4 Screening Process

2.4-1 Step 1 - Reasonable

Alternative 1 - No Action

Based on the screening process is Alternative 1 a reasonable alternative?

No, the purpose and need of this action is not satisfied by the No-Action Alternative. By accepting grant funding through the Airport Improvement Program (AIP), as administered by the FAA, the MJPA must meet its grant assurances. Alternative 1 would not resolve the Airport’s inability to maintain and operate aeronautical facilities and common-use areas for the benefit of the public, which would be a violation of the Joint Use Agreement. Aircraft would be required to use aprons and other facilities currently occupied by the either the U.S. Air Force (USAF) and/or were designed and built for large air cargo operations. This would likely lead to significant military security issues and the inability of the Airport to accommodate any potential future cargo activity in the existing cargo area.

Additionally, the Airport would not be able to meet the forecasted demand for aviation activity. In its current state the Airport does not have the necessary facilities needed to properly meet this demand.

However, in order to meet NEPA’s requirements, the No-Action Alternative will be evaluated throughout the EA for comparison purposes with other alternatives. The Council on Environmental Quality established regulations for compliance with NEPA. These regulations in Section 1502.14(d) require the alternatives analysis to "include the alternative of no action."
Alternative 2

Based on the screening process is Alternative 2 a reasonable alternative?

Alternative 2 is considered a reasonable alternative as it meets the purpose and need of the Proposed Action by addressing the following:

- As authorized in the Joint Use Agreement, allows for the compatible use of civilian aircraft on the joint-use facility;
- Fulfills its role in the NPIAS as a Reliever Airport as it would provide GA aircraft an alternative facility in which to access the region; and
- Meets FAA grant assurances by allowing the Airport to stay open to the public in a safe and compatible way with the existing military operations.

Therefore, Alternative 2 is considered a reasonable alternative and will be retained for further evaluation under Step 2 of the screening process.

Alternative 3

Based on the screening process is Alternative 3 a reasonable alternative?

Similar to Alternative 2, Alternative 3 is considered a reasonable alternative as it meets the purpose and need of the Proposed Action by addressing those issues outlined under Step 1 of the screening process.

Therefore, Alternative 3 is considered a reasonable alternative and will be retained for further evaluation under Step 2 of the screening process.

Alternative 4

Based on the screening process is Alternative 4 a reasonable alternative?

Similar to Alternative 2, Alternative 4 is considered a reasonable alternative as it meets the purpose and need of the Proposed Action by addressing those issues outlined under Step 1 of the screening process.
Therefore, Alternative 4 is considered a reasonable alternative and will be retained for further evaluation under Step 2 of the screening process.

**Alternative 5**

*Based on the screening process is Alternative 5 a reasonable alternative?*

Similar to Alternative 2, Alternative 5 is considered a reasonable alternative as it meets the purpose and need of the Proposed Action by addressing those issues outlined under Step 1 of the screening process.

Therefore, Alternative 5 is considered a reasonable alternative and will be retained for further evaluation under Step 2 of the screening process.

**2.4-2 Step 2 - Feasibility**

**Alternative 2**

*Based on the screening process is Alternative 2 a feasible alternative?*

Yes, based on the screening process (see Table 2-5), Alternative 2 is a potentially feasible alternative and ripe for environmental evaluation under NEPA. This is due to its reasonable costs in relation to the other alternatives, its ability to accommodate forecasted aviation demand and it lack of adverse safety conditions.

**Alternative 3**

*Based on the screening process is Alternative 3 a feasible alternative?*

No, the proposed drainage improvements could not be accommodated in this alternative due to its location on the parcel. It is not feasible to pump apron runoff uphill and around the north side of the apron in order to keep significant drainage improvements out of the Clear Zone. Therefore, Alternative 3 is not considered feasible for its lack of ability to safely accommodate the Proposed Action. Alternative 3 will not be retained for further screening.
Alternative 4

Based on the screening process is Alternative 4 a feasible alternative?

No, the development of Alternative 4 would increase the number of aircraft transiting between the designated air cargo areas and the apron area used by the USAF. This alternative would likely compound air traffic issues by placing the proposed development within an already highly transited area by other airport users. This layout would also increase taxi times to the runway end. In addition, review of previously prepared environmental documentation shows that the area may include highly sensitive habitat for protected species (see Appendix G – Resource and Agency Documentation). Therefore, Alternative 4 is not considered feasible for its anticipated negative impacts on aircraft ground movements. Alternative 4 will not be retained for further screening.

Alternative 5

Based on the screening process is Alternative 5 a feasible alternative?

No, Alternative 5 would not be considered a feasible alternative. Access for aircraft to the site does not currently exist and new parallel runway would have to be constructed along with other utility upgrades. Estimated costs for developing the Proposed Action on the west side of the airfield would be more than five times higher than the next highest alternative (see Table 2-5). In addition to the potential high costs the alternative does have access concerns. Although civilian operations would be separated from military operations, located exclusively on the northeast side of Runway 14-32, fire response and fuel truck access to the proposed development would require trucks and equipment to travel across Runway 14-32. Alternative 5 will not be retained for further screening.

2.4-3 Alternative Evaluation Summary

Below is a summary of the five alternatives compared for this project.
### TABLE 2-5
ALTERNATIVE EVALUATION SUMMARY

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Alternatives</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1: Reasonable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meets Purpose &amp; Need</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meets FAA grant assurances</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Accommodate GA aircraft activity</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Continue to Step 2</td>
<td>Yes&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Step 2: Feasibility</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparative Costs (2012 dollars)</td>
<td>$0</td>
<td>$6,360,000</td>
<td>$6,419,000</td>
<td>$6,136,000</td>
<td>$34,718,000</td>
<td></td>
</tr>
<tr>
<td>Potential Significant Environmental Impacts</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Ability to accommodate the existing airport infrastructure and future aviation demand</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Adverse Safety Considerations</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Step 3: Evaluate Environmental Consequences</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Source: C&S Engineers, Inc.

<sup>1</sup> No-Action Alternative will be evaluated throughout the EA for comparison purposes with other alternatives

### 2.5 Proposed Alternative

After considerable evaluation concerning the advantages and disadvantages associated with each alternative, Alternative 2 was selected as the Proposed Alternative for the reasons stated below; it is also the only practicable alternative that meets the project’s Purpose and Need:

- Is consistent with the Joint Use Agreement (see Appendix F – MJPA Support Documentation);
- Accommodates GA activity and fulfills its role in the NPIAS;
- Meets FAA grant assurances;
- Costs associated with Alternative 2 are relative and/or lower than other alternatives;
- Is consistent with the FAA approved ALP;
- Based on a preliminary review of the study area and existing environmental documentation it should not result in significant environmental impacts;
• Has the ability to accommodate the existing airport infrastructure while limiting its impact on current airport operations by the USAF.

Although Alternative 2 has been selected as the Proposed Alternative, in order to provide an environmental baseline, Alternative 1 will also be evaluated fully throughout this Environmental Assessment (EA).
3  AFFECTED ENVIRONMENT

3.1  General

Environmental resources that may potentially be affected by the Proposed Action are discussed in this section. The existing physical and natural conditions within the study area were analyzed using previously published documentation, on-site inventories conducted multiple times in 2009 and 2010, and the area was then assessed for the development of reasonable alternatives for the development of the Proposed Action. Based on this assessment and correspondence with resource agencies, the following discussion of the potentially affected environment was developed. Environmental resources potentially affected as a result of the Proposed Action will be addressed in greater detail in Section 4 – Environmental Consequences.

3.2  Study Area

3.2-1 Location and Description

The study area includes portions of the March Inland Port (RIV or Airport) and adjacent properties under private ownership. The Airport is located in an unincorporated area of Riverside County, approximately ten miles southeast of downtown Riverside (see Figure 1-1), adjacent to Interstate 215. The Airport shares essential aviation facilities (e.g., air traffic control tower, taxiways, runways, navigational aids (NAVAIDS), and aircraft rescue and fire fighting facilities) with the U.S. Air Force Reserve. The Airport and March Air Reserve Base (MARB) encompasses approximately 2,400 acres; approximately 300 acres are designated for civilian use. The MARB includes Runways 14-32 and 12-30, military hangars, vehicle parking areas and other support facilities for military use. The MJPA properties contain a fuel farm, a vacant air cargo facility (formerly occupied by DHL), a vacant industrial building and vehicle parking areas for civilian use. Runway 14-32 is the primary runway and is 13,300 feet long and 200 feet wide. Runway 12-30 is 3,010 feet long and 100 feet wide. Civilian use of Runway 12-30 is not allowed due to the Unified Facilities Criteria and Department of Defense Regulations (see Appendix F – MJPA Support Documentation).
3.2-2 Land Use and Zoning

Land use is described as the current use of a parcel of land (e.g., agricultural use, commercial use, residential use). Local governments commonly control the use of specific parcels of land by zoning. Zoning refers to an ordinance that allows or restricts the location and development of buildings or structures in a specific area. The objective of compatible land use planning and zoning is to encourage development of compatible land uses such as industrial and commercial uses near airports, and residential and public uses further from airports. Zoning is also used to limit the construction of structures in an airport’s airspace. Structures or other man-made features could become hazards to air navigation, result in electronic interference with navigation aids, or become wildlife attractants. Compatible land use guidelines and regulations regarding public airports are contained within Title 14 Code of Federal Regulations Part 150.18 The guidelines and regulations have assisted airport sponsors, state and local officials, and interested organizations in determining the appropriate land uses surrounding an airport.

Existing Land Use

The areas surrounding RIV have changed from ones dominated by agricultural land uses to ones used for a mixture of residential, commercial, industrial, and agricultural activities. The existing land uses surrounding the Airport are depicted on Figure 3-1. Industrial and Business Park land uses dominate the area west of the Airport and west of Interstate 215 with the development of the Meridian Business Park.19 Commercial and residential developments are present to the north and northeast within the City of Moreno Valley, while industrial and agricultural land uses dominate the areas located south and southeast of the Airport. According to the General Plan of the MJPA the project area is designated as Aviation (AV) land use. The General Plan is currently being updated but the project area will remain as Aviation land use.

Zoning

In 1992 the MARB prepared the Air Installation Compatibility Use Zone (AICUZ) program\textsuperscript{20} to address the surrounding public’s concern relative to aircraft operations (see Appendix F – MJPA Support Documentation). This included an extensive analysis of aircraft noise, accident potential, and compatible land use for areas surrounding the Airport. The AICUZ program was recently updated in 2005. The program identified Accident Potential Zones (APZs) around the Airport and prescribed restrictions on land use within those boundaries. Classifications of APZs include Clear Zones (CZ) and APZ I and II. These areas have a higher statistical risk for aircraft mishaps; therefore, high density land uses are not considered to be compatible within these zones. The study area is not located within these areas.

In addition to the AICUZ, the Riverside County Land Use Commission adopted its own Land Use Compatibility Plan in 2004. The plan included zoning that identifies areas of incompatible land uses. The compatibility criteria identifies the Airport property as zoned as either military or a CZ (see Figure 3-2), which prohibits all non-aeronautical structures.\textsuperscript{21}

\textsuperscript{21} Riverside County Airport Land Use Commission, \textit{Riverside County Airport Land Use Compatibility Plan, Volume 1, Policy Document}, October 14, 2004.
Source: Imagery from CaSiR (2006); roads and streams/canals from ESRI 2009; land use and municipal boundaries from Riverside County (2010); airport boundary from MJPA.
Figure 3-2

Zoning Map

Source: Imagery from CaSiR (2006); roads and stream/canals from ESRI 2009; zoning from Riverside County, Moreno Valley, & MJPA (2010); Airport Boundary from MJPA.
3.2-3 Historical Setting

The MARB includes the March Field Historic District (District), which is included in the National Register of Historic Places (NRHP). The 158 acre triangular shaped District straddles the MARB and March JPA easterly jurisdictional line and is comprised of 228 buildings and structures, 197 of which contribute to its historic significance (see Figure 3-3). The historical significance of the District is centered on its architectural significance as one of the first conceptualized military installations that has an encompassing theme (the Mission Revival style of Myron Hunt). Architectural features that embody this theme are considered key elements or defining factors; loss of these features could adversely affect the integrity and NRHP eligibility of the District.22

3.2-4 Demographics

Comparative statistics of the racial composition of the population of those jurisdictions represented on the MJPA are presented in Table 3-1. The MJPA jurisdictions include the County of Riverside, City of Riverside, City of Moreno Valley, and City of Perris. All areas considered for geographic comparison have higher percentages of Hispanic populations than both California and the U.S. Proportions of both American Indian and Native Hawaiian or Other Pacific Islander populations in the Region of Influence are comparable to both state and national figures. Asian populations within the MJPA jurisdictions are comparable to the national average, but are generally lower than those of the State of California. African American populations are variable throughout the jurisdictions with lower percentages than the national average and State of California found in Riverside County and the City of Riverside. Significantly higher populations of African Americans can be found in San Bernardino, Moreno Valley, and Perris.

TABLE 3-1
SURROUNDING AREA DEMOGRAPHICS

<table>
<thead>
<tr>
<th>Geographic Area</th>
<th>Total</th>
<th>White 1</th>
<th>Black or African-American 1</th>
<th>American Indian 1</th>
<th>Asian 1</th>
<th>Native Hawaiian or Other Pacific Islander 1</th>
<th>Two or More Races</th>
<th>Hispanic or Latino 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>307,006,550</td>
<td>79.8%</td>
<td>12.8%</td>
<td>1.0%</td>
<td>4.5%</td>
<td>0.2%</td>
<td>1.7%</td>
<td>15.4%</td>
</tr>
<tr>
<td>California</td>
<td>36,961,664</td>
<td>76.6%</td>
<td>6.7%</td>
<td>1.2%</td>
<td>12.5%</td>
<td>0.4%</td>
<td>2.6%</td>
<td>36.6%</td>
</tr>
<tr>
<td>Riverside County</td>
<td>2,125,440</td>
<td>83.6%</td>
<td>6.7%</td>
<td>1.4%</td>
<td>5.5%</td>
<td>0.4%</td>
<td>2.4%</td>
<td>43.9%</td>
</tr>
<tr>
<td>Riverside</td>
<td>293,761</td>
<td>59.3%</td>
<td>7.4%</td>
<td>1.1%</td>
<td>5.7%</td>
<td>0.4%</td>
<td>5.1%</td>
<td>38.1%</td>
</tr>
<tr>
<td>San Bernardino</td>
<td>198,985</td>
<td>45.2%</td>
<td>16.4%</td>
<td>1.4%</td>
<td>4.2%</td>
<td>0.4%</td>
<td>5.3%</td>
<td>47.5%</td>
</tr>
<tr>
<td>Moreno Valley</td>
<td>183,571</td>
<td>46.8%</td>
<td>19.9%</td>
<td>0.9%</td>
<td>5.9%</td>
<td>0.5%</td>
<td>5.8%</td>
<td>38.4%</td>
</tr>
<tr>
<td>Perris</td>
<td>51,397</td>
<td>41.2%</td>
<td>15.9%</td>
<td>1.5%</td>
<td>2.7%</td>
<td>0.3%</td>
<td>5.8%</td>
<td>56.2%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau 2010

1/ Includes persons reporting only one race
2/ Hispanics may be of any race, so also are included in applicable race categories
3/ Totals will exceed 100 percent since some people fell under multiple ethnicity groups.
Source: Imagery from CaSil (2006); roads and streams/canals from ESRI 2009; floodplains from FEMA; Soils from NRCS; wetlands and drainage from ESA; airport boundary from MJPA.
3.2-5 Natural Resource Characteristics

Geology

The Airport is located in the northern portion of the Perris Plains, within the Santa Ana basin which covers an area of 2,000 square miles and is part of the Peninsula Ranges Province. The plains are a north-south trending alluvial valley, bounded by low-lying granitic bedrock and a series of tributary valleys defined by four surrounding mountain ranges (San Jacinto, San Gabriel, Santa Ana, and San Bernardino). Perris Plain alluvial deposits are largely composed of alternating layers of clay, silt, sand, and gravel of mixed composition. The thickness varies from a few feet to greater than 800 feet.23

Topography/Soils

The topography of the Airport and MARB and the surrounding area is generally flat with elevations ranging from 1,550 feet mean sea level (MSL) in the northwest section of the Airport to 1,480 feet MSL within the study area. There are seven types of soils (referred to as a complex or a series) that dominate the area (see Figures 3-3 and 3-4). These soils tend to be very shallow to deep, well-drained or somewhat excessively drained, loamy or sandy, and of mixed mineralogy. Information on each soil series type and its characteristics are presented in Table 3-2.

---

TABLE 3-2
STUDY AREA DOMINANT SOIL SERIES

<table>
<thead>
<tr>
<th>Soil Map Unit</th>
<th>Permeability</th>
<th>Available Water Capacity</th>
<th>Runoff</th>
<th>Erosion Hazard</th>
<th>Construction Limitations</th>
<th>Soil Candidate Listing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exeter Sandy Loam Series</td>
<td>Moderate to Moderately Slow</td>
<td>Low to Moderate</td>
<td>Slow to Medium</td>
<td>Slight to Moderate</td>
<td>Moderate</td>
<td>Prime Farmland Soils</td>
</tr>
<tr>
<td>Fallbrook Sandy Loam Series</td>
<td>Moderate</td>
<td>Low</td>
<td>Medium to Rapid</td>
<td>Moderate to High</td>
<td>Moderate</td>
<td>Prime Farmland Soils</td>
</tr>
<tr>
<td>Greenfield Sandy Loam</td>
<td>Moderately Rapid</td>
<td>High</td>
<td>Slow to Medium</td>
<td>Slight</td>
<td>Soil is Favorable</td>
<td>Prime Farmland Soils</td>
</tr>
<tr>
<td>Hanford Sandy Loam Series</td>
<td>Moderately Rapid</td>
<td>Moderate to High</td>
<td>Slow</td>
<td>Low to Slight</td>
<td>Soil is Favorable</td>
<td>Prime Farmland Soils</td>
</tr>
<tr>
<td>Monserate Sandy Loam</td>
<td>Very Slow to Moderately Slow</td>
<td>Low to Moderate</td>
<td>Slow</td>
<td>Slight</td>
<td>Moderate</td>
<td>Soil of Statewide Importance</td>
</tr>
<tr>
<td>Pachappa Fine Sandy Loam</td>
<td>Moderate</td>
<td>High</td>
<td>Slow</td>
<td>Slight</td>
<td>Soil is Favorable</td>
<td>Prime Farmland Soils</td>
</tr>
<tr>
<td>Ramona Sandy Loam</td>
<td>Moderately Slow</td>
<td>High</td>
<td>Slow</td>
<td>Slight</td>
<td>Soil is Favorable</td>
<td>Prime Farmland Soils</td>
</tr>
</tbody>
</table>

Source: U.S. Department of Agriculture (USDA), Natural Resources Conservation Service

Surface Water

According to the United States Geological Survey (USGS), the Airport is located within the San Jacinto River Watershed (hydrologic unit code 18070202), an approximately 765 sq. mi. area that extends from the San Jacinto Mountains to the north and east to Lake Elsinore to the west. The San Jacinto River Watershed is essentially a desert region that is considered to have a Mediterranean climate. The San Jacinto River, Salt Creek, Perris Valley Storm Drain, Mystic Lake, Perris Reservoir, Canyon Lake, and Lake Elsinore are the dominant hydrologic features in the watershed. The watershed drains from the San Jacinto River, 6 miles to the southeast of the Airport into Lake Elsinore.

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Drainage

According to the Riverside County Flood Control and Water Conservation District the Airport is located within the Perris Valley Master Drainage Plan. The Airport has been delineated into four localized watersheds. The watershed in which the Proposed Action is located receives stormwater from the runway and taxiway surfaces and adjacent vegetated areas before discharging into an unimproved natural drainage ditch (Heacock Channel) located along Heacock Street. The stormwater then continues to the Perris Valley Storm Drain. Within the study area the stormwater reaches Heacock Street via two man-made natural bottom swales (see Figure 3-3). These swales were likely constructed by the military to facilitate drainage of the surrounding area.

Wetlands

A review of state and federal wetlands mapping shows no potential for wetlands to occur within the project area. However, site visits were taken to the project area and it was determined that a jurisdictional determination should be made for the area as a result of the drainage swales that transect the site. A jurisdictional determination was completed by ESA on the project area in October of 2009 (see Appendix G – Resource and Agency Documentation). The determination concluded that the project area does not support wetlands or waters of the U.S. that would be regulated under Section 404 of the Clean Water Act. The drainage swales are considered non-jurisdictional in nature. Coordination efforts have taken place with the U.S Army Corps of Engineers and the California Department of Fish and Game. Those coordination efforts are further described under Section 4.3-5 Wetlands and can be viewed in Appendix J – FAA Consultation.

A small seasonal wetland was formed in the northern portion of the project area due to the practice of purging water from the end of a municipal waterline into the area. The water source for this man-induced wetland was the Western Municipal Water District’s overflow hydrant. The discharge had released water on a regular basis beginning in January of 2005 (estimated to be twice a month for 4-6 hours at a time) before being discontinued in March 2008. However, since the purging practice has stopped the wetland has reverted back to annual grassland. No formal delineation was completed on the wetland prior to the discontinuation of the purging of water.

Consultation was initiated with the USACE and California Department of Fish and Game (see Appendix J) but no response has been received.

The Heacock Channel, located between the study area boundary and Heacock Street (see Figure 3-4), is designated by the USACE as an unlined jurisdictional wetland. According to the General Plan of the March Joint Powers Authority, the channel is in need of improvements to accommodate the increase in water flow associated with nearby development in Moreno Valley.27

**Floodplains**

Based on a review of the Flood Insurance Rate Map, the study area (Community Panel Number 06065C0745G, retrieved 06/23/2010) has been designated as Zone D indicating that extensive floodplain mapping has not occurred (see Figure 3-3). Zone D parcels are areas that have been undetermined, but still have the possibility to be flood hazards. Although a section of land in the northeastern corner of the MJPA Planning Area is subject to 100-year floods, previous coordination with the Federal Emergency Management Association (FEMA) Map Assistance Center confirmed that the Base has not been mapped.

**Groundwater**

The Airport is located within the San Jacinto Basin aquifer system.28 The system consists of a series of interconnected alluvium-filled valleys bounded by steep-sided bedrock mountains and hills. The thickness of deposits in these valleys typically ranges from 200 to 1,000 ft. Groundwater within the project area is 35 feet below the surface. According to the USGS, prior to development, recharge to the flow system was from infiltration of mountain streams, primarily the San Jacinto River. Presently, recharge is largely from irrigation return flows and from percolation ponds filled with reclaimed water. Ground-water discharge occurs primarily by ground-water pumpage.

The groundwater system for the Airport is almost entirely surrounded by non-water bearing rocks, so that the amount of water flowing in and out of the basin is considered negligible. Past groundwater monitoring on the MARB has identified contamination by various volatile organic

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compounds (VOCs), including trichloroethylene and tetrachloroethylene; however, water services to the Airport rely on an outside supplier and groundwater from the MARB is not used for potable purposes. 29

**Air Quality**

Riverside County is located within the South Coast Air Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). This area has been designated by the United States Environmental Protection Agency (USEPA) as an extreme non-attainment area under the 8-hour ozone standard, a serious nonattainment area for particulate matter less than 10 microns (PM10), a maintenance area for carbon monoxide (CO), and nonattainment for particulate matter less than 2.5 microns (PM2.5). This area is in attainment for the remaining criteria pollutants nitrogen dioxide and sulfur dioxide (NO2 and SO2). 30

**Climate**

Research has shown there is a direct correlation between fuel combustion and greenhouse gas (GHG) emissions. In terms of U.S. contributions, the General Accounting Office (GAO) reports that “domestic aviation contributes about 3 percent of total carbon dioxide emissions, according to EPA data,” compared with other industrial sources including the remainder of the transportation sector (20 percent) and power generation (41 percent). 31 The International Civil Aviation Organization (ICAO) estimates that GHG emissions from aircraft account for roughly three percent of all anthropogenic GHG emissions globally. 32 Climate change due to GHG emissions is a global phenomenon, so the affected environment is the global climate. 33

29 Air Force Reserve Command, Draft Environmental Assessment for Proposed MILCON Projects and TFI at March Air Reserve Base, California, August 2009.


33 As explained by the U.S. Environmental Protection Agency, “greenhouse gases, once emitted, become well missed in the atmosphere, meaning U.S. emissions can affect not only the U.S. population and environment but other regions of the world as well; likewise, emissions in other countries can affect the United States.” Climate Change Division, Office of Atmospheric Programs, U.S. Environmental Protection Agency, Technical Support Document for Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act 2-3 (2009), available at http://epa.gov/climatechange/endangerment.html.
The scientific community is continuing efforts to better understand the impact of aviation emissions on the global atmosphere. The FAA is leading and participating in a number of initiatives intended to clarify the role that commercial aviation plays in GHG emissions and climate. The FAA, with support from the U.S. Global Change Research Program and its participating federal agencies (e.g., NASA, NOAA, EPA, and DOE), has developed the Aviation Climate Change Research Initiative (ACCRI) in an effort to advance scientific understanding of regional and global climate impacts of aircraft emissions. The FAA also funds the Partnership for AIR Transportation Noise & Emissions Reduction (PARTNER) Center of Excellence research initiative to quantify the effects of aircraft exhaust and contrails on global and U.S. climate and atmospheric composition. Similar research topics are being examined at the international level by the International Civil Aviation Organization.  

Vegetation

The study area is dominated by nonnative Mediterranean annual grasses (see Appendix G – Resource and Agency Documentation) such as wild oats (Avena fatua), soft chess (Bromus hordeaceus), ripgut brome (Bromus diandrus), and foxtail barley (Hordeum murinum ssp. leporinum). An assemblage of native and nonnative forbs was noted in the grassland areas including bristly ox tongue (Picris echioides), rough cat’s ear (Hypochaeris radicata), thistle (Cirsium sp.), filaree (Erodium sp.), geranium (Geranium sp.), clover (Trifolium sp.), turkey mullein (Eremocarpus setigerus), and mustard (Brassica sp). Cover is typically dense and vegetation ranges from a few inches to four to five feet in height depending on the species and time of year. Table 3-3 provides a breakdown of those species listed as federally threatened or endangered vegetation that have been documented on or in the vicinity of the Airport:

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### TABLE 3-3
FEDERALLY LISTED THREATENED OR ENDANGERED VEGETATION

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Status</th>
<th>Habitat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Munz’s onion</td>
<td><em>Allium munzii</em></td>
<td>FE</td>
<td>Perennial bulbiferous herb found in heavy clay soils growing in grasslands or openings in shrublands and woodlands such as chaparral, cismontane woodland, coastal scrub, and pinyon and juniper woodland. 300-1035 m. Blooms Mar-May.</td>
</tr>
<tr>
<td>San Diego ambrosia</td>
<td><em>Ambrosia pumila</em></td>
<td>FE</td>
<td>Perennial rhizomatous herb, often found in disturbed areas, sometimes alkaline or sandy or clay soils, in chaparral, coastal scrub, valley and foothill grassland, and vernal pools. 20-415 m. Blooms Apr-Oct.</td>
</tr>
<tr>
<td>Marsh sandwort</td>
<td><em>Arenaria paludicola</em></td>
<td>FE</td>
<td>Known from only two natural occurrences in Black Lake Canyon and Oso Flaco Lake. Found growing up through dense mats of <em>Typha, Juncus, Scirpus</em>, etc. in freshwater marshes. Found at elevations 10-170 m. Blooms May-Aug.</td>
</tr>
<tr>
<td>San Jacinto Valley crownscale</td>
<td><em>Atriplex coronata var. notatior</em></td>
<td>FE</td>
<td>Annual herb found on dry, alkaline flats in the San Jacinto River Valley, within playas, chenopod scrub, valley and foothill grassland in mesic areas, and vernal pools. 400-500 m. Blooms Apr-Aug.</td>
</tr>
<tr>
<td>Nevin’s barberry</td>
<td><em>Berberis nevinii</em></td>
<td>FE</td>
<td>Perennial evergreen shrub found in on steep, north facing slopes or in low grade sandy washes in chaparral, cismontane woodland, and coastal scrub. 290-1575 m. Blooms Mar-Jun.</td>
</tr>
<tr>
<td>Thread-leaved brodiaea</td>
<td><em>Brodiaea filifolia</em></td>
<td>FT</td>
<td>Perennial bulbiferous herb usually associated with annual grassland and vernal pools on clay soils. Surrounding habitats include chaparral, cismontane woodland, coastal scrub, and playas. 25-860 m. Blooms Mar-Jun.</td>
</tr>
<tr>
<td>Salt marsh bird’s-beak</td>
<td><em>Cordylanthus maritimus ssp. maritimus</em></td>
<td>FE</td>
<td>Limited to the higher zones of coastal salt marshes at elevations of 0-30 m. Blooms May-Oct.</td>
</tr>
<tr>
<td>Species</td>
<td>Scientific Name</td>
<td>Federal Status</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------</td>
<td>----------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Slender-horned spineflower</td>
<td><em>Dodecahema leptoceras</em></td>
<td>FE</td>
<td>Annual herb found on flood deposited terraces and washes in chaparral and coastal scrub.</td>
</tr>
<tr>
<td>Moran’s nosegay</td>
<td><em>Navarretia fossalis</em></td>
<td>FT</td>
<td>San Diego hardpan and San Diego claypan vernal pools, often surrounded by other habitat types.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>30-1300 m. Blooms Apr-Jun.</td>
</tr>
<tr>
<td>California Orcutt grass</td>
<td><em>Orcuttia californica</em></td>
<td>FE</td>
<td>Vernal pools. 15-660 m. Blooms Apr-Aug.</td>
</tr>
</tbody>
</table>

Source: USFWS, 2010

**KEY:**

- **FE** = Listed as Endangered by the Federal Government
- **FT** = Listed as Threatened by the Federal Government
- **FC** = Candidate for listing by the Federal Government

**Wildlife**

Over 218 species of birds, 32 mammals, 29 reptiles, and 5 amphibians have been documented on or in the vicinity of the Airport. **Table 3-4** provides a breakdown of those species listed as federally threatened or endangered species:
<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Status</th>
<th>Habitat</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Invertebrates</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vernal pool fairy shrimp</td>
<td><em>Branchinecta lynchi</em></td>
<td>FT</td>
<td>Endemic to the grasslands of the Central Valley, central Coast Mountains, and south Coast Mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and swales, or basalt flow depression pools.</td>
</tr>
<tr>
<td>Quino checkerspot butterfly</td>
<td><em>Euphydryas editha quino</em></td>
<td>FE</td>
<td>Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego Counties. Hills and mesas near the coast. Needs high densities of food plants <em>Plantago erecta</em>, <em>P. insularis</em>, <em>Orthocarpus purpureascens</em>.</td>
</tr>
<tr>
<td>Riverside fairy shrimp</td>
<td><em>Streptocephalus woottoni</em></td>
<td>FE</td>
<td>Endemic to western Riverside, Orange and San Diego Counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season.</td>
</tr>
<tr>
<td><strong>Amphibians</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>California tiger salamander (central population)</td>
<td><em>Ambystoma californiense</em></td>
<td>FT</td>
<td>Annual grassland and grassy understory of valley-foothill hardwood habitats in central and northern California. Needs underground refuges and vernal pools or other seasonal water sources for breeding.</td>
</tr>
<tr>
<td><strong>Birds</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western snowy plover</td>
<td><em>Charadrius alexandrinus nivosus</em></td>
<td>FT</td>
<td>Flat sandy beaches, salt flats and sandy areas with minimal vegetation, nests in sandy depressions. May also nest on gravelly substrate. Has been known to nest near sewage ponds as well.</td>
</tr>
<tr>
<td>Western yellow-billed cuckoo</td>
<td><em>Coccyzus americanus occidentalis</em></td>
<td>FC</td>
<td>Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian thickets of willow, often mixed with cottonwoods, with understory of blackberry, nettles, or wild grape.</td>
</tr>
<tr>
<td>Southwestern willow flycatcher</td>
<td><em>Empidonax traillii extimus</em></td>
<td>FE</td>
<td>Riparian woodlands in southern California, especially in low brushy vegetation in wet areas.</td>
</tr>
</tbody>
</table>
Coastal California gnatcatcher | *Polioptila californica californica* | FT | Obligate, permanent resident of coastal sage scrub below 2500 feet in southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.

Least Bell’s vireo | *Vireo bellii pusillus* | FE | Summer resident of southern California in low riparian vegetation near water or in dry river bottoms. Nests placed along margins of bushes or on twigs, usually in willow, *Baccharis*, and mesquite.

**Mammals**

San Bernardino kangaroo rat | *Dipodomys merriami parvus* | FE | Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.

Stephens’ kangaroo rat | *Dipodomys stephensi* | FE | SKR is associated with sparsely vegetate habitats, primarily in habitats where perennial cover is less than 30 percent. In general, perennial shrub cover and dense grasses restrict the presence of SKR (USFWS, 1997). SKR prefers grassland communities dominated by forbs rather than by annual grasses and characterized by moderate to high amounts of bare ground (USFWS, 2010). Vegetation most commonly associated with SKR includes two native shrubs (coastal sagebrush and California buckwheat) and the non-native herb filaree; will burrow into firm soil. Typically found in transition areas, including grasslands that border coastal sage scrub, transition areas where sage scrub and grasslands are intermixed, and areas of sparse sage scrub (RCHCA, 1996).

Source: USFWS, 2010

**KEY:**

Federal: (USFWS)

FE = Listed as Endangered by the Federal Government

FT = Listed as Threatened by the Federal Government

FC = Candidate for listing by the Federal Government
Legend

- Study Area Boundary
- Airport Boundary
- Drainage Pathway
- Swale
- Soils
  - Exeter Sandy Loam
  - Greenfield Sandy Loam
  - Hanford Fine Sandy Loam
  - Monserate Sandy Loam
  - Ramona Sandy Loam

Source: Imagery from CaSi (2006); roads and streams/canals from Esri 2009; floodplains from FEMA; Soils from NRCS; wetlands and drainage from ESA; airport boundary from MJPA.

March Inland Port
Environmental Study Area Map

Figure 3-4


4 ENVIRONMENTAL CONSEQUENCES

4.1 Introduction

This section presents an assessment of the environmental impact categories outlined in Federal Aviation Administration (FAA) Order 1050.1E, *Environmental Impacts: Policies and Procedures*, and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Projects*, as they relate to the Proposed Action. This section will be used to aid in determining the potential environmental impacts associated with the development of the Proposed Action. An examination of each environmental impact category is provided to determine if impacts caused by the Proposed Action are considered significant or insignificant under the National Environmental Policy Act (NEPA) or any other environmental special purpose laws.

Each environmental impact category has a corresponding threshold level beyond which the impact is considered to be significant. However, if sufficient mitigation measures are included as part of the Proposed Action to reduce the impacts below the threshold levels, an action may be concluded with a Finding of No Significant Impact (FONSI).

Summaries of the environmental analyses conducted for each environmental impact category are presented within the following sections, as are conclusions drawn regarding the presence or absence of potentially significant impacts. If the needs for mitigation measures are identified they will be included and described under each environmental impact category.

4.2 No Impact Categories

The following environmental impact categories were reviewed and it was determined that the Proposed Action would result in no significant impacts to those categories. Brief descriptions for each impact category are given below. No further analysis or discussion in regards to these environmental impact categories will be included in this Environmental Assessment (EA).

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4.2.1 Coastal Resources

No coastal barriers, significant coastal fish and wildlife habitat, or coral reef ecosystems are located on or adjacent to the Airport property study area. The Airport and study area are not located within a state-designated coastal zone and is located over 30 miles from the Pacific Ocean. Therefore, the Proposed Action will not have an impact on coastal barriers or zones or have to adhere to the California Coastal Act. 37

4.2.2 Section 4(f)

No publicly owned land from a public park, recreation area, wildlife and waterfowl refuge are located within close proximity to the study area. Although the March Air Reserve Base (MARB) includes a historic district it was developed as part of the original air base, March Field, and would not be impacted by the Proposed Action. An area located west of I-215 was part of a Stephen’s Kangaroo Rat (SKR) Habitat Conservation Plan (HCP) adopted by Riverside County. This area is located 2.5 miles from the project area. The Proposed Action will take place entirely within the Airport boundary and will not have direct or indirect impacts to Section 4(f) resources.

4.2.3 Farmlands

The Proposed Action does not involve the development or conversion of Farmland Protection Policy Act (FPPA)38 regulated farmlands to non-agricultural land uses. According to information supplied by the California Department of Conservation, Division of Land Resource Protection, the project study area is not designated as Prime Farmland (see Appendix G – Resource and Agency Documentation). Although several of the soil types in the project area could potentially be prime farmland soils, suitable irrigation does not exist. Additionally, there are not agriculture uses currently existing on the site. The study area is designated as Urban and Built-up Land. 39 The nearest land zoned for agriculture is located half of a mile away from the project. Since no farmland will be converted to non-agricultural land use, there will be no impacts to farmlands.

37 Public Resources Code, Division 20, California Coastal Act, 2010.
38 The Farmland Protection Policy Act is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses, http://www.nrcs.usda.gov /programs/fppa/.
4.2.4 Floodplains

The Flood Data depicted on Figure 3-3 is derived from the Flood Insurance Rate Maps (FIRMs) published by the Federal Emergency Management Agency (FEMA). The FIRMs are the basis for floodplain management, mitigation, and insurance activities for the National Flood Insurance Program. The results of a close examination of the above-mentioned maps indicate that local floodplains will not be affected as a result of the Proposed Action because it is not located within a 100-year floodplain (see Figure 3-3).

4.2.5 Natural Resources and Energy Supply

Development projects may have the potential to change or increase energy requirements or use of consumable natural resources. The Proposed Action has been reviewed to determine its potential impacts to utilities, consumable materials, and aircraft fuel consumption. Review and coordination with utility providers (see Appendix A – Correspondence and Coordination with Stakeholders and Agencies) determined that the Proposed Action would not result in a measurable impact on natural resources and energy supply.

Although the Proposed Action would result in an increase in operations of general aviation (GA) aircraft and associated ground support equipment, March Inland Port (RIV or Airport) is equipped to handle that estimated increase in fuel consumption. The Airport is already equipped with a fuel storage facility that houses two horizontal 25,000 gallon Jet-A storage tanks and two vertical 105,000 gallon Jet-A storage tanks. The horizontal tanks are separate from the vertical storage system, so they could be converted to other types of fuel storage after a thorough code review is conducted that allows fuels such as aviation gasoline (AVGAS). The Proposed Action includes the construction of a separate 10,000 gallon aboveground storage tank (AST) to store additional fuel for aircraft. As the demand for AVGAS continues to decrease nationally the AST would only be constructed once the aviation demand warrants it.
4.2.6 Wild and Scenic Rivers

Based on a review of the National Park Service Wild and Scenic Rivers Program website\textsuperscript{40} there are no federally designated wild and scenic rivers on or adjacent to the Airport. The nearest designated river is Bautista Creek which is approximately 25 miles southeast of the Airport. As a result, there will be no significant impacts to designated rivers that have been designated in the National Wild and Scenic Rivers System.

4.3 Impact Categories

4.3.1 Noise

Under FAA Order 1050.1E, \textit{Section 14 – Noise},\textsuperscript{41} a noise analysis must be completed to determine the Proposed Action’s contributions to existing noise levels surrounding the Airport, including any noise caused by the Proposed Action’s aircraft operations. According to FAA Order 1050.1E, a significant noise impact would occur if the analysis finds that noise sensitive areas at or above community noise equivalent level (CNEL) 65 dB\textsuperscript{42} would experience an increase in noise levels of CNEL 1.5 dB or more when the future Proposed Action Alternative conditions are compared to the future No-Action Alternative conditions for the same timeframe.

As outlined under Section 1 – Purpose and Need, the Proposed Action, as authorized in the Joint Use Agreement, would allow the March Joint Powers Authority (MJPA) to open RIV to civilian use and general aviation (GA) aircraft operations. The Proposed Action involves development of a concrete apron and associated support facilities on MJPA-owned parcels to provide adequate aircraft fueling, parking and storage capabilities. As a result, it is anticipated that aircraft types currently not operating at the Airport due to a lack of those facilities would begin operations once construction has been completed. A noise analysis was completed to determine the noise impacts resulting from the Proposed Action.

\textsuperscript{40} National Park Service Wild and Scenic Rivers Program, \url{http://www.nps.gov/nero/rivers/wildandscenic.htm}.

\textsuperscript{41} Federal Aviation Administration, Order 1050.1E, \textit{Section 14 – Noise}, 2004.

\textsuperscript{42} The noise Day-Night Average Sound Level (DNL) metric is the standard noise descriptor specified by the FAA for transportation noise sources. FAA Orders 1050.1E and 5050.4B require the use of the DNL metric in evaluating aircraft noise exposure in environmental assessments of Federal actions. The FAA does recognize CNEL as an alternative metric for California.
Noise Analysis

The aircraft noise exposure contours for the Airport were developed through the use of both the Federal Aviation Administration’s (FAA’s) Integrated Noise Model (INM) version 7.0b for civilian operations and NOISEMAP 7.353 for the military operations. This methodology was approved by the FAA’s Office of Environment and Energy (AEE) on March 1, 2012, (see Page 726 of the Appendices, within Appendix H – Noise Analysis). Detailed information regarding the noise analysis can be found in Appendix H – Noise Analysis. The data used in the aircraft noise modeling process included the following information:

- Airspace – airspace restrictions surrounding the Airport
- Aircraft Fleet Mix – aircraft types operating or forecasted to operate at the Airport
- Time of Day – time of day when aircraft operation takes place
- Stage Length Flown – destination and origin of departing and arriving flights
- Runway Use – distribution of aircraft operations on runway ends
- Flight Paths and Flight Path Utilization – location and direction of aircraft operations surrounding the Airport

Though a particular sound may be measured in decibels, the noise emanating from airport operations rises, falls, and even ceases in many areas throughout the day. Various noise descriptors or metrics have been developed to reflect how people are affected by the time-varying noise exposure levels resulting from aircraft operations. The CNEL metric is currently the recognized noise descriptor for transportation noise sources in the State of California.

The CNEL metric employs the equivalent sound level, a single numerical noise rating which, over a given period of time, would represent the same noise energy as the time-varying sound level. The CNEL metric was derived to account for the greater annoyance caused by sound intrusion during the evening and at night. It augments the equivalent sound level occurring between 7:00 p.m. and 10:00 p.m. by 5 dB, and from 10:00 p.m. and 7:00 a.m. by 10 dB before being combined with the equivalent sound level for the period from 7:00 a.m. to 10:00 p.m. The CNEL provides a numerical description of the weighted 24-hour cumulative noise energy level using the A-weighted decibel scale, typically over a period of a year.
Existing Conditions Noise Contours

Using information supplied by the recently prepared Draft Environmental Assessment\(^{43}\) (AFRC EA) by the Air Force Reserve Command (AFRC) a total of 37,297 annual aircraft operations were included in the noise analysis for 2010 existing conditions. The operations consisted of military aircraft operations only as no civilian aircraft currently operate at the Airport. These include operations by both based and transient military aircraft, U.S. Customs operations, and operations associated with the March Aero Club. All operations, outside of those flown by the March Aero Club, took place on Runway 14-32. Due to its length (3,059 ft.) and existing March ARB regulations (see Appendix F – MJPA Support Documentation) use of Runway 12-30 is restricted to only those flown by the March Aero Club. Based on conversations and information supplied by the MJPA and the MARB Airport Traffic Control Tower (ATCT) it was determined that 94 percent of the operations would depart or arrive on Runway end 32 (north flow), while 6 percent of the operations would be conducted on Runway end 14 (south flow). The resulting noise contours for 2010 existing conditions are depicted over the surrounding land uses on Figure 4-1.

As shown, the CNEL 65 dB noise contour extends off of the runway centerlines of Runway 14-32 with the 65 CNEL contour extending approximately 2.8 miles to the southeast from the Runway 32 threshold, and approximately 1.9 miles to the north from the Runway 14 threshold. The 65 CNEL contour extends into areas of residential, commercial, agricultural, and vacant/open space land uses. According to the noise analysis, approximately 54 homes fall within the 65 CNEL contour under the 2010 existing conditions.

Future No-Action Noise Contours

As stated, according to the forecasts contained in the 2010 AFRC EA, military operations are expected to increase to 45,229 annual operations in 2011. The change is a result of the anticipated increase in KC-135R operations by 59 percent, which results in an additional 7,932 operations per year. Outside of the increase in KC-135R operations, there are no anticipated changes to the aircraft fleet mix or operational configurations expected under the 2016 future no-action conditions when compared to the 2010 existing conditions. The increase in military aircraft operations results in slight changes to the noise contours when comparing the 2010 existing conditions to the 2016 future no-action conditions. Contours developed for the 2016

\(^{43}\) Air Force Reserve Command, Draft Environmental Assessment for Proposed Military Construction and Total Force Integration at March Air Reserve Base, California, June 2010.
future no-action conditions demonstrate that the CNEL 65 dB contour now extends approximately 2.9 miles to the southeast from the Runway 32 threshold and approximately 1.95 miles to the north from the Runway 14 (see Figure 4-2). According to the noise analysis, this increase results in an additional 52 homes that fall within the 65 CNEL contour under the 2016 future no-action conditions.

**Future With-Action Noise Contours**

Using forecasts developed in the 2010 AFRC EA and the 2010 March ARB/IP General Aviation Assessment\(^{44}\) for both military and civilian aircraft operations, 51,079 annual operations were modeled in the noise analysis under the 2016 future with-action conditions. The increase in aircraft operations was directly attributed to the construction of the Proposed Action and expected introduction of civilian aircraft operations. According to the 2010 GA Assessment, it is projected that there will be 5,850 annual GA aircraft operations conducted in 2016. Figure 4-3 depicts the CNEL noise contours for the 2016 future with-action conditions versus the 2016 future no-action conditions. Even with the increase in operations, the CNEL 65 dB contour shows little to no growth and remains consistent with the 2016 future no-action conditions.

**No-Action Alternative**

There would be no changes to aircraft operations at the Airport under the 2016 No-Action Alternative. As a result, there would be no significant noise impacts based on federal guidelines.

**Proposed Alternative**

Noise contours were prepared for the 2016 future no-action and with-action conditions and placed over existing land uses surrounding the Airport. As shown on Figure 4-3 comparisons between the conditions demonstrate that there were no increases to the 65, 70, or 75 CNEL noise contours as a result of the Proposed Action. The analysis concludes that the introduction of 5,850 annual operations (16 daily operations) of GA aircraft would have negligible impact on the size and shape of the noise contours. Figure 4-4 further exhibits the impact of aircraft noise created by the Proposed Action by displaying the noise contours that were generated by just the forecasted 5,850 annual operations of GA aircraft operations. As shown, the CNEL 65 dB contour does not extend outside of the airport boundary. Therefore, the noise analysis concludes that the Proposed Action would not result in significant noise impacts as defined by FAA Order 1050.1E.

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\(^{44}\) March Air Reserve Base/IP, General Aviation Assessment, 2010.
Legend

- 65 CNEL
- 70 CNEL
- 75 CNEL
- Study Area Boundary
- Airport Boundary
- MJPA Owned
- Municipal Boundary
- Highway
- Road
- Historic District
- Agricultural
- Commercial
- Residential
- Vacant/Open Space/Other

Source: Imagery from NAIP (2010); roads and streams/canals from Esri 2010; land use and municipal boundaries from Riverside County (2010); airport boundary from MJPA; noise contours from ESA (2011).
Source: Imagery from NAIP (2010); roads and streams/canals from ESRI 2009; land use and municipal boundaries from Riverside County (2010); airport boundary from MJPA; noise contours from ESA (2011).
4.3.2 Compatible Land Use

The compatibility of existing and planned land uses in the vicinity of an airport is usually associated with the extent of the Airport’s noise impacts. Therefore, there must be assurances that zoning laws, current infrastructure and the adoption of new zoning regulations are compatible with the Airport’s location and its forecasted noise contours.

Significance thresholds for CNEL levels have been established when evaluating the compatibility of surrounding land uses. These are provided in FAA Order 1050.1E and will be used in determining the significance of noise impacts at the federal level. The MJPA and surrounding municipalities have also developed their own thresholds of significance in which noise impacts will also be evaluated. All thresholds of significance have been included in Appendix H – Noise Analysis.

Additionally, the Department of Defense (DOD) developed the AICUZ Program to protect aircraft operational capabilities at its installations and to assist local government officials in protecting and promoting public health, safety, and quality of life (see Appendix F – MJPA Support Documentation). Generally, AICUZ studies describe three constraints that affect or result from flight operations. These constraints include aircraft noise exposure, height restrictions, and accident potential.

No-Action Alternative

The present airport property and surrounding land uses were shown previously on Figure 3-1. According to the General Plan of the March Joint Powers Authority\(^{45}\) the project area is designated as aviation use. Areas surrounding the project area are predominantly vacant with some commercial and limited residential land use as well. There would be no additional impacts to surrounding land uses resulting from the No-Action Alternative.

Proposed Alternative

Land uses adjacent to the project area are composed of vacant lots, commercial use, and limited residential properties. As discussed under the impact category, Section 4. 3-1 - Noise, the Proposed Action will not result in changes to noise contours when comparing the 2016 future no-action conditions to the 2016 future with-action conditions. As a result the Proposed Action would not cause noise-sensitive areas to experience an increase in noise of CNEL 1.5 dB or more at or above CNEL 65 dB noise exposure when compared to the No-Action Alternative. Since all surrounding land uses are compatible and the Proposed Action will not result in an increase in noise exposure level to noise sensitive areas, there will be no significant impacts to compatible land uses.

According to the Riverside County Airport Land Use Commission (RCALUC) the construction of the 10,000 gallon aboveground storage tank (AST) to house fuel is considered a high risk land use. However, the storage of aviation fuel and other aviation-related flammable materials on airport property are exempted from this criterion. Even though exempted, alternatives to the construction of the AST were reviewed. These included using one of the existing 25,000 gallon vacant tanks, construction of a smaller 5,000 gallon tank, and alternate locations for construction. It was determined that the 10,000 gallon AST and its location (see Figure 2-3) were the Proposed Alternative based on location, existing infrastructure, accessibility, existing vehicle access procedures, and mitigation measures that were incorporated into the development of the existing fuel storage facility. However, before design begins the MJPA will review the size of the proposed AST to determine if a lesser capacity would be sufficient to meet the anticipated demand. Based on the aviation forecasts only a small percentage (less than 15 percent) of the forecasted number of GA aircraft would use AVGAS. The AST would only be constructed when the future aviation demand warrants it.

During construction and demolition, surrounding land uses may be subjected to short-term impacts associated with a temporary increase in noise from equipment and increased traffic in the vicinity of construction sites. However, these short-term impacts are not expected to significantly impact the surrounding land uses as they are most commonly used for agriculture or open space. Additionally, the number of employees (estimated at less than 10)/users accessing

the area on a day-to-day basis is not expected to have a significant impact on surrounding land uses as Heacock Street has the capacity to handle the expected increase.

The MJPA submitted a Land Use Assurance Letter to the FAA on December 13, 2011, verifying that the Proposed Action is consistent with existing land use plans for the MJPA (see Appendix F – MJPA Support Documentation).

**Mitigation**

The MJPA will continue to enforce that all vehicles operating in the fuel storage facility area will abide by those measures outlined in the Enhanced Fuel Farm/Fuel Storage Facility Security Measures and Fuel Vehicle Access Procedures (see Appendix F – MJPA Support Documentation). However, because those previously imposed mitigation measures are adequate to ensure there is no significant impact, no further project-specific mitigation measures are required for this project.

### 4.3.3 Air Quality

There are two laws that directly apply to air quality for airport development projects, NEPA and the Clean Air Act (CAA). The CAA established the National Ambient Air Quality Standards (NAAQS) for six criteria pollutants. 47 Under the CAA if a Proposed Action is subject to federal funding or approval it must conform to the goals set forth for eliminating or reducing the number of violations of the NAAQS in the state in which the action is to take place. These goals are outlined under State Implementation Plans (SIP). An area that violates national primary or secondary NAAQS for one or more of the United States Environmental Protection Agency (USEPA) designated six criteria pollutants it is referred to as non-attainment. A maintenance area is one that has previously been in violation of the NAAQS but has since implemented an avoidance plan and has had no additional violations over an extended period of time. If an area is designated as non-attainment or maintenance the FAA is required to assure that the Proposed Action conforms to the SIP. This may include the need to perform a conformity determination in accordance with regulations in 40 CFR Part 93.

Under NEPA, federal agencies are required to assess the impacts major federal actions may have on air quality and the human environment. As part of the NEPA process, the Proposed Action’s

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47 Carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen oxides (NOₓ), particulate matter (PM), ozone (O₃), and lead (Pb).
impact on air quality is assessed by evaluating the impact of the Proposed Action on the NAAQS. The methodology for evaluating the need to conduct an air quality analysis is provided in the FAA and USEPA manual, *Air Quality Procedures for Civilian Airports & Air Force Bases*. Figure 1 in the manual provides a decision tree/flow chart that is used to determine if an air quality assessment is needed under NEPA regulations.

**Air Quality Analysis**

March Inland Port is located in Riverside County, California, and within the South Coast Air Basin which is regulated by the South Coast Air Quality Management District (SCAQMD). In accordance with procedures outlined in *Air Quality Procedures for Civilian Airports & Air Force Bases*, the Airport and the Proposed Action’s impacts to air quality were evaluated based on the following:

- Determine if Indirect Source Review is applicable;
- Determine the action’s general conformity with the SIP; and
- Determine if the action exceeds NAAQS activity levels.

**Indirect Source Review:** Based on a review of the State Indirect Source Review Regulations, only California’s North Coast Air Basin requires an Indirect Source Review for proposed airport actions (See Appendix G – Resource and Agency Support Documentation).

**General Conformity with SIP:** The General Conformity Rule (Rule) applies to a federal action that is located in an area designated nonattainment or maintenance by the USEPA. Only pollutants causing the area to be designated as nonattainment or maintenance are relevant and evaluated under the Rule. The net increase in emissions of the pollutants are compared against the threshold levels established in the Rule, known as the de minimis thresholds, published at 40 CFR 93.153(b)(1)-(b), Applicability Analysis. Based on a review of the USEPA Greenbook (September 16, 2010) the Airport is located within a non-attainment area for the 8-hour ozone, particulate matter (PM10) (fine particles with a diameter 10 micrometers or less), and particulate

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matter (PM$_{2.5}$) (fine particles with a diameter 2.5 micrometers or less) standards. The South Coast Air Basin is also a maintenance area for carbon monoxide (CO). As a result, an emissions inventory is required to determine whether the Proposed Action would exceed USEPA de minimis threshold levels for those pollutants (see Table 4-1). If the increase in emissions from the Proposed Action does not equal or exceed these thresholds, the action is assumed to comply with the Rule and no further analysis is required under CAA Section 176(c)(1). If the threshold levels are exceeded a General Conformity Determination would be required.

**Table 4-1**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Area Type</th>
<th>Tons/Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone (VOC or NOx)$^{51}$</td>
<td>Extreme nonattainment</td>
<td>10</td>
</tr>
<tr>
<td>Carbon monoxide, SO2 and NO2</td>
<td>All nonattainment and maintenance areas</td>
<td>100</td>
</tr>
<tr>
<td>Particulate Matter (PM$_{10}$)</td>
<td>Serious nonattainment</td>
<td>70</td>
</tr>
<tr>
<td>Particulate Matter (PM$_{2.5}$)</td>
<td>All nonattainment and maintenance areas</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: 40 CFR 93 § 153, Revisions to the General Conformity Regulations

The emissions inventory that was prepared for the Proposed Action includes the emissions generated by the following sources:

- Aircraft Fleet Mix and Activity Levels
- Aircraft Time in Mode
- Aircraft Emission Factors
- Ground Support Equipment (GSE)
- Auxiliary Power Units (APU)
- Fuel Storage Tanks
- Construction Equipment

The latest version of the FAA-required and USEPA-approved Emissions and Dispersion Modeling System (EDMS 5.1.2) was used to estimate emissions from aircraft engines and GSE.

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$^{51}$ In accordance with USEPA requirements, the emissions inventory includes assessing the rates of increase of ozone precursor’s nitrogen oxides (NOX) and volatile organic compounds (VOC). Since the rate of increase of ozone emissions cannot be estimated through modeling the USEPA considers the rates of increase of these pollutants to reflect the likely rate of ozone emissions increases.
The URBEMIS2007 model was used to calculate all other emissions associated with construction of the Propose Action. Detailed information regarding the air quality analysis is located in Appendix I – Air Quality Analysis. This includes the complete list of input and output data from EDMS and URBEMIS2007.

**NAAQS Assessment:** NEPA requires that an assessment be conducted to determine if a proposed action will generate emissions resulting in an exceedance of the NAAQS. However, where a project is unlikely to result in a NAAQS violation, no such assessment is required. Consistent with activity thresholds identified in *Air Quality Procedures for Civilian Airports & Air Force Bases*, if the GA activity at an airport is below 180,000 annual operations a NAAQS Assessment is not required.

**No-Action Alternative**

No construction activities would occur with this alternative and there would be no changes to airport operations. As a result there would be no increases in airport produced air emissions or overall impacts to air quality under the No-Action Alternative.

**Proposed Alternative**

**General Conformity with SIP:** An emissions inventory was prepared comparing the net emissions increase that would result from the Proposed Action alternative versus the No-Action Alternative. A summary of emissions impacts is given in Table 4-2.

<table>
<thead>
<tr>
<th>Year</th>
<th>Particulate Matter (PM10)</th>
<th>Particulate Matter (PM2.5)</th>
<th>Carbon Monoxide (CO)</th>
<th>Volatile Organic Compounds (VOC)</th>
<th>Nitrogen Oxides (NOX)</th>
<th>Sulfur Oxides (SOX)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>No Action Alternative (tons/year)</td>
<td>5.36</td>
<td>5.31</td>
<td>521.17</td>
<td>84.51</td>
<td>621.06</td>
</tr>
<tr>
<td></td>
<td>Proposed Alternative (tons/year)</td>
<td>12.76</td>
<td>7.17</td>
<td>571.94</td>
<td>89.73</td>
<td>631.03</td>
</tr>
<tr>
<td></td>
<td>Emissions Increase (tons/year)</td>
<td>7.40</td>
<td>1.86</td>
<td>50.77</td>
<td>5.22</td>
<td>9.97</td>
</tr>
</tbody>
</table>
For each year of analysis, the increase in net emissions from the Proposed Action is below the de minimis thresholds for all pollutants of concern. The highest rate of increase under each alternative is from emissions of CO caused by the increased use of piston-engine aircraft and twin-engine turboprops. In 2016, emissions of NOx, VOC, PM and PM2.5 are anticipated to decrease under the Proposed Action condition as construction equipment would no longer be necessary. Emissions under the No-Action alternatives would remain the same for both 2012 and 2016 as military operations are not anticipated to increase over that time period, nor is any additional development planned within the study area. Although the emissions inventory shows that there would be an increase in emissions from the Proposed Action those increases are below the de minimis threshold levels. Therefore, the Proposed Action is assumed to comply with the Rule and no further analysis is required under CAA Section 176(c) (1).

**NAAQS Assessment:** After the realignment of March Air Force Base (AFB), the MJPA pursued the establishment of March Air Reserve Base as a joint use facility. A joint use agreement between the MJPA and the U.S. Air Force (USAF) was executed on May 7, 1997. Currently, the MJPA has an agreement with the USAF to limit civilian operations to 21,000 per year. This agreement was amended in 2008 to clarify that GA aircraft are permitted to use the March Inland Port. However, due to the lack of public use facilities there are currently no GA aircraft operations at the Airport. As determined in the General Aviation Assessment (see Appendix E), the forecasted number of GA aircraft operations estimated at RIV for 2011 (which was the year that operations were anticipated to begin) is 4,880 total operations. (Due to the delayed schedule, this level of operations will be used to represent the forecasted annual activity for the first year following the Proposed Action’s completion.) The Proposed Action is solely intended for the purposes of developing support facilities to service GA aircraft and would have no affect on

<table>
<thead>
<tr>
<th>Year</th>
<th>Threshold Exceedance</th>
<th>No Action Alternative (tons/year)</th>
<th>Proposed Alternative (tons/year)</th>
<th>Emissions Increase (tons/year)</th>
<th>Threshold Exceedance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>No</td>
<td>5.36</td>
<td>8.07</td>
<td>2.71</td>
<td>No</td>
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<tr>
<td></td>
<td>No</td>
<td>5.31</td>
<td>5.86</td>
<td>0.55</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>521.17</td>
<td>575.23</td>
<td>54.06</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>84.51</td>
<td>87.71</td>
<td>3.20</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>621.06</td>
<td>622.30</td>
<td>1.24</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>54.91</td>
<td>55.03</td>
<td>0.12</td>
<td>No</td>
</tr>
</tbody>
</table>

Source: FAA Emissions and Dispersion Modeling System (EDMS), Version 5.1.3, 2010. ESA analysis, 2010 (see Appendix I)
military or cargo operations at the Airport. As stated, if GA activity levels are below 180,000 annual operations a NAAQS Assessment is not required. Since the net emissions resulting from the Proposed Action were below the de minimis thresholds levels it is unlikely that the pollutant concentration levels would exceed a NAAQS standard. As a result of the forecasted low number of operations and the results of the emissions inventory a NAAQS was assessment was not completed.

Since the de minimis threshold levels are not exceeded and the SCAQMD does not require an Indirect Source Review, there will be no impacts to air quality as a result of the Proposed Action. The Proposed Action conforms to the California SIP, NEPA, and meets the requirements of conformity given under CAA Section 176(c)(1).

4.3.4 Climate

Although there are no federal standards for aviation-related GHG emissions, it is well-established that GHG emissions can affect climate.52 The Council on Environmental Quality (CEQ) has indicated that climate should be considered in NEPA analyses. As noted by CEQ however, “it is not currently useful for the NEPA analysis to attempt to link specific climatological changes, or the environmental impacts thereof, to the particular project or emissions; as such direct linkage is difficult to isolate and to understand”.53

No-Action Alternative

There would be no increase in GHG emissions as a result of the No-Action Alternative.


Proposed Alternative

The Proposed Action would increase GHG emissions by 4,273 MT CO₂e over the No-Action Alternative. This includes the GHG emissions associated with construction activity and operations. This increase would comprise less than 6.442% percent of U.S.-based GHG emissions and less than 8.72% percent of global GHG emissions.  

4.3.5 Water Quality

The Federal Water Pollution Control Act provides the authority to establish water quality standards, control discharges, develop waste management treatment plans and practices, prevent or minimize the loss of wetlands, and regulate other issues concerning water quality. Airport-related water quality impacts can occur from both point and non-point sources at airports. If not properly controlled, the resultant water quality impacts may adversely affect animal, plant, or human populations. FAA Order 1050.1E indicates that an EA should provide sufficient information to demonstrate that water quality standards and permit requirements can be met. In addition, if a proposed project could potentially contaminate a USEPA designated aquifer, consultation with USEPA is required.

In 2008, the MJPA prepared a Water Quality Management Plan (WQMP) that outlines guidance procedures and formats to implement the National Pollution Discharge Elimination System (NPDES) land development requirements at the Airport (see Appendix F – MJPA Support Documentation). Review of the WQMP and correspondence made with the California Regional Water Quality Control Board identified the following permitting requirements for the Proposed Action:

54 CO₂ equivalents (CO₂e) is the universal unit of measurement used to indicate the global warming potential for different GHG.


57 National Pollution Discharge Elimination System (NPDES), New Development & Redevelopment Guidelines for Project Under the March Joint Powers Authority, January 8, 2008.
• NPDES General Construction Storm Water Permit (Order No. 99-08-DWQ, CAS000002)
• NPDES General Industrial Activities Permit (Order No. 97-03-DWQ, CAS000001)
• Section 401 Water Quality Certification (WQC) from the State of California

No-Action Alternative

There would be no water quality impacts resulting from the No-Action Alternative.

Proposed Alternative

The Proposed Action will result in an increase of approximately 5.39 acres of impervious surface. This increase in impervious surface of less than one percent of the total MARB existing impervious surfaces would result in minor impacts to stormwater runoff at the Airport.

Preliminary engineering has indicated that a detention basin would be constructed to temporarily hold stormwater while slowly draining east into the Heacock Channel. The basin will help detain water as to not increase the queue of water flow entering the channel but to also increase its water quality before entering downstream receiving waters as additional suspended solids will be removed through natural processes. Although the development area is not prone to flooding, the drainage improvements would result in minor beneficial impacts to stormwater drainage and discharge from the airfield. The detention basin will be designed, engineered, constructed and maintained within the standards and practices outlined under FAA AC No: 150/5200-33B to ensure that the basin drains in the required time period and does not become a wildlife attractant.

The MJPA is currently completing a hydrology study for the project area. Once the study is complete and full design has begun on the proposed apron area it will be determined if the detention basin can be effective in eliminating all potential water quality impacts to surrounding waterways as outlined in the WQMP. The insertion of an oil/water separator may be necessary to help eliminate the potential for spillage to enter surrounding waterways from the pavement areas where aircraft are parked and fueled.

The minor increase in stormwater runoff as a result of the Proposed Action will not result in the following:

1. Violation to the conditions or terms contained in the WQC and/or existing NPDES permit as the Proposed Action will be designed to comply with all state water quality standards;
2. Additional adverse effects on the water quality of sensitive aquatic habitats, including but not limited to, wetlands or critical habitats for federally or state-protected species as surveys have indicated none exist within the project area; or
3. Threats to the integrity of public drinking water supplies as the Proposed Action will be completed in accordance with the WQMP and all state and federal standards.

Mitigation

Prior to construction, the MJPA would be required to obtain coverage under a NPDES Construction General Stormwater Permit by, 1) filing a Notice of Intent for the construction activity, and 2) preparing a Storm Water Pollution Prevention Plan (SWPPP) to manage stormwater associated with the construction activity. The SWPPP must include those BMPs outlined in the WQMP to minimize the potential for exposed soils or other contaminants from reaching surface waters during or following construction activities. Such BMPs would include the use of silt fences, covering of soil stockpiles, use of secondary containment for the temporary storage of hazardous liquids, establishment of buffer areas near intermittent streams, and revegetation of disturbed soils that will not be paved or covered by structures in a timely manner. Adherence to the requirements of the NPDES construction permit would minimize impacts to water resources during construction, resulting in a minor impact. The MJPA would be responsible for the development of the SWPPP to meet Construction General Permit requirements.

Additionally, guidelines established in FAA Advisory Circular 150/5370-10B Standards for Specifying Construction of Airport will be incorporated in project design specifications to further mitigate potential impacts. These guidelines include temporary measures to control water pollution, soil erosion, and filtration through the use of berms, fiber mats, gravels, mulches, slope drains and other erosion control methods. Erosion and sedimentation control measures will be implemented during construction and periodic inspections will be conducted by the selected construction supervisor in the post-construction phase.
4.3.6 Wetlands, Jurisdictional or Non-Jurisdictional

Executive Order 11990, *Protection of Wetlands*, defines wetlands as:

“those areas that are inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction.”  

Federal agencies are required to minimize the destruction, loss, or degradation of wetlands. Specifically, Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344) places the responsibility to regulate all fill activities performed in the waters of the United States with the United States Army Corps of Engineers (USACE). As a result, the protection, preservation and enhancement of the nation’s wetlands, to the fullest extent practicable during the planning, construction, funding and operation of transportation facilities and projects, are also to be assured by the FAA.

This section outlines the potential for jurisdictional wetlands to occur as subject to regulation under Section 404 of the CWA of 1977, Section 401 of the CWA, Porter-Cologne Water Quality Control Act (Porter-Cologne), and Section 1602 of the Fish and Game Code (Streambed Alteration Agreements) on the site of the Proposed Action. In addition, any recommended mitigation measures resulting from the assessment of potential wetlands will be outlined in this section.

**No-Action Alternative**

There are no expected wetland impacts as a result of the No-Action Alternative.

**Proposed Alternative**

The location of the Proposed Action consists of terrain that is flat and drainage that flows towards the southeast. Two man-made, primarily unvegetated swales drain the area and a small area dominated by hydrophytic vegetation is located at the head of one of the swales. These swales were likely constructed by the military to facilitate drainage of the surrounding area. Approximately 0.6 acres of these swales would be impacted as a result of the Proposed Action.

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In some areas, the swales do support species that may be associated with seasonal wetlands, including nutsedge (Cyperus eremostis) and curly dock (Rumex crispus). These species are not dominant in the swales and compose only a minor percentage of the overall vegetative cover.

The Western Riverside Area California Soil Survey (NRCS 2009) shows five soil series mapped within the location of the Proposed Action (see Appendix G – Resource and Agency Documentation). The following soils are mapped within the study area:

- Exeter sandy loam (EnA)
- Exeter sandy loam (EpA)
- Greenfield sandy loam (GyA)
- Monserate sandy loam (MmB)
- Ramona sandy loam (RaA)

The 2009 ESA Wetlands Assessment\(^{60}\) concluded that these soils did not meet the definition of hydric soil and did not show any hydric soil indicators. The assessment concludes that the project site does not support wetlands or waters of the U.S. that would be regulated under Section 404 of the Clean Water Act. To be considered jurisdictional under the USACE as “other waters of the U.S.,” the site would need to exhibit a defined bed and bank, as well as an ordinary high water mark (OHWM). None of these features were present.

However, even though dredge and fill activities in these wetlands do not require USACE approvals, these wetlands may be natural resources that must be assessed under NEPA. Significant impacts to these wetlands abilities to provide groundwater recharge and discharge; attenuate flood waters; provide nutrient removal, retention and transformation; and provide sediment, toxicant and pathogen retention should not occur as a result of this Proposed Action. All impacts would be avoided through design and all proper permitting would be obtained prior to construction.

A determination has been made that the features on site do not require a Streambed Alteration Agreement or notification to the California Department of Fish & Game (CDFG) outside of the Environmental Impact Report (EIR) that is currently being prepared to satisfy California Environmental Quality Act (CEQA) requirements. The features could potentially be regulated by the Regional Water Quality Control Boards (RWQCB) under Porter-Cologne. If they are determined to be waters of the state, impacts would require a Waste Discharge Requirement

\(^{60}\) *March Air Reserve Base Jurisdictional Determination*, Environmental Science Associates, October 2009.
(WDR) authorization. Further, coordination is taking place as part of the CEQA review process and will be completed prior to design. However, due to the man-made nature of the swales, significant impacts to non-jurisdictional or jurisdictional wetlands are not expected as a result of the Proposed Action.

The FAA contacted the RWQCB and USACE for concurrence with their determination that there would be no impacts to wetlands as a result of the Proposed Action. However, no response has been received. The USACE and the RWQCB were contacted to verify the results of the determination but no response from either agency was provided. A second consultation letter was forwarded to the USACE by the FAA on May 9, 2011 (see Page 988 of Appendices, within Appendix J – FAA Consultation).

Mitigation

As discussed above, the USACE and the RWQCB were contacted to verify the results of the determination but no response from either agency was provided. An additional consultation letter was forwarded to the USACE by the FAA on May 9, 2011 (see Page 1,015 of Appendices, within Appendix J – FAA Consultation). If directed by the USACE, the MJPA could process and approve jurisdictional determination (as needed) and could obtain a “No Permit Required” letter from the USACE prior to construction.

4.3.7 Fish, Wildlife and Plants

The provisions set forth in the Endangered Species Act (ESA) of 1973 require the FAA to determine if a Proposed Action under its purview would affect a federally listed species or habitat critical to that species (critical habitat). In addition, candidate species, any species that either the USFWS or NMFS is considering for listing as “endangered” or “threatened”, but has not yet been the subject of a proposed rule, shall be identified in order to alert federal agencies of potential proposals or listings.

The FAA must consult with the USFWS regarding potential impacts to federally listed species or habitat.

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Presented in this section is an evaluation of the flora and fauna found and known to inhabit the study area. The evaluation includes an analysis of threatened and endangered species along with their likelihood to inhabit the area encompassed by the Proposed Action.

**No-Action Alternative**

There would be no additional impacts to biotic resources, including federally listed endangered or threatened species, as a result of the No-Action Alternative.

**Proposed Alternative**

Impacts to biotic resources from construction and demolition activities are expected to be minor due to the nature of the existing vegetation. The proposed development includes the grading or disturbance of approximately 7.4 acres of open grasslands. The Proposed Action has the potential to impact four federally listed species (see Table 4-3).

### TABLE 4-3

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Status</th>
<th>Potential Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephens’ kangaroo rat</td>
<td>FE</td>
<td>Low – Grasslands in study area provide marginal habitat. Grasslands are dominated by annual grass species and approach 100 percent cover throughout the study area. Grasslands in the study area are highly fragmented and isolated and are not adjacent to coastal sage scrub. No perennial species (such as sagebrush or buckwheat) are present in study area.</td>
</tr>
<tr>
<td>Munz’s onion</td>
<td>FE</td>
<td>Low – Grasslands in study area provide marginal habitat.</td>
</tr>
<tr>
<td>San Diego ambrosia</td>
<td>FE</td>
<td>Low – Grasslands in study area provide marginal habitat.</td>
</tr>
<tr>
<td>Thread-leaved brodiaea</td>
<td>FT</td>
<td>Low – Grasslands in study area provide marginal habitat.</td>
</tr>
<tr>
<td>Vernal pool fairy shrimp</td>
<td>FT</td>
<td>Low - Study area does not provide suitable habitat. Swales on site do not remain inundated for long enough periods to support this species.</td>
</tr>
</tbody>
</table>


**KEY:**

Federal: (USFWS)

FE = Listed as Endangered by the Federal Government

FT = Listed as Threatened by the Federal Government

FC = Candidate for listing by the Federal Government
Federally listed species that were identified in Tables 3-3 and 3-4 that were not included on Table 4-3 were omitted as there is not suitable habitat within the project area for those species. Specifically, a survey for the vernal pool fairy shrimp species was conducted in 2010 by LSA Associates on the site of the Proposed Action, (see Appendix G – Resource and Agency Documentation). The survey concluded that no habitat was observed that would support the Fairy Shrimp species within the boundaries of the Proposed Action. One water feature located north of the Proposed Action was determined to potentially contain habitat for the Fairy Shrimp species. However, this is outside of the boundaries of the project area, and will not be impacted by the Proposed Action.

Potential for critical habitat to the Stephens Kangaroo Rat (SKR) was identified within the boundaries of the Proposed Action during a field survey made by the USFWS on June 13, 2011. According to the USFWS representative two burrows were located within the survey area that had the potential to provide habitat for the species. No additional indicators of the species (individuals or scat) were identified during the field visit. The field visit did not result in the identification of any other federally listed species or critical habitat within the survey area.

Burrowing owls have historically been sited within the area surrounding the Airport. In May of 2008, a burrowing owl survey was conducted on parcels adjacent to the project site (Kimley-Horn and Associates, May 2008). It was determined the site consisted of marginal burrowing owl habitat as most entrances were overgrown with vegetation and appeared to be abandoned or inactive. No burrowing owls were observed during field surveys and no indirect observations, such as molted feathers, cast pellets, or excrement at or near a burrow entrance, were made during field surveys.

**Mitigation**

Additional coordination with the USFWS was completed in regards to potential SKR habitat (beginning on Page 985 of the Appendices, within Appendix J – FAA Consultation). Following their discovery of potential SKR habitat (burrows) during a site survey, the USFWS requested that trapping be completed. Having coordinated in the past with the Riverside County Habitat Conservation Agency (RCHCA or Agency) regarding its SKR Habitat Conservation Plan (HCP or Plan), (including coordination during the MJPA General Plan environmental review process), the March Inland Port Airport Authority (MIPAA), (a governing body created by and under the MJPA that is responsible for the development and operation of MIP), contacted the Agency regarding the potential for coverage under the HCP. The Plan proposes conservation,
mitigation, and monitoring measures in order to receive a USFWS permit pursuant to the federal ESA and CDFG management authorization pursuant to California Fish and Game Code Sections 2081 and 2835 (collectively “Permits”) authorizing “take” of SKR in accordance with the terms and conditions of the Permits and the HCP for SKR in Western Riverside County, California. Although not originally included in the Plan, the MIPAA requested coverage for this project and an agreement has been finalized that “provides the framework for the RCHCA to issue Take Authorization to MIPAA for the construction, operation and maintenance of the Project in accordance with the terms and conditions in the Permits, SKR HCP, and Implementation Agreement” (see Appendix G – Resource and Agency Documentation for the final agreement between the RCHCA and MIPAA, which was signed on June 6, 2012). In order to obtain Take Authorization, the MIPAA has received approval of a Certificate of Inclusion (COI) for the project. The COI document was approved on June 7, 2012 (see Appendix G – Resource and Agency Documentation).

The COI and Take Authorization will allow the MIPAA/MJPA to avoid trapping activities. Under the Permits, the MIPAA will be allowed incidental take of SKR within a designated 19.5-acre area that includes the Proposed Action, provided all applicable terms and conditions of the Permits and HCP are met. Following the decision to pursue inclusion in the HCP, the FAA initiated formal Section 7 consultation with the USFWS on April 16, 2012, requesting their opinion of the Proposed Action (see Page 1,005 of the Appendices, within Appendix J – FAA Consultation). The USFWS has completed its Biological Opinion (BO), dated June 18, 2012, and they have provided concurrence with the Take Authorization approach as described. The USFWS BO can be found in Appendix G – Resource and Agency Documentation.

Should the presence of any of the species listed in Table 4-3 be found during construction, activities would be stopped until a qualified biologist can evaluate the potential impacts to federally endangered and threatened species as a result of construction activities.

The project site is currently managed annual grassland and developed with the existing facilities. Currently, no areas of riparian habitats or other sensitive natural communities are located on the project site. Therefore, the Proposed Action would not have a substantial effect on any riparian habitat or other sensitive natural community identified in local or regional plans, or by the CDFG or the USFWS.

Surveys for burrowing owls shall be conducted during both the breeding season and the nonbreeding season prior to any construction activities occurring in suitable habitat (i.e. annual
grassland with burrows). The project proponent shall conduct preconstruction surveys in suitable nesting habitat for burrowing owls within 250 feet of project activities prior to construction that will occur between February 1 and August 31 (breeding season), and within 165 feet of project activities that will occur between September 1 and March 31 of any given year (nonbreeding season). If active burrows are recorded within 250 feet of project activities, the project proponent will consult with CDFG regarding suitable measures to avoid impacting breeding effort. Surveys shall conform to CDFG burrowing owl recommendations.

Pre-construction surveys for tree-nesting raptors shall be conducted within 30 days prior to any construction that will occur between March 15 and September 15 of any given year. Preconstruction surveys shall be conducted by a qualified biologist. All suitable nesting habitat nests are recorded within 250 feet of project activities the project proponent will consult with CDFG regarding suitable measures to avoid impacting the species.

4.3.8 Construction Impacts

Environmental impacts may result due to the use of construction equipment. Environmental impacts include soil erosion, water pollution, air pollution (including dust generation), noise pollution, and solid waste generation. Local, state, and federal regulations have been created to address these potential impacts. This section documents the potential impacts related to the construction of the Proposed Action.

No-Action Alternative

No construction activities would occur with this alternative. As a result there would be no impacts related to construction activities.

Proposed Alternative

Soil Erosion: The risk of soil erosion and the possible release of silt and sediment into the watercourses is a potential impact as a result of the earthwork and site preparation activities during construction activities. This impact is more likely to occur during the initial grading phases of the project due to the exposure of bare soil materials to precipitation events. After construction these impacts typically diminish once the completed site has an established growth of grass and vegetation on the disturbed areas.
**Water Quality:** Water quality impacts are typically due to the erosion of soil and subsequent sedimentation during construction. These impacts can be minimized by implementing erosion and control measures.

**Air Quality:** Air pollution resulting from construction equipment and fugitive dust from excavated land will temporarily impact air quality. Construction of the Proposed Action would generate air emissions through the use of heavy-duty construction equipment, from vehicle trips hauling materials, and from construction workers traveling to and from the project site. In addition, fugitive dust emissions would result from demolition and fine grading activities. Mobile source emissions, primarily NOX, would be generated from the use of construction equipment such as excavators, bulldozers, wheeled loaders, and cranes. During the finishing phase, paving operations and the application of asphalt, architectural coatings (i.e., paints) and other building materials would release VOCs. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and for dust, the prevailing weather conditions. As shown in Table 4-2, construction-related air emissions combined with emissions associated with the increase in aircraft operations would remain at levels below the de minimis thresholds established in the General Conformity Rule. See Appendix I – Air Quality Analysis for detailed information regarding the air quality analysis.

**Noise:** Noise levels from the operation of construction equipment will temporarily increase ambient noise levels in the vicinity of the Proposed Action. Following completion of construction, noise will return to pre-construction levels.

**Mitigation**

**Soil Erosion:** Control of soil erosion will occur through the use of appropriate erosion and sediment control techniques. A soil erosion and sediment control plan will be developed during design consistent with FAA Advisory Circular 150/5370-10A, *Standards for Specifying Construction of Airports*,\(^{62}\) and the NPDES General Permit for stormwater discharges associated with construction activities. Adherence to design standards, inspection and quality control during construction and periodic cleaning of soil erosion and sediment control features will minimize and mitigate the potential for erosion and sedimentation.

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**Water Quality:** An erosion control plan in accordance with federal and state guidelines discussed above will ensure that there are no long-term impacts to water quality. In January of 2008, the MJPA released its own guidance, titled the *National Pollution Discharge Elimination System (NPDES), New Development & Redevelopment Guidelines for Projects Under the March Joint Powers Authority, January 9, 2008* (see Appendix F – MJPA Support Documentation) to establish consistency with resource agency procedures. The guidance includes submittal requirements for all necessary permits associated with water quality and construction.

**Air Quality:** To minimize potential negative impacts, proper and standard construction practices will be used as outlined under FAA AC 150/5370-10A. These can include:

- Periodic watering of dusty on-site travel routes during dry conditions;
- Construction and utilization of a designated construction entrance that will minimize soil being carried onto adjacent roads by construction vehicles leaving the site; and
- Cessation of earthwork activities during particularly dry and high wind conditions if the generation of such dust could potentially impact nearby residences.

It is mandatory for all construction projects in the South Coast Air Basin to comply with SCAQMD Rule 403 for controlling fugitive dust by methods outlined by the Rule on Table 1–Best Available Control Measures. As such, the Proposed Action applicant will comply with Rule 403, which would reduce regional PM10 emissions from construction activities. As a result, there will be no significant construction impacts.

### 4.3.9 Hazardous Materials, Pollution Prevention, and Solid Waste

Federal, state and local laws regulate hazardous materials use, storage, transport, or disposal. In addition, disrupting sites containing hazardous materials or contaminates may cause significant impacts to soil, surface water, groundwater, air quality and the organisms using these resources. Therefore, airport sponsors purchasing or developing land for airport purposes may encounter hazardous materials contamination. Hazardous wastes are solid wastes that are ignitable, corrosive, reactive, or toxic (sometimes called “characteristic wastes”).

The statutory framework related to the evaluation of the Proposed Actions impact on hazardous materials is contained in the Resource Conservation and Recovery Act (RCRA), the

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Comprehensive Environmental Response Compensation and Liability Act (CERCLA), and the Community Environmental Response Facilitation Act (CERFA).

This section evaluates the potential impacts on hazardous materials as a result of the Proposed Action. It is required that the following impacts be evaluated in order to determine whether they meet the significance thresholds established by federal regulations:

- The Proposed Action’s impact on property on or eligible for the USEPA’s National Priorities List (NPL).
- The sponsor’s ability to meet local, state or federal laws and regulations on hazardous materials.
- The sponsor’s ability to resolve (mitigate) issues involving hazardous materials as a result of the Proposed Action.

The Solid Waste Disposal Act notes the term “solid waste” includes garbage, refuse, or sludge from a waste treatment plant, water supply treatment plant, or an air pollution control facility.

Construction, renovation, or demolition of airport development projects typically produces debris (e.g., dirt, concrete, asphalt) that must be properly disposed. Airport sponsors must follow federal, state, or local regulations that address disposing of solid waste. This section provides information on how each alternative under consideration could increase solid waste. It also discusses how to address the effects of increased waste volume and ways to mitigate those effects.

While the FAA does not outline specific significance thresholds for evaluation of solid waste impacts, this section will consider the following conditions:

- Determine whether solid waste would exceed available landfill or incineration capacities or require extraordinary effort to meet applicable solid waste permit conditions or regulations; and
- Local, state, or federal agencies determine that substantial unresolved waste disposal issues exist and may require more analyses.

**No-Action Alternative**

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64 42 U.S. Code Sections et Seq., The Solid Waste Disposal Act (SWDA) of 1965, (now stated in subtitle D of the Resources Conservation and Recovery Act (RCRA)).
There would be no hazardous materials, pollution prevention, or solid waste impacts as a result of the No-Action Alternative.

**Proposed Alternative**

A database search was conducted within a one-mile radius to identify sites within a number of regulatory agency databases. The location of the Proposed Action is part of the MARB, which is identified as a Superfund site on the NPL. Previous uses associated with the MARB activities resulted in a release of PCBs at the now-demolished Building 1305, adjacent to the project area. PCB-contaminated soils at the location of the former building, which has since been developed as the new fuel storage facility, were removed and no further action is required. While the Proposed Action plans to install a new 10,000-gallon AST for aviation fuel at the fuel storage facility, this tank will be located on the east side of the fuel storage facility and would not result in construction activities at the location of the now-demolished Building 1305 and would remain above ground.

Construction activities would require the demolition of an existing 2,000 square foot structure. The structure was constructed in 1971 as a recreation center for military pilots and their families. An asbestos survey was conducted for the former military family recreation facility in the northwest corner of the Proposed Project site, which found non-friable suspect asbestos-containing materials (ACM) in roof mastic and green vinyl floor tile/mastic inside one of the rooms of the building (see Appendix F – MJPA Support Documentation). Based on the age of the recreation center and a preliminary review of its structure the possible presence of ACM or lead-based paint (LBP) have been indicated.

The increase in flight operations resulting from the Proposed Action will result in an increase in maintenance fluids, aircraft lubricants, solvents and fuel. The *General Plan of the March Joint Powers Authority* provides policies to ensure that federal, state and local laws related to hazardous materials are met throughout the development of the Proposed Action. Additionally, those policies provide guidance as to how the sponsor shall resolve any unexpected issues involving hazardous materials as a result of the Proposed Action. These policies include:

- Comply with the enforcement of disclosure laws that require all users, producers, and transporters of hazardous materials and wastes to clearly identify such materials at the site, and to notify the appropriate county, state and/or federal agencies in the event of a violation.
• For disaster preparedness, identify any Planning Area roadways along which hazardous materials may be transported, and restrict the transport of such materials on those routes.
• Ensure the storage, use and transportation of any hazardous material complies with the standards set forth within the errata sheets published for each substance.
• Coordinate with the Riverside County Fire Department and Riverside County Department of Environmental Health to assure improved response and capability of handling hazardous material incidents.
• Ensure aviation related activities comply with both military and civilian standards contained within the approved AICUZ and ALP.
• Ensure development and use of property within the vicinity of the airfield complies with appropriate building standards and codes, including height restrictions, restrictions on use, setbacks, population densities, insulation and materials, as contained within an approved Comprehensive Land Use Plan (CLUP) and appropriate AICUZ.
• Ensure airport operations adhere to appropriate emergency access and response standards and practices.

The sponsor shall ensure that all local state or federal laws and regulations on hazardous materials are met per those measures outlined in the *General Plan of the March Joint Powers Authority*.65

The Riverside County Waste Management Department (RCWMD) operates and maintains the landfills of Riverside County. Waste Management, Inc., is the responsible refuse hauling company that provides solid waste and recycling collection and disposal services to the project area and Riverside County (RCWMD, 2010).

During construction, solid waste may include a variety of building materials that can be recycled. Construction activities would require the demolition of an existing 2,000 square foot structure (previously a recreation center for military pilots and their families). New construction would also generate solid waste consisting of cardboard and other paper products, metals, plastics and other building materials.

Solid waste in the project area is collected at the Perris Transfer Station, which is then transported to Lamb Canyon and El Sobrante landfills. As of January 1, 2010, Lamb Canyon Landfill had approximately nine million tons of remaining capacity and can accept 5,000 tons of

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refuse per day. The El Sobrante Landfill had approximately 39 million tons of remaining capacity as of January 1, 2010, and can accept 4,000 tons per day. Using the Estimated Solid Waste Generation Rate for transportation (0.0108 tons/sq ft/yr) provided by CalRecycle, once the Proposed Action is completed it is estimated that facility operations would produce approximately 270 tons of solid waste a year, therefore it is not anticipated that the Proposed Action would burden designated landfills.

**Mitigation**

Former uses on MARB resulted in hazardous materials releases and soil and groundwater contamination in various locations throughout the base. However, cleanup activities established as part of the U.S. Air Force’s Installation Restoration Program (IRP) are well underway. As mentioned, one IRP site that included the release of PCBs is located within the project area. That site has already been remediated and no further action is required.

While a comprehensive survey and investigation have been completed, the possibility remains that undiscovered contaminated soils or groundwater exists in the project area. In the event construction activities encounter conditions not identified in this report (i.e., chemical drums/containers, non-aqueous phase liquids or other suspect materials), further waste characterization shall be performed to ensure the proper handling and disposal requirements for these materials are met. The construction contracts prepared for the development of the Proposed Action will include a provision that in the event previously unknown contaminants are discovered during construction, or a spill occurs during construction, work shall stop until the National Response Center is notified at 800.424.8802 and the spill is remediated in accordance with all applicable laws.

Prior to demolition of the former military recreation building that would disturb an ACM, a Pre-Demolition/Renovation Inspection shall be conducted by a licensed contractor. Any identified ACMs shall then be removed by a licensed asbestos abatement contractor. Cal/OSHA regulations mandate that only a licensed asbestos abatement contractor be used to abate/remove ACM. The contractor would be responsible for the management and handling of hazardous materials and waste (including removal of any ACM or LBP prior to demolition) in accordance with federal and state regulations and applicable MARB management plans.

Mitigation measures that address solid waste generation and disposal are included in the MJPA General Plan. No additional mitigation measures are required as a result of the Proposed Action.
The airport sponsor shall make every effort and take every means to recycle, reuse, and/or reduce the amount of construction and demolition materials generated by the proposed development that would otherwise be taken to a landfill.

4.3.10 Historic, Architectural, Archaeological, and Cultural Resources

The primary federal law protecting nationally important historic properties is the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 of the NHPA governs federal agencies’ responsibilities to preserve and use historic buildings, while Section 106 of the NHPA, as implemented through 36 CFR Part 800, is intended to require federal agencies to consider the effects of their undertakings on historic properties.

A historic property is, “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register of Historic Places (NRHP) maintained by the Secretary of the Interior” (36 CFR Section 800.16(l)). Properties or sites having traditional religious or cultural importance to Native American Tribes and Hawaiian organizations may qualify.

The State of California implements the NHPA through its statewide comprehensive cultural resource surveys and preservation programs. The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historic Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the state’s jurisdictions.

This sub-section presents the results of a 2011 Cultural Resources Survey Report66 (the report) for the elements associated with the Proposed Action. The report is designed to provide information on historical and archaeological properties within the defined area of potential effects (APE) and to determine how those properties may affect the Proposed Action. A complete copy of the report is provided in Appendix G – Resource and Agency Documentation.

The survey conducted as a part of the report consisted of a records search at the Eastern Information Center of the California Historical Resources Information System, contact with the

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Native American Heritage Commission (NAHC) and appropriate Native American organizations/individuals, and a field survey.

The APE for this project encompasses 25.8 acres, which include an 11.5-acre parcel owned by the MJPA, as well as other MJPA lands, and 5.99 acres of MARB lands to be used for a taxilane connector and drainage improvements (see ESA Cultural Resources Report, specifically Page 609, within Appendix G – Resource and Agency Documentation). The total area of disturbance associated with the development of the Proposed Action is estimated to be approximately 19.5 acres.

**No-Action Alternative**

No construction would occur as a result of the No-Action Alternative resulting in no significant impacts to historic or archaeological resources.

**Proposed Alternative**

The report’s findings note that no recorded prehistoric archaeological sites are located within the project APE or within a ¼-mile radius of the project APE. Additionally, no archaeological resources were recorded during a 2011 survey conducted for the purpose of the report. Although 15 percent of the project APE was inaccessible during the survey, this remaining portion has since been assessed and the findings remained consistent.

According to information provided by the Pechanga Band of Luiseño Indians in a letter dated June 18, 2012, the Proposed Project area is part of the Tribe’s aboriginal territory, evidenced by Luiseño names of several places, rock art, pictographs, petroglyphs, a village complex and an extensive record of Luiseño artifacts within the project vicinity (see Appendix A – Correspondence and Coordination with Stakeholders and Agencies). The Tribe is confident that this area is directly related to the Pechanga Band of Luiseño Indians due to the Tribe’s cultural ties to this area. Therefore, the Tribe considers any resources located in this area to be a Pechanga cultural resource. On July 18, 2012, the FAA, MJPA staff and Pechanga Tribe representatives met to discuss the project concerns. The Tribe recommended, and FAA added, additional language to the mitigation measures to address potential cultural resources that may be found as a result of the proposed action. Copies of the correspondence between the SHPO and FAA and Pechanga Tribe are included in Appendix A – Correspondence and Coordination with Stakeholders and Agencies.
No structures older than 50 years were identified in the report. The 1971 crew readiness building (Building 1309) was identified within the project APE, but because it is less than 45 years old, the building was not evaluated, as it would not likely meet the NRHP criterion G67 for exceptional significance as required for buildings or structures less than 50 years old and due to a lack of historical and architectural significance. As a result of the analysis no significant impacts are expected to result from the Proposed Action.

As the lead federal agency for this EA, the FAA initiated Section 106 consultation with the SHPO on May 9, 2011, in order to seek concurrence regarding the FAA’s determination of the APE and determination that the proposed project would have no effects to historic architectural, archaeological or cultural resources within the vicinity of the project site (see Appendix J – FAA Consultation). It was at the request of the SHPO that the remaining 15 percent of the project APE (previously excluded from the Cultural Report due to access issues) was evaluated. After reviewing the revised submittal, the SHPO concurred with the conclusion that the proposed project would not affect historic properties. Concurrence was provided in a written letter signed on December 7, 2011 (see Page 1,017 Appendix J – FAA Consultation). However, a lack of surface manifestations of archaeological materials does not preclude the possibility of subsurface archaeological resources; mitigation measures have been provided to address any previously unidentified resources that are discovered during excavation.

**Mitigation**

Prior to beginning project construction, the MJPA shall retain a Riverside County qualified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources. Any newly discovered cultural resource deposits shall be subject to a cultural resources evaluation.

At least 30 days prior to beginning project construction, the MJPA shall contact the Pechanga Tribe to notify the Tribe of excavation activities and the monitoring program, and to develop a Cultural Resources Treatment and Monitoring Agreement. The Agreement shall address the treatment of any known cultural resources, the designation, responsibilities, and participation of professional Native American Tribal monitors during excavation activities; project grading and development scheduling; terms of compensation for the monitors; and treatment and final disposition of any cultural resources, sacred sites, and human remains discovered on the site. In

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accordance with the agreement, the archaeological monitor and the Native American monitor will have the authority to stop and redirect grading in order to evaluate the significance of any archaeological resources discovered on the property.

The MJPA shall relinquish ownership of all Native American cultural resources, including sacred items, burial goods and all archaeological artifacts that are found on the project area to the Native American Tribe for proper treatment and disposition.

In the event that archaeological/paleontological resources are discovered during site excavation, grading, or construction, the MJPA shall require that work on the site be suspended within 100 feet of the resource until the significance of the resource can be determined by a qualified archaeologist or paleontologist and the Native American representative. If significant resources are determined to exist, the archaeologist or paleontologist and the Native American representative shall make recommendations for protection or recovery of the resource which the MJPA shall implement. The MJPA shall consult with appropriate Native American representatives in determining appropriate treatment for unearthed cultural resources if the resources are prehistoric or Native American in nature.

Preservation in place is the preferred manner of mitigating impacts to archaeological sites, as it maintains the relationship between artifacts and the archaeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site. In considering any suggested mitigation proposed by the archaeologist in order to mitigate impacts to archaeological resources, the MJPA, in consultation with appropriate parties including the Native American representative, shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation for cultural resources is being carried out. If the developer, the project archaeologist and the Tribe cannot agree on the significance or the mitigation for such resources, these issues will be presented to the MJPA Planning Director for decision. The MJPA Planning Director shall make the determination and shall take into account the religious beliefs, customs and practices of the Tribe. Notwithstanding any other rights available under the law, the decision of the MJPA Planning Director shall be appealable to the Joint Powers Commission.

Although not anticipated, if human remains are encountered during subsurface construction, all work in the area shall stop and the Riverside County Coroner shall be contacted immediately. If
the Riverside County Coroner determines that the remains are Native American, the Riverside County Coroner will contact the NAHC within 24 hours, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). The Native American Heritage Commission must then immediately identify the “most likely descendant(s)” of receiving notification of the discovery. The most likely descendant(s) shall then make recommendations within 48 hours, and engage in consultations concerning the treatment of the remains as provided in Public Resources Code 5097.98 and the Cultural Resources Treatment and Monitoring Agreement as described above. The MJPA shall ensure that the immediate vicinity where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section, with the most likely descendents regarding their recommendations, and if applicable, taking into account the possibility of multiple human remains. A report outlining the archaeological find and the treatment measures used to mitigate the archaeological find shall be prepared by the qualified archaeologist and submitted to the MJPA who shall ensure implementation of the treatment plan.

4.3.11 Light Emissions and Visual Effects

Airport-related lighting facilities and activities could visually affect surrounding residents and other nearby light-sensitive areas such as homes, parks or recreational areas. The characteristics of many runway lighting systems create potential sources of annoyance to nearby residents in the airport vicinity if light is directed towards light-sensitive land uses. Disturbing light emissions may emanate from the following sources associated with airport operations:

- Airfield and apron lighting;
- Visual NAVAIDS;
- Terminal lighting;
- Employee/customer parking lighting;
- Both airborne and ground-based aircraft operations; and
- Roadway lighting.

This section examines whether there is a potential for these sources to disturb sensitive land uses, and if so, examine those effects and evaluate measures to lessen them. Additionally, visual, or

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aesthetic, effects resulting from the Proposed Action are examined in this section. These effects are inherently more difficult to define and assess because they involve subjectivity. Visual effects deal broadly with the extent to which airport development contrasts with the existing environment, architecture, historic or cultural setting, or land use planning.

While there are no federal regulations governing light emissions or visual effects, the FAA will consider potential effects to properties, and people’s use of properties, covered by Section 4(f) of the U.S. Department of Transportation (DOT) Act,70 Section 6(f) of the Land and Water Conservation Fund Act (LWCF), 71 and Section 106 of the NHPA. 72

**No-Action Alternative**

There would be no additional light emission and/or visual effects resulting from the No-Action Alternative.

**Proposed Alternative**

The Proposed Action will include both airside and landside lighting improvements. These lighting sources include:

- Taxiway lighting for aircraft ground movements (airside)
- Apron security lighting (airside)
- Tenant/customer parking lighting (landside)
- Access roadway lighting (landside)

The proposed lighting system improvements will be constructed entirely within the Airport property. Taxiway edge lighting would border the proposed apron entrance and taxilane. This edge lighting would be located on the airfield and would not significantly increase the amount of light emissions currently resulting from the existing airfield. The apron security lighting will consist of several 1,000 Watt floodlights that are specifically designed with focused beams so as to prevent light pollution to surrounding areas. Employee/customer parking and access roadway lighting will likely consist of pole-mounted 400 Watt floodlights. There are no residential areas and/or areas covered by Section 4(f) within the vicinity of the study area.

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70 U.S. Department of Transportation Act, Section 4(f), recodified and renumbered as § 303(c) of 49 U.S.C.
71 The Land and Water Conservation Fund Act, Section 6(f).
The closest residential area is located approximately ¾ of a mile away from the proposed development area. Visual effects resulting from the Proposed Action will primarily result from earthmoving and construction activity. These effects will be minimal and short term as they will only impact the surrounding areas during the construction of the Proposed Action.

**Mitigation**

The Proposed Action is located within the Mount Palomar Observatory area. The project area is located approximately 43 miles away from the Mount Palomar Observatory area, in Zone B. The Proposed Action is subject to lighting restrictions as required by County Ordinance No. 655, which are intended to reduce the effects of night lighting on the Mount Palomar Observatory. All proposed outdoor lighting systems shall be in conformance with county Ordinance No. 655.

There are no significant visual effects expected as a result of the Proposed Action. The proposed GA terminal building will be designed with an architectural theme similar to other buildings at the Airport so as not to provide significant contrasts to the surrounding environment.

**4.3.12 Secondary (Induced) Impacts**

Secondary or induced impacts are ones that result from the proposed action but occur later in time or farther removed in distance yet are still reasonably foreseeable. Indirect effects may include population growth or movement, demands for public services, or changes in business or economic activity as a result of the proposed action.

**No-Action Alternative**

There will be no secondary or induced impacts as a result of the No-Action Alternative.

**Preferred Alternative**

Airport users purchase goods and services from Fixed Base Operators (FBOs), rent hotel rooms and cars, and eat at local restaurants. Consequently, these affected businesses must employ local residents. Those who reside in the surrounding communities in turn create local public service

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73 County of Riverside Ordinance No. 655, <http://www.clerkoftheboard.co.riverside.ca.us/ords/600/655.htm>.
demands and those demands must be met by both the local government entities and private businesses.

Given the estimated small increase in forecasted operations over the next 20 years by GA aircraft and the increased demand for services by those users, employment at the Airport will likely rise over the same time period. However, any shifts in population, increased public service demands, and changes in business and economic activity due to the Proposed Action would be minor in nature. Since the project does not require residential or business relocation, alter transportation patterns, divide or disrupt established communities, disrupt orderly, planned development, nor create an appreciable change in employment, no significant social impacts are expected.

### 4.3.13 Socioeconomic Environmental Justice, and Children’s Health and Safety Risks

**Socioeconomics**

Principal social impacts to be considered are those associated with relocation or other community disruption, transportation, planned development, and employment. Factors to be considered in determining impacts in this category include, but are not limited, to the following:

- Shifts in patterns of population movement and growth;
- Public service demands;
- Changes in business and economic activities; or
- Other factors identified by the public.

While impacts that fall into the above-mentioned categories are expected to be minimal as a result of the Proposed Action, some impacts can be expected. Airport users purchase goods and services from Fixed Base Operators (FBOs), rent hotel rooms and cars, and eat at local restaurants. Consequently, these affected businesses must employ local residents. Those who reside in the surrounding communities in turn create local public service demands and those demands must be met by both the local government entities and private businesses.

**Environmental Justice**
Executive Order 12898 (February 11, 1994)\textsuperscript{74} requires that the Proposed Action be reviewed to determine if there are disproportionate adverse impacts to surrounding low income or minority populations. Hispanic persons are a significant portion of the population within the local region and certain communities have higher levels of children under the age 18 and persons in poverty than the state or national average.

*Children’s Health and Safety Risks*

Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*,\textsuperscript{75} requires federal agencies to identify and assess environmental and safety risks that may disproportionately affect children and ensure that its actions address any disproportionate risks. Environmental health and safety risks are defined as risks to health or safety that are attributable to products or substances that a child is likely to come in contact with or ingest.

**No-Action Alternative**

There would be no expected shifts in patterns of population movement and growth, public service demand and/or changes in business and economic activities as a result of the No-Action Alternative. The No-Action Alternative will not disproportionately impact surrounding low income or minority populations, nor will it cause environmental and safety risks that would disproportionately affect children.

**Proposed Alternative**

*Socioeconomics*

Given the estimated small increase in forecasted operations over the next 20 years by GA aircraft and the increased demand for services by those users, employment at the Airport will likely rise over the same time period. However, any shifts in population, increased public service demands, and changes in business and economic activity due to the Proposed Action would be minor in nature. Since the project does not require residential or business relocation, alter transportation patterns, divide or disrupt established communities, disrupt orderly, planned development, nor create an appreciable change in employment, no significant social impacts are expected.


Environmental Justice

Review of the populations in the surrounding communities concluded that no disproportionately high and adverse human health or environmental impacts to minority and/or low-income populations have been identified as a result of the Proposed Action. Hispanic persons are a significant portion of the population within the local region and certain communities have higher levels of children under the age 18 and persons in poverty than the state or national average. However, since no significant noise or air quality impacts are anticipated from the Proposed Action, there would be no adverse impact to these populations. Construction impacts would take place entirely within the Airport boundary and are not expected to create significantly adverse environmental or health impacts.

Children’s Health and Safety Risks

The Proposed Action will not create or make more readily available products or substances that contact or ingestions through air, food, drinking water, recreational waters, or soil could harm children. As a result, there will be no significant impacts to children’s health or safety.

4.3.14 Cumulative Impacts

In accordance with the Council on Environmental Quality (CEQ) guidelines, preparation of this EA considers direct and cumulative impacts associated with the Proposed Action and the consequences of subsequent related actions. According to CEQ, cumulative impacts represent the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Summary of Projects

In order to determine cumulative impacts to the environment, projects occurring within the past three years and expected to happen within the future five years that took place within a two mile radius were evaluated.

Past Projects
In the past three years the MJPA has completed the following development projects at the Airport:

2007 – Apron expansion, taxilane widening
2008 – Electrical vault/fencing/pavements improvements
2009 – Fuel Farm/ Fuel Storage Facility

Present Projects

Current projects that are ongoing within a two mile radius of the proposed project or have recently been completed include the following:

- The Moreno Valley Industrial Area
- Meridian Business Park
- March LifeCare Campus
- Iris Plaza (Commercial Center)

Reasonably Foreseeable Future Projects

The capital improvement program for the March Inland Port describes the goals and objectives of the MJPA for the next five years. A list of desired construction projects at the Airport are as follows:

2012 - 2013
- Design and construction of airport access road and parking lot (Proposed Action)
- Design and construction of AST (Proposed Action)
- Design and construction of general aviation apron (Proposed Action)
- Design and construction of general aviation terminal (Proposed Action)

2013 - 2014
- Design and construction of west side airport frontage road
- Design and rehabilitation of airport apron area

2014 - 2015
- Design and construction of new aircraft parking apron to accommodate Group V or smaller aircraft

2015 – 2016
- Design and construction of a parallel taxiway west of the runway and adjacent to MJPA owned property

**Cumulative Impacts Comparison**

Section 3 – Affected Environment, describes the existing environmental conditions within the study area and area of potential effect. These conditions will serve as a baseline for comparison of past, present, and reasonably foreseeable future projects in order to assess cumulative impacts. The following environmental impact categories were reviewed and it was determined that the Proposed Action in conjunction with past, present, and future development projects would result in no significant impacts to the following categories listed on Table 4-4. Brief descriptions for each impact category are given below. No further analysis or discussion in regards to these environmental impact categories will be included under the Cumulative Impacts section.

<table>
<thead>
<tr>
<th>Topic</th>
<th>EA Section</th>
<th>Cumulative Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coastal Resources</td>
<td>4.2-1,2</td>
<td>No coastal barriers or designated zones are located on or adjacent to the Airport property. No cumulative impacts are anticipated as a result of the Proposed Action.</td>
</tr>
<tr>
<td>Section 4(f)</td>
<td>4.2-3</td>
<td>No publicly owned land from a public park, recreation area, wildlife and waterfowl refuge are located within close proximity to the study area. No cumulative impacts are anticipated as a result of the Proposed Action.</td>
</tr>
<tr>
<td>Farmland</td>
<td>4.2-4</td>
<td>No farmlands will be converted to non-agricultural land uses. No cumulative impacts are anticipated as a result of the Proposed Action.</td>
</tr>
<tr>
<td>Floodplains</td>
<td>4.2-5</td>
<td>An analysis of floodplain maps indicated that local floodplains will not be affected as a result of the Proposed Action as the study area is not within the 100-year floodplain.</td>
</tr>
<tr>
<td>Natural Resources and Energy</td>
<td>4.2-6</td>
<td>Proposed Action would not incrementally contribute to a significant cumulative impact because service providers would be able to accommodate projected increases and other projected developments.</td>
</tr>
<tr>
<td>Wild &amp; Scenic Rivers</td>
<td>4.2-7</td>
<td>There are no federally designated wild and scenic rivers on or adjacent to the Airport. No cumulative impacts are anticipated as a result of the Proposed Action.</td>
</tr>
<tr>
<td>Historic, Architectural, Archaeological, and Cultural Resources</td>
<td>4.3-10</td>
<td>No recorded prehistoric archaeological sites or historical structures were located within the Area of Potential Effect. No cumulative impacts are anticipated as a result of the Proposed Action.</td>
</tr>
</tbody>
</table>
## Compatible Land Use

<table>
<thead>
<tr>
<th>Category</th>
<th>Page</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present, past, and future development projects would be consistent with the land uses defined in the MJPA's General Plan. These developments when combined with the Proposed Action would not result in significant land use impacts.</td>
<td>4.3-2</td>
<td></td>
</tr>
</tbody>
</table>

## Wetlands

<table>
<thead>
<tr>
<th>Page</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.3-5</td>
<td>The 2009 Wetlands Assessment concluded that impacts to non-jurisdictional or jurisdictional wetlands are not expected as a result of the Proposed Action. No cumulative impacts are anticipated as a result of the Proposed Action.</td>
</tr>
</tbody>
</table>

## Solid Waste

<table>
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<tr>
<th>Page</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.3-8</td>
<td>Proposed Action would not incrementally contribute to a significant cumulative impact in solid waste generation as service providers would be able to estimated increases and other projected developments.</td>
</tr>
</tbody>
</table>

## Hazardous Materials

<table>
<thead>
<tr>
<th>Page</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.3-9</td>
<td>Proposed Action would not incrementally contribute to a significant cumulative impact because actions would be taken during construction to limit potential for impacts and hazards.</td>
</tr>
</tbody>
</table>

**Source:** C&S Engineers, Inc.

Additional analysis was performed on the following environmental impact categories as it was determined that the Proposed Action in conjunction with past, present, and future development may result in incremental impacts to those resources. These categories included the following:

- Noise
- Light Emissions and Visual Effects
- Socioeconomic Environmental Justice, and Children’s Health and Safety Risks
- Air Quality
- Construction Impacts
- Water Quality
- Fish, Wildlife & Plants

### Noise Impacts

The noise analysis prepared for the Proposed Action concluded that the introduction of 5,850 annual operations (16 daily operations) of GA aircraft in 2016 would have virtually no impact on the size and shape of the noise contour as the operations of larger military aircraft are the main component of aircraft driven noise impacts at the Airport. After the anticipated introduction of the KC-135R aircraft in 2011 forecasted military aircraft operations are anticipated to remain at their current levels throughout the 15 year planning period. Due to the restriction of 21,000 annual operations of civilian aircraft (including GA) that was agreed to between the MJPA and
USAF as part of the Joint Use Agreement the noise contours are not anticipated to grow significantly as a result of previous, ongoing, or future projects. Noise contours were developed for the future 2025 conditions, which included 8,400 annual GA aircraft operations (see Appendix H – Noise Analysis). Although the noise contours did grow as a result of the forecasted increase in operations the analysis concluded that there would be no significant impacts to noise sensitive areas as defined by NEPA.

All planned development at the Airport that would trigger an increase in aircraft operations would require that a noise analysis be completed to determine its impact to noise surrounding the Airport. The MJPA is not currently aware of any proposed projects that would create cumulative noise impacts in combination with aircraft and highway noise exposure levels.

Light Emissions and Visual Effects

The closest residential area is located approximately ¾ of a mile away from the proposed study area. Visual effects resulting from the Proposed Action will primarily result from earthmoving and construction activity. These effects will be minimal and short term as they will only impact the surrounding areas during the construction of the Proposed Action. According to City of Moreno Valley the area located adjacent to the study area is designated as an area for future industrial or business park development. The Proposed Action and future projects would not result in significant visual effects to those land uses.

Socioeconomic Environmental Justice, and Children’s Health and Safety Risks

Given the estimated small increase in forecasted operations over the next 20 years by GA aircraft and the increased demand for services by those users, employment at the Airport will likely rise over the same time period. However, any shifts in population, increased public service demands, and changes in business and economic activity due to the Proposed Action would be minor in nature. Since the project does not require residential or business relocation, alter transportation patterns, divide or disrupt established communities, disrupt orderly, planned development, nor create an appreciable change in employment, no significant social impacts are expected.

Review of the populations in the surrounding communities concluded that no disproportionately high and adverse human health or environmental impacts to minority and/or low-income populations have been identified as a result of the Proposed Action. Hispanic persons are a significant portion of the population within the local region and certain communities have higher
levels of children under the age 18 and persons in poverty than the state or national average. However, since no significant adverse impacts are anticipated from the Proposed Action, there would be no adverse impact to these populations. Construction impacts would take place entirely within the Airport boundary and are not expected to create significantly adverse environmental or health impacts.

The Proposed Action will not create or make more readily available products or substances that contact or ingestions through air, food, drinking water, recreational waters, or soil could harm children. As a result, there will be no significant impacts to children’s health or safety.

Air Quality

Based on the emissions inventory that was prepared as part of the air quality analysis the net emissions resulting from the Proposed Action were well below the de minimis threshold levels and will not cause an increase in emissions sufficient to adversely affect air quality in the vicinity of the Airport. The largest contributor to emission levels was from the forecasted increase in the operation of aircraft at the Airport. The number of annual civilian aircraft operations at the Airport is forecasted to grow to only 8,400 operations by the year 2025. Emissions estimates were calculated for the future 2025 conditions (see Appendix H – Air Quality Analysis). Although the emissions increased as a result of the forecasted increase in operations the analysis concluded that there would be no significant impacts to air quality as defined by NEPA. Because of the low number of civilian operations at the Airport, which is capped at 21,000 as part of the Joint Use Agreement, emissions resulting from aircraft operations are expected to increase only slightly as a result of ongoing or future projects.

Climate

The cumulative impact of this proposed action on the global climate when added to other past, present, and reasonably foreseeable future actions is not currently scientifically predictable. Aviation has been calculated to contribute approximately three percent of global carbon dioxide (CO2) emissions; this contribution may grow to five percent by 2050. Actions are underway within the U.S. and by other nations to reduce aviation’s contribution through such measures as new aircraft technologies to reduce emissions and improve fuel efficiency, renewable alternative fuels with lower carbon footprints, more efficient air traffic management, market-based measures and environmental regulations including an aircraft CO2 standard. The U.S. has ambitious goals to achieve carbon-neutral growth for aviation by 2020 compared to a 2005 baseline, and to gain
absolute reductions in GHG emissions by 2050. At present there are no calculations of the extent to which measures individually or cumulatively may affect aviation’s CO₂ emissions. Moreover, there are large uncertainties regarding aviation’s impact on climate. The FAA, with support from the U.S. Global Change Research Program and its participating federal agencies (e.g., NASA, NOAA, EPA, and DOE), has developed the Aviation Climate Change Research Initiative (ACCRI) in an effort to advance scientific understanding of regional and global climate impacts of aircraft emissions, with quantified uncertainties for current and projected aviation scenarios under changing atmospheric conditions.⁷⁶

Construction Impacts

Construction activities are generally short-term and temporary in nature, and do not usually cause significant adverse environmental impacts at airports. The construction impacts analysis conducted for this EA indicates that the proposed projects would not have long-term adverse impacts. Short-term construction impacts include soil erosion, water quality, stormwater runoff, air quality, and noise. The EA includes mitigation measures to address stormwater runoff and minimize air and noise impacts.

The past construction projects at the Airport have not created any long-term adverse impacts and construction of the reasonably foreseeable future projects would also be temporary in nature and would not create long-term adverse impacts.

Water Quality

Similar to the permits needed to be obtained for the Proposed Action, additional permits will be necessary for those projects listed for future development that are located within the jurisdiction of the MJPA. As addressed under Section 4.3-4 Water Quality, adherence to the MJPA’s Water Quality Management Program is required for all development. This includes obtaining a permit of general construction activities as those activities may cause erosion and sediment from exposed surfaces could flow into the existing surface water conveyance system and subsequently into adjacent water bodies.

Additional drainage studies would need to be prepared in order to determine the impact that each project would have drainage into the Heacock Channel. This would also require additional

coordination with the Eastern Municipal Water District to determine if they have the existing sewer facilities sufficient to serve future projects.

**Fish, Wildlife and Plants**

A field visit conducted by the USFWS in June, 2011, indicated the possibility that the SKR species could be found within the project study area. As a result the MIPAA has applied for Take Authorization in accordance with the terms and conditions of California Fish and Game Code and the HCP for SKR in the Western Riverside County, California. The Take Authorization would give the MIPAA permission for incidental take of SKR in the development of the Proposed Action. The Proposed Action in conjunction with past, present and future development projects is not anticipated to result in significant impacts to SKR.

The MJPA already plays an active role in helping to preserve and protect SKR habitat. While under the administration of the U.S. Air Force, MARB, in conjunction with the USFWS, established a preserve for the management of SKR. The management area consists of 1,178 acres of grassland located approximately 2.5 miles northwest of the project site.

**Summary**

The discussion of cumulative impacts addressed impacts of reasonably foreseeable future projects proposed in this EA in combination with past and present actions at the Airport. On-airport actions have been implemented, are under current planning, or are anticipated in the near future to bring the Airport into compliance with federal design standards, improve access to the Airport, rehabilitate or expand existing paved areas, and provide additional aircraft parking. When grouped together with other off-airport projects, these independent actions have a cumulative effect on resources.

As described in Section 3 – Affected Environment, the study area consists of previously disturbed land where most airport activity occurs (i.e., runways, taxiways, hangars, apron, auto parking, etc.). Adjacent to the study area is industrial, commercial and recreational areas. For the past, present, and reasonably foreseeable future projects (covered in this EA) cumulative impacts were limited to: noise, light emissions and visual effects, induces socioeconomic impacts, air quality, construction impacts, and water quality. The cumulative impacts expected to occur are not significant due to the types of projects, the built environment they occur in, and the mitigation measures proposed as part of this EA.
5 Reviewers and Preparers of EA

LEAD AGENCY

The Federal Aviation Administration (FAA) is the lead federal agency for preparation of this Final Environmental Assessment (EA).

U.S. Department of Transportation,
Federal Aviation Administration,
Los Angeles Airport District Office,
15000 Aviation Blvd., Room 3024,
Lawndale, California 90261

PRINCIPAL REVIEWERS

Responsibility for review of this Final EA rests with the FAA. Listed below are the identities and backgrounds of the principal FAA individuals in accordance with Council on Environmental Quality (CEQ) Regulations and FAA Order 5050.4B, Airport Environmental Handbook.

Victor Globa,
Environmental Protection Specialist,
Federal Aviation Administration Western Pacific Region
Los Angeles Airport District Office
B.S. Business Administration – Aviation Management
Over 20 years of experience,
Principal FAA Environmental Protection Specialist responsible for detailed FAA evaluation of Environmental Assessments in Southern California and Arizona.

PREPARERS OF EA

The following individuals participated in the preparation of the Environmental Assessment for the General Aviation Development, with a description of each preparer’s professional experience:
Mr. Ralph Redman, C&S Engineers, Inc.

Position: Senior Planner
Education: Bachelor of Science in Natural Resources, Environmental Science, Ohio State University
Experience: Mr. Redman has more than ten years experience with airport-related environmental assignments. His experience includes airport-specific noise and air quality modeling, organization and development of public and advisory committee meetings and materials, public speaking, and the development of draft and final versions of environmental documentation for airport development. Ralph has developed a strong working relationship with FAA staff, having performed environmental analysis for numerous airports within the FAA Western-Pacific Region.

Mr. Sean Neely, C&S Engineers, Inc.

Position: GIS Designer
Education: Bachelor of Science in Environmental Science & Policy with a focus on Planning and GIS from the University of Southern Maine, 2005.
Experience: Mr. Neely is a Senior GIS Analyst with C&S Companies. Mr. Neely heads the C&S GIS/IM team in our San Diego and Riverside offices, providing analysis, support, quality assurance and oversight on many different GIS projects. He supports a wide variety of airport projects with geospatial services including airport obstruction evaluation, airport planning, environmental planning, mapping-grade GPS, cartographic production and custom GIS web applications.

Mr. Charlie McDermott, C&S Engineers, Inc.

Position: Department Manager
Education: Associate of Science in Mathematics & Science, Onondaga Community College. Associate of Occupational Studies in Drafting Technology, Alfred State College.
Experience: As manager of the Planning and Environmental Department, Charlie supervises more than 10 planners and environmental specialists that are responsible for the delivery of all planning and environmental-related services, including
environmental assessments, master plans, layout plan updates, land acquisition and relocation, and drainage studies. He has 25 years of aviation experience at 63 different airfields in 10 states.

Ms. Carly Shannon, C&S Engineers, Inc.

Position: Planning Intern
Education: Bachelor of Science in Environmental Geoscience, Boston College, 2009.

Mr. Phil Wade, Environmental Science Associates (ESA)

Position: Associate III
Education: Bachelor of Arts in English

Mr. Steve Alverson, ESA

Position: Airports Director, Outreach and Stakeholder Program
Education: Bachelor of Science in Aeronautics, Dowling College
Experience: Mr. Alverson has 29 years of aviation environmental consulting experience. Steve has provided airport environmental consulting services to the Sacramento County Airport System, the March Inland Airport, the San Diego County Regional Airport Authority, the San Francisco Airport Commission, the Port of Oakland, the Los Angeles World Airport, the Port of Seattle, and the Port of Portland. He has managed a range of services that have included public meeting facilitation, environmental documentation, and aircraft noise analyses. Steve currently serves as the SFO Airport Community Roundtable Coordinator. During the past year, Steve organized and facilitated a strategic planning process for the SFO Community Roundtable that will set the vision and mission of the Roundtable for the next three to five years. Steve also led the SFO Roundtable’s Operations and Efficiency Subcommittee in a process to align the Roundtable’s operations with its mission and work program. As a result of Steve’s extensive experience, he is frequently asked to speak at national and international conferences. He has provided college-level lectures on airport environmental issues.
**Mr. Michael Arnold, ESA**

Position: Regional Director  
Education: Bachelor of Science in Civil Engineering, Michigan State University  
Experience: Mr. Arnold brings more than 19 years of aviation experience at some of the world’s most challenging airports. His expertise includes the ability to resolve a wide range of airport development challenges quickly using both time tested and innovative approaches. His experience includes a wide-range of planning, noise, and environmental projects at more than 80 domestic and international airports. He is proficient in AIP/PFC funding mechanisms as well as a variety of alternative funding sources. He is experienced in facility planning including new runway and taxiway development, terminal space planning and conceptual development, aircraft rescue facility and air traffic control siting studies, t-hangar and conventional hangar development and a number of other aviation support facilities. Mike has also conducted siting studies for new air traffic control towers. He has conducted numerous aircraft performance and airspace analyses, and is well versed in the latest techniques for resolving operational conflicts and challenges associated with maximizing operational flexibility in accommodating airport growth.

**Ms. Madeline Bray, M.A., RPA, ESA**

Position: Associate III  
Education: Master of Arts in Archaeology  
Experience: Ms. Bray is an experienced field technician with a variety of excavation and mapping experience with international historically significant sites. She is experienced in excavation methodology and equipment, and has firsthand experience in ancient Roman artifacts, Advisory Council on Historic Preservation, and Section 106 compliance.

**Ms. Kathy Anderson, M.A., ESA**

Position: Associate III  
Education: Master of Arts in Public History
Experience: Ms. Anderson is a cultural resources researcher and writer for many of ESA’s CEQA compliance efforts. She establishes base historic settings, coordinates staff and develops cultural resource documents, along with contributing to the evaluation of various historic resources for eligibility for the National Register of Historic Places.

**Mr. Mark Tucker, M.A., ESA**

Position: Senior Managing Associate  
Education: Master of Arts in Geography

**Mr. Joshua Boldt, ESA**

Position: Managing Associate  
Education: Bachelor of Science in Botany
6 References


42 U.S. Code Sections et Seq., The Solid Waste Disposal Act (SWDA) of 1965, (now stated in subtitle D of the Resources Conservation and Recovery Act (RCRA)).


California Department of Fish and Game (CDFG), *Staff Report on Burrowing Owl Mitigation*, Sacramento, CA, 1995.

County of Riverside Ordinance No. 655, <http://www.clerkoftheboard.co.riverside.ca.us/ords/600/655.htm>.


Federal Aviation Administration, Order 1050.1E, Section 14 – Noise, 2004.


Public Resources Code, Division 20, California Coastal Act, 2010.


The Land and Water Conservation Fund Act, Section 6(f).


U.S. Code, Title 49, Chapter 106(g), 47523–47527, 47533.
U.S. Code, Title 49, Chapter 475, Subchapter II – *National Aviation Noise Policy*.

U.S. Department of Transportation Act, Section 4(f), recodified and renumbered as § 303(c) of 49 U.S.C.

U.S. Department of Transportation, Federal Aviation Administration, *Report to Congress, National Plan of Integrated Airport Systems (NPIAS)*.


7 Appendices

Appendix A  Correspondence and Coordination with Stakeholders and Agencies
Appendix B  Acronyms
Appendix C  Glossary of Terms
Appendix D  Airport Layout Plan
Appendix E  General Aviation Assessment
Appendix F  MJPA Support Documentation
Appendix G  Resource and Agency Documentation
Appendix H  Noise Analysis
Appendix I  Air Quality Analysis
Appendix J  FAA Consultation
Appendix K  Public Involvement