

## **SUMMARY**

The Federal Aviation Administration (FAA), as lead federal agency, along with the United States Air Force (USAF), and the National Guard Bureau (NGB) have prepared this Environmental Impact Statement (EIS). This EIS meets the federal requirements to analyze and disclose the potential environmental impacts resulting from the Proposed Airfield Safety Enhancement Project (ASEP) including real property transactions at Tucson International Airport (TUS or Airport) in Pima County, Arizona (the Proposed Action). The Proposed Action includes the following components: construct a new center parallel taxiway and connecting taxiway system; a replacement Runway 11R/29L (proposed to be 10,996 feet long by 150 feet wide); and acquisition of land for the runway safety areas from USAF Plant 44 (AFP 44). This land acquisition also includes relocation of various military installation assets to locations elsewhere on AFP 44 and installation of navigational aids and development and/or modification of associated arrival and departure procedures. This Proposed Action also includes the release of airport land from federal obligations between the former East Hughes Access Road and newly constructed Aerospace Parkway. A portion of this land would be transferred to the USAF on behalf of the National Guard Bureau in support of the Tucson Air National Guard Base 162<sup>nd</sup> Wing for a Munitions Storage Area (MSA) and access road.

The information contained in this EIS will be taken into consideration by the FAA and USAF in determining the agency's decision regarding the Proposed Action.

### **S.1 ENVIRONMENTAL REVIEW PROCESS**

A total of 18 public comments were received during the scoping period from August 19, 2016 to October 3, 2016. Thirteen people provided comments in support of the proposed project. Five comments were received concerning the possibility of additional military flights including the F-35 Lightning II fighter aircraft being based at Davis-Monthan Air Force Base (DMA) or Tucson Air National Guard Base. **However, the need for the Proposed Action at TUS does not involve, in any way, the new F-35 fighter aircraft.** Deployment of the F-35 to various installations around the United States and abroad is a decision made by the USAF. In August 2012, the USAF approved a Record of Decision to station the F-35A at Luke Air Force Base, west of Phoenix, Arizona. At this time, there is no proposal before the USAF or NGB that has identified Tucson Air National Guard Base for placement of the F-35. There will be no analysis of potential F-35 deployment at TUS in the EIS.

## **S.2 PURPOSE AND NEED**

### **S.2.1 FAA PURPOSE AND NEED**

The purpose of the Proposed Action is to fulfill FAA's statutory mission to ensure the safe and efficient use of navigable airspace in the United States as set forth under 49 United States Code (U.S.C.) § 47101 (a)(1). The FAA must ensure that the Proposed Action does not derogate the safety of aircraft and airport operations at TUS. Moreover, it is the policy of the FAA under 49 U.S.C. § 47101(a)(6) that airport development projects provide for the protection and enhancement of natural resources and the quality of the environment of the United States. The need for the Proposed Action is to ensure that TUS operates in the safest manner possible pursuant to 49 U.S.C. § 47101(a)(1) and to reduce the risk of runway incursions to the extent practicable.

### **S.2.2 USAF PURPOSE AND NEED**

The USAF's purpose and need is to maintain equivalent AFP 44 operational capabilities. The USAF owns land, known as AFP 44, adjacent to the Airport. Under the Proposed Action, 12 Earth Covered Magazines (ECMs) used to store explosive materials, located on AFP 44, would have to be demolished. Removal of these ECMs is needed to prevent USAF munitions storage safety arcs from extending onto the TUS airfield after relocation of Runway 11R/29L and to remove the ECMs from the relocated runway's safety area.

### **S.2.3 NGB PURPOSE AND NEED**

The NGB's purpose and need is to maintain NGB safety standards and operational capabilities at the Tucson Air National Guard Base. The existing MSA at the Tucson Air National Guard Base does not meet the USAF separation distances required for explosive operations and exposes non-munitions personnel to explosive hazards. Relocating the MSA would accommodate the required Quantity-Distance clear zone arcs that are required in accordance with USAF Manual 91-201, *Explosives Safety Standards*.

### **S.2.4 TUCSON AIRPORT AUTHORITY (TAA) PURPOSE AND NEED**

The TAA's purpose and need is to enhance the safety of the airfield at TUS. TAA has conducted various planning studies with the goal of reducing airfield incursions and improving overall airfield safety. The Proposed ASEP, which is the subject of this EIS, was developed by TAA to meet this goal and to ensure that TUS operates in the safest manner possible. TAA has also identified the need to ensure land use compatibility among users of TUS and to protect for potential future development on Airport property.

## **S.3 ALTERNATIVES**

The FAA established a multi-step screening process to identify a range of reasonable ASEP alternatives that are capable of achieving the Purpose and Need for the Proposed Action. The EIS considered both on and off-airport alternatives to the Proposed Action. Off-airport alternatives were considered, but none were found that met the purpose and need for the Proposed Action.

The FAA then established a multi-step screening process to identify a range of reasonable MSA area alternatives. The screening process determined if the initial range of alternatives were able to meet the NGB's Purpose and Need and if the alternative was consistent with planned airport development. If the MSA alternative advanced through the screening process, it was retained for a more detailed environmental evaluation in the EIS.

The No Action Alternative was included in the evaluation of potential environmental consequences in this EIS, as required by 40 Code of Federal Regulation (C.F.R.) § 1502.14(d). With a No Action Alternative, the airfield layout would remain as it is today. Although the No Action Alternative would not fulfil the Purpose and Need, it provides a basis of comparison for the assessment of future conditions and impacts.

Based on the screening analysis presented, one ASEP alternative and one MSA alternative are recommended to be carried forward for further detailed environmental evaluation in the EIS. The following alternatives were carried forward for further evaluation in the EIS:

- No Action Alternative: No changes to the airport and no land transfers would occur. The airfield would remain as it is today.
- 800-Foot Separation Plan A (Proposed Action): Includes the replacement of Runway 11R/29L with a full-length parallel runway. An 800-foot separation between parallel runways would be implemented, which allows for a parallel taxiway to be constructed between the runways. An additional parallel taxiway west of the relocated Runway 11R/29L would limit direct access from aircraft approaching the runway from the west. Various other taxiway improvements are proposed to enhance airfield safety. The addition of several taxiway segments would replace removed taxiways and would comply with FAA design standards. This Alternative would eliminate both Hot Spot-1 and Hot Spot-2.
- Parcel "H" Site: The Parcel "H" Site for the proposed MSA is located south of AFP 44 and southeast of intersection between former Hughes Access Road and South Country Club Road. After release of federal obligations by FAA, TAA would make available the 55 acres on the eastern edge of Parcel "H" to the USAF on behalf of the NGB for the MSA. This area would provide the AANG the appropriate landside and airside access for a new MSA. In addition, this approximate 55-acre site would maintain NGB safety standards and operational capabilities and not conflict with future developments on the airfield. This proposed MSA site would also not conflict with AFP 44 operations.

## **S.4 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES**

The impacts resulting from implementation of the Proposed Action and all reasonable alternatives including the No Action Alternative are disclosed in Chapter 4, *Environmental Consequences and Mitigation Measures*, of this EIS. The impacts of each alternative are disclosed for project year 2023. The FAA uses the year 2023 as a basis for analysis because it is the projected implementation year of the Proposed Action. In addition, specific Airport activity levels and their associated environmental impacts are evaluated for a condition five years beyond the opening year (2028).

The environmental consequences section forms the scientific and analytical basis for comparing the impacts of the alternatives. It includes considerations of direct and indirect effects and their significance and possible conflicts between the alternatives and the objectives of federal, regional, state, and local land use plans, policies and controls for the area concerned.

Based on the guidance provided by FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, and the USAF's 32 C.F.R. Part 989, *Environmental Impact Analysis Process*, the environmental impacts of the alternatives have been evaluated.

Where appropriate, various measures to avoid, minimize, rectify, reduce, or eliminate adverse impacts resulting from the Proposed Action are presented in the EIS for only those categories where potential adverse impacts were identified. These mitigation measures would be implemented by the TAA, as the owner and operator of the Airport. The FAA would ensure implementation of such mitigation measures through special conditions in grant-in-aid agreements, contract specifications, directives, other review or implementation procedures and other appropriate follow-up actions in accordance with 40 C.F.R § 1505.3. A summary of the potential impacts resulting from implementation of the alternatives and the mitigation possibilities associated with potential impacts are presented in **Table S-1**.

## **S.5 FAA'S PREFERRED ALTERNATIVE**

The FAA has identified the Proposed Action as its preferred alternative pursuant to 40 C.F.R. 1502.14(e). As defined in Council on Environmental Quality's (CEQ's) *Forty Most Asked Questions Concerning NEPA Regulations*, the agency's "preferred alternative" is the "alternative which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors." In selecting a preferred alternative, the FAA considered the factors disclosed in this EIS in the context and scope of implementing Federal transportation policies within the framework of the agency's statutory authorities and responsibilities.

In addition, the FAA has identified the Proposed Action as the Environmentally Preferred Alternative. In identifying the Environmentally Preferred Alternative, the FAA considered the ability of each alternative to meet the purpose and need for the project, the Airport Sponsor's goals and objectives, and the potential environmental impacts.

**Table S-1  
ENVIRONMENTAL IMPACT SUMMARY MATRIX  
Tucson International Airport**

<b>IMPACT CATEGORY</b>	<b>NO ACTION ALTERNATIVE</b>	<b>PROPOSED ACTION</b>	<b>MITIGATION, AVOIDANCE, AND MINIMIZATION MEASURES</b>
<b>Air Quality</b>	No significant impact. Would Not Exceed National Ambient Air Quality Standards	No significant impact. Would Not Exceed National Ambient Air Quality Standards	For Construction – Obtain a fugitive dust activity permit and implement measures to control dust and other airborne particles during construction.
<b>Biological Resources</b> ESA Species (Lesser Long-nosed Bat)	No Impact	May affect, but is not likely to adversely affect	Grading activities at night should be suspended from 15 April to 15 September to the extent practicable.
<b>Biological Resources</b> ESA Species (Pima Pineapple Cactus)	No Impact	May affect, is likely to adversely affect	Avoid 18 PPC, Transplant and Monitor 64 PPC on Airport Property, and purchase mitigation bank credits for 24 acres from the Palo Alto PPC Conservation Bank to compensate for 24 acres loss of PPC habitat.
<b>Biological Resources</b> Migratory Bird Treaty Act Species (Western Burrowing Owl)	No Impact	Conduct additional survey within 30 days of the start of construction activities.	If western burrowing owl is found in the construction area, at that time, mitigation measures will be identified and coordinated with AGFD and USFWS.
<b>Biological Resources</b> Migratory Bird Treaty Act Species (Cactus Ferruginous Pygmy-owl and Refous-winged Sparrow)	No Impact	No Adverse Impact	Implement Pima County Native Plant Preservation (PCC §18.72) and the Watercourse and Riparian Habitat Protection ordinances (PCC §16.30)

**Table S-1, Continued  
ENVIRONMENTAL IMPACT SUMMARY MATRIX  
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<b>IMPACT CATEGORY</b>	<b>NO ACTION ALTERNATIVE</b>	<b>PROPOSED ACTION</b>	<b>MITIGATION, AVOIDANCE, AND MINIMIZATION MEASURES</b>
<b>Biological Resources</b> Special Status Species	No Impact	No Adverse Impact	Implement Pima County Native Plant Preservation (PCC §18.72) and the Watercourse and Riparian Habitat Protection ordinances (PCC §16.30)
<b>Climate</b>	No Adverse Impact	No Adverse Impact	None Required
<b>DOT Section 4(f)</b>	No Physical or Constructive Use	No Physical or Constructive Use	None Required
<b>Hazardous Materials, Solid Waste, and Pollution Prevention</b>	No Impact	No significant impact	Removal of materials per Arizona Department of Environmental Quality (ADEQ's) Waste Programs Division requirements. Conduct Lead based paint and asbestos survey on interiors of the 12 ECMs prior to demolition.
<b>Historical, Architectural, Archaeological, &amp; Cultural Resources</b>	No Impact	No Historic Properties in the Direct Effects APE. No adverse Effect on the Triple Hangars in the Indirect Effects APE.	Archaeological sites (AZ BB:13:839[ASM] and AZ BB:13:851[ASM]) must be avoided. If human remains and/or funerary items are found, must implement unanticipated discovery plan and notify the Arizona State Museum.
<b>Land Use</b>	No Land Use, Zoning, or Property Boundary Changes	Acquisition of approximately 58 acres of USAF land known as Parcel "F" and associated recorded deed restrictions for AFP 44	Transfer approximately 160 acres known as Parcel "G" to USAF. Replace capacity/capability of 12 existing ECMs elsewhere on AFP 44 that would provide the same explosives storage capacity.

**Table S-1, Continued  
ENVIRONMENTAL IMPACT SUMMARY MATRIX  
Tucson International Airport**

<b>IMPACT CATEGORY</b>	<b>NO ACTION ALTERNATIVE</b>	<b>PROPOSED ACTION</b>	<b>MITIGATION, AVOIDANCE, AND MINIMIZATION MEASURES</b>
<b>Natural Resources</b>	No Impact	No Adverse Impact	Recycle and reuse existing pavement materials (i.e., "old pavement") for subgrade and base course for the Proposed Action to the maximum extent allowed by FAA standards
<b>Energy Supply</b>	No Impact	Local providers can meet increases in demand.	None Required
<b>Noise and Noise-Compatible Land Use</b> Housing Units within DNL 65+ dB	642 Housing Units	641 Housing Units	69 Housing Units in significant increase area to be mitigated using the following methods: <ul style="list-style-type: none"> <li>• Offer to sound insulate 26 single-family housing units</li> <li>• Offer to sound insulate 2 two-family housing units</li> <li>• Offer to sound insulate 21 multi-family housing units</li> <li>• Offer 20 manufactured/mobile housing units acquisition.</li> </ul>
<b>Noise and Noise-Compatible Land Use</b> Population within DNL 65+ dB	2,181 People	2,185 People	See Noise and Noise-Compatible Land Use Housing Units within DNL 65+ dB Mitigation
<b>Noise and Noise-Compatible Land Use</b> Noise Sensitive Facilities within DNL 65+ dB	No Noise Sensitive Facilities within DNL 65+ dB	Pima Community College-Aviation Technology Center not considered Noise Sensitive Facilities due to is function/use	None Required



**Table S-1, Continued  
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<b>IMPACT CATEGORY</b>	<b>NO ACTION ALTERNATIVE</b>	<b>PROPOSED ACTION</b>	<b>MITIGATION, AVOIDANCE, AND MINIMIZATION MEASURES</b>
<b>Socioeconomic Impacts</b>	No Impact	Acquisition of approximately 58 acres of USAF land known as Parcel "F" and associated recorded deed restrictions for AFP 44	Transfer approximately 160 acres known as Parcel "G" to USAF. Replace 12 ECMs elsewhere on AFP 44 that would provide the same explosives storage capacity.
<b>Environmental Justice</b>	Noise impacts to minority and low-income populations	Noise impacts to minority and low-income populations	See Noise and Noise-Compatible Land Use Mitigation.
<b>Children's Health and Safety Risks</b>	No Impact	No Impact	None Required
<b>Visual Effects</b>	No Impact	No Significant Impact due to the distance to the nearest residences and the types of lights to be used	None Required
<b>Wetlands</b>	No Impact	No Impact	None Required
<b>Floodplains</b>	No Impact	No Significant Impact	Erosion-control Best Management Practices (BMPs) will be adopted to maintain runoff on-site and minimize the potential for adverse effects on downstream water quality.

**Table S-1, Continued  
ENVIRONMENTAL IMPACT SUMMARY MATRIX  
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<b>IMPACT CATEGORY</b>	<b>NO ACTION ALTERNATIVE</b>	<b>PROPOSED ACTION</b>	<b>MITIGATION, AVOIDANCE, AND MINIMIZATION MEASURES</b>
<b>Surface Waters</b>	No Impact	1.1 acres of the Hughes Wash Tributary #1 and 0.06 acres of the Hughes Wash Tributary #2 would be impacted. Additional 11.6 acre-feet of stormwater detention needed.	Construction of detention basins to mitigate additional impervious surface. Obtain applicable permits from USACE and ADEQ for impacts to jurisdiction waters of the United States Erosion-control BMPs will be adopted to maintain runoff on-site and minimize the potential for adverse effects on downstream water quality.
<b>Groundwater</b>	No Impact	No Impact	None Required
<b>Wild and Scenic Rivers</b>	No Impact	No Impact	None Required
<b>Irreversible and Irretrievable Commitment of Resources</b>	No Impact	No Impact	None Required
<b>Cumulative Impacts</b>	No Impact	No Significant Impact	None Required