

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 full length parallel runway; displace Runway 11L arrivals threshold; demolish existing Runway 11R/29L; construct a new centerline parallel taxiway; construct new outboard parallel taxiway; construct bypass taxiway; close Taxiway A2, construct/maintain Arizona Air National Guard (AANG) extended arm/disarm pad; provide associated drainage improvements; and, provide AANG aircraft arresting system/runway improvements. This Proposed Action also includes land transactions/conveyance of Parcel F from Air Force Plant 44 (AFP 44) to Tucson Airport Authority (TAA), Parcel G from TAA to United States Air Force (USAF), Parcel H from TAA to USAF, the demolition of 12 USAF ECMs identified at AFP 44 as "A" Magazines, construction of replacement magazines elsewhere on AFP 44, and construction of a munitions storage area for the AANG.

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 Lighting 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.

A Notice of Availability (NOA) was published in the *Federal Register* on May 21, 2018. The NOA described the Proposed Action, provided the public hearing date, time, and location, informed the public on how to obtain a copy of the Draft EIS, and initiated the public comment period. Advertisements announcing the availability of the Draft EIS were also published on May 18, 2018 in the Arizona Daily Star and La Estrella newspapers.

Notice of the Draft EIS Availability for review was sent to all stakeholders who submitted comments during the EIS scoping process. The Draft EIS was also available for review online at the following website: <https://www.airportprojects.net/tus-eis>. Public comments on the Draft EIS were received from a total of 11 individuals, organizations, and governmental agencies during the official comment period (May 21, 2018 to July 9, 2018). Comments were received from FEMA, the Pima County Flood Control District, the City of Tucson, TAA, and the Pima County Administrator's office. A copy of the full comment and the response to those comments are provided in **Appendix K**.

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 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 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**

IMPACT CATEGORY	NO ACTION ALTERNATIVE	PROPOSED ACTION	MITIGATION, AVOIDANCE, AND MINIMIZATION MEASURES
Air Quality	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.
Biological Resources 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.
Biological Resources 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.
Biological Resources 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
Tucson International Airport**

IMPACT CATEGORY	NO ACTION ALTERNATIVE	PROPOSED ACTION	MITIGATION, AVOIDANCE, AND MINIMIZATION MEASURES
Biological Resources 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)
Climate	No Adverse Impact	No Adverse Impact	None Required
DOT Section 4(f)	No Physical or Constructive Use	No Physical or Constructive Use	None Required
Hazardous Materials, Solid Waste, and Pollution Prevention	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.
Historical, Architectural, Archaeological, & Cultural Resources	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.
Land Use	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**

IMPACT CATEGORY	NO ACTION ALTERNATIVE	PROPOSED ACTION	MITIGATION, AVOIDANCE, AND MINIMIZATION MEASURES
Natural Resources	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
Energy Supply	No Impact	Local providers can meet increases in demand.	None Required
Noise and Noise-Compatible Land Use Housing Units within DNL 65+ dB	644 Housing Units	645 Housing Units	67 Housing Units in significant increase area to be mitigated using the following methods: <ul style="list-style-type: none"> • Offer to sound insulate 27 single-family housing units • Offer to sound insulate 4 two-family housing units • Offer to sound insulate 17 multi-family housing units • Offer 19 manufactured/mobile housing units acquisition.
Noise and Noise-Compatible Land Use Population within DNL 65+ dB	2,188 People	2,199 People	See Noise and Noise-Compatible Land Use Housing Units within DNL 65+ dB Mitigation
Noise and Noise-Compatible Land Use 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 its function/use	None Required

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


IMPACT CATEGORY	NO ACTION ALTERNATIVE	PROPOSED ACTION	MITIGATION, AVOIDANCE, AND MINIMIZATION MEASURES
Socioeconomic Impacts	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.
Environmental Justice	Noise impacts to minority and low-income populations	Noise impacts to minority and low-income populations	See Noise and Noise-Compatible Land Use Mitigation.
Children's Health and Safety Risks	No Impact	No Impact	None Required
Visual Effects	No Impact	No Significant Impact due to the distance to the nearest residences and the types of lights to be used	None Required
Wetlands	No Impact	No Impact	None Required
Floodplains	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
Tucson International Airport**

IMPACT CATEGORY	NO ACTION ALTERNATIVE	PROPOSED ACTION	MITIGATION, AVOIDANCE, AND MINIMIZATION MEASURES
Surface Waters	No Impact	1.1 acres of the Hughes Wash Tributary #1 and 0.06 acres of the Hughes Wash Tributary #2 would be impacted.	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.
Groundwater	No Impact	No Impact	None Required
Wild and Scenic Rivers	No Impact	No Impact	None Required
Irreversible and Irretrievable Commitment of Resources	No Impact	No Impact	None Required
Cumulative Impacts	No Impact	No Significant Impact	None Required

S.6 Approval Declaration

After careful and thorough consideration of the facts contained herein, and following consideration of the views of those Federal agencies having jurisdiction by law or special expertise with respect to the environmental impacts described, the undersigned finds that the proposed Federal action is consistent with existing national environmental policies and objectives as set forth in Section 101(a) of the National Environmental Policy Act of 1969.

APPROVED:  8/24/18

Arlene Draper
Acting Director, Office of Airports
Federal Aviation Administration
Western-Pacific Region

Date

DISAPPROVED: _____

Arlene Draper
Acting Director, Office of Airports
Federal Aviation Administration
Western-Pacific Region

Date

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