



FINAL

**ENVIRONMENTAL ASSESSMENT
FOR THE
COMBAT RESCUE HELICOPTER TRANSITION**

September 2017

(This page intentionally left blank)

FINDING OF NO SIGNIFICANT IMPACT ENVIRONMENTAL ASSESSMENT FOR THE COMBAT RESCUE HELICOPTER TRANSITION AT KIRTLAND AIR FORCE BASE, NEW MEXICO

Pursuant to provisions of the National Environmental Policy Act (NEPA), 42 United States Code (USC) 4321 to 4347, as amended, implementing Council on Environmental Quality (CEQ) Regulations; 40 Code of Federal Regulations (CFR) 1500–1508; and 32 CFR § 989, *Environmental Impact Analysis Process*, the United States Air Force (USAF) prepared an Environmental Assessment (EA) to assess potential environmental consequences associated with the Combat Rescue Helicopter (CRH) transition at Kirtland Air Force Base (KAFB), Bernalillo County, New Mexico.

The purpose of the Proposed Action is to replace the current fleet of aging Sikorsky HH-60G helicopters with the HH-60W. The replacement of the HH-60G was deemed necessary due to increased maintenance costs, decreased reliability and safety, and outdated mission capabilities. Delivery of the new HH-60Ws would allow the 58 Special Operations Wing (SOW) at KAFB to continue providing undergraduate, graduate, and refresher aircrew training for special operations and personnel rescue. The selection of the HH-60W as the CRH replacement was announced in June 2014.

The EA addressing the CRH transition at KAFB, New Mexico, attached hereto and incorporated herein, analyzes the potential environmental consequences of activities associated with the CRH replacement and associated construction and demolition activities at KAFB and provides environmental protection measures to avoid or reduce adverse environmental impacts.

The EA considers all potential impacts of the Proposed Action and the No Action Alternative. The EA also considers cumulative environmental impacts with other projects within the Region of Influence.

PROPOSED ACTION (EA §2.3.1, pages 2-1 to 2-5)

The USAF is proposing to replace the current fleet of 11 Primary Training Aircraft Inventory (PTAI) and 1 Back-up Aircraft Inventory (BAI) HH-60G helicopters with 11 PTAI and 3 BAI HH-60W helicopters. It is anticipated that the current activities of the 58 SOW would remain unchanged as no new flight operations or additional student throughput are planned or anticipated at this time. The existing flight approach and flight departure tracks to and from KAFB would also remain unchanged. Associated activities would include restriping of the concrete apron, installation of additional mooring points, construction of additional parking areas, demolition of Buildings 954 and 960 to create space for a 35,973-square foot flight simulator facility, and construction of an 11,000-square foot addition to Building 957.

NO-ACTION ALTERNATIVE (EA §2.3.2, pages 2-5 to 2-6)

The No-Action Alternative was analyzed to provide a baseline of the existing environmental, social, and economic conditions the Proposed Action was compared against. Under the No-Action Alternative, the HH-60G helicopters would continue to be used to provide undergraduate, graduate, and refresher aircrew training for special operations and personnel rescue for the 58 SOW at KAFB. As the HH-60Gs continue to age, it is anticipated that helicopter maintenance costs would increase, reliability deficiencies and enhanced mission capability would not be addressed, training of military personnel would be conducted with outdated equipment, and no increase in tactical superiority in operations would be realized. Most HH-60Gs currently in service with the 58 SOW at KAFB have logged flight service hours that are approaching their upper limits and are in need of outright replacement to maintain safe and effective performance.

SUMMARY OF FINDINGS

Based on the scope of the Proposed Action, the following environmental resource areas were eliminated from further analysis: Airspace Management, Land Use, Visual Resources, Biological Resources, and Geology and Soils (EA § 3.2, pages 3-1 to 3-3). Under the Proposed Action, current 58 SOW activities would not change, as no new flight operations or additional student throughput are planned and flight activities would continue to use established helicopter aerial refueling tracks, weapons ranges, drop zones, low-level training routes, and installation entry and exit procedures. The Proposed Action area is located in the Flightline District; therefore, current land use designations would not change. The proposed

facilities would not adversely affect the existing visual landscape, would not result in adverse impacts on sensitive wildlife or vegetation, and attributes of the soil in the area would be taken into consideration in the design of the new structures. Environmental analyses within the EA focused on the following resource areas:

Noise (EA § 3.3.1, pages 3-3 to 3-9). The proposed transition to the HH-60W airframe is expected to result in a long-term, negligible, adverse impact on the noise environment. The proposed transition would result in no change in aircraft operational levels at KAFB or the Sunport. Rotor blade, engine, and weight differences between the HH-60G and HH-60W are not expected to result in a significant difference in noise levels.

Construction and demolition activities associated with the Proposed Action are expected to result in a short-term, negligible to minor, adverse impact on the noise environment at KAFB. Construction activities would temporarily increase noise levels in the immediate vicinity of the Proposed Action area; however, because distance rapidly attenuates noise levels, the area would experience only a minor increase in ambient noise conditions during construction hours of 0700 to 1700. The nearest sensitive noise receptor are residential areas located approximately 1,500 feet north of the Proposed Action area.

Air Quality (EA § 3.3.2, pages 3-9 to 3-14). The Proposed Action is located within Bernalillo County, New Mexico, which is in attainment status for all National Ambient Air Quality Standards (NAAQS). The proposed transition to the HH-60W airframe is not expected to result in a change in air emissions; therefore, no short- or long-term impacts on air quality are expected. The CRH mission will operate the HH-60W equipped with the T700-GE-701D engine, which the HH-60G converted to in 2012 and implementation of the Proposed Action will result in no additional sorties.

Construction and demolition activities are expected to result in a short-term, minor, adverse impact on air quality. Per the New Mexico Air Quality Control Act and 20.11.20 New Mexico Administrative Code (NMAC), a fugitive dust control construction permit is required for projects disturbing 3/4 acre or more as well as the demolition of buildings containing more than 75,000 cubic feet of space. Ground-disturbing activities would result in fugitive dust; however implementation of best management practices (BMPs) such as watering during ground-disturbing activities, using soil stabilization agents for dust suppression, use of rip-rap to prevent vehicle track-out, and installing silt/fabric fences would reduce any impact. Vehicles would be well maintained and diesel vehicles would use diesel particle filters to reduce emissions. It is not expected that emissions from construction and demolition activities would contribute to or affect local or regional attainment status with the NAAQS. The Air Conformity Applicability Model was used to estimate emissions associated with construction activities using known material quantities and an estimate of construction phasing. Construction-related emissions of all criteria pollutants are below the applicable *de minimis* threshold of 100 tons per year. Should a new emergency back-up generator be installed, a 20.11.41 NMAC construction permit would be obtained prior to installation.

Water Resources (EA § 3.3.3, pages 3-14 to 3-21). All aspects associated with implementation of the Proposed Action are not expected to result in short- or long-term impacts on floodplains. Because the Proposed Action area is approximately 1-1/2 miles north of the Tijeras Arroyo and sits at a higher elevation, flooding potential is considered to be low. In addition, the proposed transition to the HH-60W airframe is not expected to result in short- or long-term impacts on water resources. Implementation of the Proposed Action is not expected to result in any changes to water resources as no new flight operations and no additional student throughput are planned or anticipated at this time.

Construction and demolition activities are expected to result in a short-term, negligible to minor, adverse impact on water resources. The construction areas are anticipated to be larger than 1 acre; therefore, compliance with the Municipal Separate Storm Sewer System Permit would be required. The proposed new facilities and associated stormwater controls would be designed in accordance with Unified Facilities Code Low Impact Design requirements to maintain or restore the natural hydrologic functions of the area. Adherence to BMPs, good housekeeping measures, and restabilization and revegetation of the area following construction would reduce any adverse impacts.

Safety (EA § 3.3.4, pages 3-21 to 3-23). The proposed transition to the HH-60W airframe is expected to result in a long-term, negligible to minor, beneficial impact on military personnel safety. Replacement of

the aging HH-60G helicopters and associated flight simulator would resolve reliability deficiencies and enhance mission capability, improve training of military personnel, and maintain tactical superiority in 58 SOW operations. It is expected that replacement of the aging HH-60G helicopters with more modern aircraft would have a beneficial impact on safety.

Construction and demolition activities are expected to result in a short-term, minor, adverse impact on personnel safety. The safety risk to personnel in the area would slightly increase due to construction activities. Installation personnel would be required to vacate the areas during construction activities. The construction area would be fenced and signs would be posted to further reduce safety risks to installation personnel. The selected construction contractor would be required to create and administer a site-specific health and safety plan with BMPs. Adherence to all federal, state, and local rules and regulations and the installation's Hazardous Waste Management Plan (HWMP) by contractors during demolition activities would prevent the potential exposure of military personnel to asbestos and lead wastes.

Hazardous Materials and Waste (EA § 3.3.5, pages 3-23 to 3-30). The proposed transition to the HH-60W airframe is not expected to result in any long- or short-term impacts on hazardous materials and wastes. 58 SOW would continue to implement standard BMPs and participate in the Environmental Management System (EMS) and Enterprise Environmental, Safety, and Occupational Health Management Information System programs.

Construction and demolition activities would result in a short-term, minor, adverse impact on hazardous materials and wastes. Heavy equipment would be well maintained to avoid the potential for spills or leakage. Construction contractors would be made aware of the EMS program. Building 954 would be surveyed prior to demolition and all friable asbestos (including asbestos that would be made friable during demolition), lead-based paint, and polychlorinated biphenyls would be separated from the remainder of the demolition materials as required and remediated and disposed of in accordance with the HWMP and all regulations. Construction activities are not expected to result in any impacts on or be impacted by Environmental Restoration Program sites.

Cultural Resources (EA § 3.3.6, pages 3-30 to 3-35). The proposed transition to the HH-60W airframe is not expected to result in short- or long-term impacts on cultural resources.

Construction and demolition activities would result in a short-term, negligible, adverse impact on cultural resources. No known archaeological sites exist within the Proposed Action area. Should an inadvertent discovery of human or cultural remains occur, all project activities shall stop and operational procedures outlined in the Installation Cultural Resources Management Plan shall be followed. The State Historic Preservation Officer (SHPO) requested, and KAFB performed, a Historic Property Survey of Building 954. Upon completion and submittal of the survey, the SHPO concurred with the KAFB determination that Building 954 is not eligible for the National Register for Historic Places. SHPO concurrence was received 2 August 2017.

Infrastructure (EA § 3.3.7, pages 3-35 to 3-39). The proposed transition to the HH-60W airframe is expected to result in a long-term, negligible, adverse impact on the electrical distribution system from the use of four new portable air conditioning units. Because these units would be used on an as needed basis and during preflight and maintenance activities only, it is expected that their use would not result in a significant impact. No other short- or long-term impacts on infrastructure and transportation are expected from the proposed transition to the HH-60W airframe.

Construction and demolition activities are expected to result in a short-term, negligible to minor, adverse impact on infrastructure. During construction activities, installation roadways would be used by haul and delivery trucks; however, transportation would not occur during peak travel times. Minimal amounts of water would be used for dust-suppression. During construction activities, utility service interruptions might be experienced should lines need to be rerouted or as new facilities are connected to the utility systems. Because implementation of the Proposed Action would not result in new flight operations and additional student throughput above current levels, it is anticipated that the current utility systems would be able to accommodate the new facilities without exceeding current capacity. Materials that could be recycled or reused would be diverted from landfills to the greatest extent possible.

Socioeconomics (EA § 3.3.8, pages 3-40 to 3-43). Implementation of the Proposed Action is expected to result in a short-term, negligible, beneficial impact on the socioeconomic environment. The existing

construction industry should adequately provide enough workers as required for construction activities. Beneficial impacts would result from the increase in payroll tax revenues and the purchase of materials, goods, and services in the area.

Implementation of the Proposed Action is not expected to result in a short- or long-term impact on environmental justice or protection of children. No schools or day care centers are located within 1/2-mile of the Proposed Action area and all activities would occur in the Flightline District on KAFB, which is a restricted access area.

The USAF has concluded that no significant adverse cumulative impacts would result from activities associated with implementation of the Proposed Action when considered with past, present, or reasonably foreseeable future projects at KAFB and the Region of Influence (EA Chapter 4, pages 4-1 to 4-8).

FINDING OF NO SIGNIFICANT IMPACT

Based on my review of the facts and analyses contained in the attached EA, conducted under the provisions of NEPA, CEQ Regulations, and 32 CFR § 989, I conclude that the Proposed Action would not have a significant environmental impact, either by itself or cumulatively with other known projects. Accordingly, an Environmental Impact Statement is not required. The signing of this Finding of No Significant Impact completes the environmental impact analysis process.



DAWN A. NICKELL, Colonel, USAF
Vice Commander, 377th Air Base Wing



Date

Attachment: *Environmental Assessment for the Combat Rescue Helicopter Transition at Kirtland Air Force Base, New Mexico.*

FINAL

**ENVIRONMENTAL ASSESSMENT
FOR THE
COMBAT RESCUE HELICOPTER TRANSITION**

September 2017

(This page intentionally left blank)

**FINAL ENVIRONMENTAL ASSESSMENT
FOR THE
COMBAT RESCUE HELICOPTER TRANSITION AT
KIRTLAND AIR FORCE BASE
ALBUQUERQUE, NEW MEXICO**

- a. Responsible Agency:** United States Air Force, Air Education and Training Command
- b. Affected Location:** Kirtland Air Force Base, Albuquerque, New Mexico
- c. Designation:** Final Environmental Assessment
- d. Proposed Action:** Under the Combat Rescue Helicopter (CRH) Transition, the United States Air Force (USAF) is proposing to replace its aging fleet of Sikorsky HH-60G rotorcraft with the Sikorsky HH-60W. Replacement of the HH-60G was deemed necessary due to the increased maintenance costs, decreased reliability and safety, and outdated mission capabilities. The selection of the HH-60W as the CRH replacement was announced in June 2014.

The Proposed Action is to replace the current fleet of 11 Primary Training Aircraft Inventory (PTAI) and 1 Back-up Aircraft Inventory (BAI) HH-60G helicopters with 11 PTAI and 3 BAI HH-60W helicopters. As a result of the Proposed Action, demolition, construction, and the relocation of some existing facilities on Kirtland Air Force Base is necessary. This includes an 11,000-square foot addition to Building 957, and demolition of Buildings 954 and 960 to create space for a 35,973 square foot flight simulator facility.

Under the No-Action Alternative, the USAF would not replace the HH-60G helicopter, the HH-60W helicopter would not be procured, and base asset demolition, construction, and relocation would not be required. Under the No-Action Alternative, the 58 Special Operations Wing (SOW) would continue to conduct their current mission using the existing HH-60G helicopter.

- e. Inquiries:** Inquiries regarding the Proposed Action should be directed to Mr. Josh Adkins, EA Project Manager, AFCEC/CZN, 2261 Hughes Avenue, Suite 155, JBSA Lackland, Texas, 78236
- f. Abstract:** This EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, 42 United States Code (USC) §§ 4321-4374, as implemented by the Council on Environmental Quality (CEQ) regulations, 40 Code of Federal Regulations (CFR) §§1500-1508, and USAF implementation regulation 32 CFR 989. As presented in this EA, analysis established that no substantial adverse impacts to any resource categories would result from implementing the Proposed Action.

Privacy Advisory

Letters or other written or oral comments provided may be published in the Final EA. As required by law, comments will be addressed in the Final EA and made available to the public. Any personal information provided will be used only to identify your desire to make a statement during the public comment period or to fulfill requests for copies of the Final EA or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the Final EA. However, only the names of the individuals making comments and specific comments will be disclosed. Personal home addresses and telephone numbers will not be published in the Final EA.

(This page intentionally left blank)

Table of Contents

CHAPTER 1	PURPOSE AND NEED FOR ACTION	1-1
1.1	Introduction	1-1
1.1.1	KAFB Overview	1-1
1.1.2	58 SOW and HH-60G Pave Hawk Helicopter Overview	1-4
1.2	Purpose of and Need for Proposed Action	1-5
1.3	Scope of the Analysis	1-5
1.4	Interagency and Intergovernmental Coordination/Consultations	1-6
1.4.1	Interagency Coordination/Consultation	1-6
1.4.2	Intergovernmental Coordination/Consultation	1-7
1.5	Public and Agency Review of Draft EA	1-7
CHAPTER 2	DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES	2-1
2.1	Proposed Action	2-1
2.2	Selection Standards	2-1
2.3	Detailed Description of the Alternatives	2-1
2.3.1	Proposed Action	2-1
2.3.2	No-Action Alternative	2-5
2.4	Alternatives Eliminated From Further Consideration	2-6
2.5	Comparative Summary of Impacts	2-7
CHAPTER 3	AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES	3-1
3.1	Environmental Laws, Regulations, and Executive Orders	3-1
3.2	Environmental Resource Areas Eliminated from Detailed Consideration	3-1
3.2.1	Airspace Management	3-2
3.2.2	Land Use	3-2
3.2.3	Visual Resources	3-2
3.2.4	Biological Resources	3-2
3.2.5	Geology and Soils	3-3
3.3	Environmental Resource Areas Requiring Detailed Consideration	3-3
3.3.1	Noise	3-3
3.3.2	Air Quality	3-10
3.3.3	Water Resources	3-15
3.3.4	Safety	3-22
3.3.5	Hazardous Materials and Wastes	3-24
3.3.6	Cultural Resources	3-31
3.3.7	Infrastructure	3-36
3.3.8	Socioeconomics and Environmental Justice	3-41
CHAPTER 4	CUMULATIVE IMPACTS	4-1
4.1	Scope of Cumulative Analysis	4-1
4.1.1	Past Actions	4-1
4.1.2	Present and Reasonably Foreseeable Actions	4-1
4.2	Cumulative Impact Analysis by Environmental Resource Area	4-5
4.2.1	Noise	4-5
4.2.2	Air Quality	4-6
4.2.3	Water Resources	4-6
4.2.4	Safety	4-6
4.2.5	Hazardous Materials and Wastes	4-6
4.2.6	Cultural Resources	4-6
4.2.7	Infrastructure	4-7
4.2.8	Socioeconomics and Environmental Justice	4-7
4.3	Unavoidable Adverse Impacts	4-7
4.4	Compatibility of the Proposed Action with the Objectives of Federal, Regional, and Local Land Use Plans, Policies, and Controls	4-7

Table of Contents (Continued)

4.5	Relationship between Short-Term Uses and Long-Term Productivity.....	4-7
4.6	Irreversible and Irretrievable Commitment of Resources.....	4-8
CHAPTER 5	INTERAGENCY/ INTERGOVERNMENTAL COORDINATION	5-1
CHAPTER 6	LIST OF PREPARERS.....	6-1
CHAPTER 7	REFERENCES.....	7-1

List of Figures

Figure 1-1: KAFB Vicinity Map.....	1-2
Figure 2-1: Proposed Action Area.....	2-4
Figure 2-2: 58 SOW Mission Footprint	2-6
Figure 3-1: Existing Noise Contours at KAFB.....	3-7
Figure 3-2: Water Resources Adjacent to the Proposed Action Area	3-19
Figure 3-3: ERP Sites Within and Adjacent to the Proposed Action Area.....	3-29
Figure 3-4: Historically-Eligible Structures Within and Adjacent to the Proposed Action Area.....	3-34
Figure 3-5: Utility Systems Within and Adjacent to the Proposed Action Area.....	3-38

List of Tables

Table 2-1: HH-60G/HH-60W Comparison	2-2
Table 2-2: Summary of Potential Impacts.....	2-7
Table 3-1: Sample List of Coordination and Permits Associated with the Proposed Action.....	3-1
Table 3-2: Sound Levels and Human Response	3-4
Table 3-3: Construction Equipment Noise Levels	3-10
Table 3-4: National and New Mexico Ambient Air Quality Standards	3-11
Table 3-5: Conformity <i>de minimis</i> Emissions Thresholds.....	3-12
Table 3-6: Calendar Year 2016 Air Emissions Inventory for KAFB.....	3-13
Table 3-7: Construction Activity Emissions.....	3-14
Table 3-8: ERP Sites Within and Adjacent to the Proposed Action Area.....	3-26
Table 3-9: Historical Buildings within a 1/2-Mile of the Proposed Action Area	3-32
Table 3-10: Population in the Region of Influence as Compared to New Mexico and the United States (2000 and 2010).....	3-41
Table 3-11: Minority and Low-Income Characteristics (2010)	3-42
Table 4-1: Present and Reasonably Foreseeable Future Projects	4-2

List of Appendices

Appendix A	Interagency and Intergovernmental Coordination/Consultations
Appendix B	Notice of Availability and Draft EA Comments Obtained (<i>under development</i>)
Appendix C	Applicable Laws, Regulations, Policies, and Planning Criteria
Appendix D	Air Pollutant Emissions Calculations
Appendix E	Building 954 SHPO Consultation

List of Acronyms and Abbreviations

ABCWUA	Albuquerque Bernalillo County Water Utility Authority
ABW	Air Base Wing
ACAM	Air Conformity Applicability Model
ACM	asbestos-containing material
ADAL	Addition/Alteration
AEC	Atomic Energy Commission
AEHD-AQD	Albuquerque Environmental Health Department Air Quality Division
AFB	Air Force Base
AFCEC	Air Force Civil Engineer Center
AFI	Air Force Instruction
AFRL	Air Force Research Laboratory
AFSWC	Air Force Special Weapons Center
AMAFCA	Albuquerque Metropolitan Arroyo Flood Control Authority
AMRGI	Albuquerque-Mid Rio Grande Intrastate
APE	area of potential effect
AQCR	Air Quality Control Region
ATTW	Aircrew Training and Test Wing
BAI	Backup Aircraft Inventory
bgs	below ground surface
BLM	Bureau of Land Management
BMP	best management practice
BTU	British thermal units
CA	Corrective Action
CAA	Clean Air Act
CCTW	Combat Crew Training Wing
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CH ₄	methane
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CRH	Combat Rescue Helicopter
CTW	Crew Training Wing
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DNL	average day/night sound level
DoD	Department of Defense
DOE	Department of Energy
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EISA	Energy Independence Security Act
ELG	Effluent Limitations Guideline
EO	Executive Order
EOD	Explosive Ordnance Division
ET	evapotranspiration
FAA	Federal Aviation Administration
FR	Forest Road
FY	Fiscal Year
GHG	greenhouse gas
HAP	hazardous air pollutant
Hz	hertz
I	Interstate
IDP	Installation Development Plan

JD	Jurisdictional Determination
KAFB	Kirtland Air Force Base
LATN	Low Altitude Tactical Navigation
LBP	lead-based paint
LID	Low Impact Design
L_{max}	maximum sound level
mg/m^3	milligrams per cubic meter
MGD	million gallons per day
MMRP	Military Munitions Response Program
MS4	Municipal Separate Storm Sewer System
MSA	Metropolitan Statistical Area
MSGP	Multi-Sector General Permit
MWD	Military Working Dog
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NFA	No Further Action
NHPA	National Historic Preservation Act
NMAAQS	New Mexico Ambient Air Quality Standards
NMAC	New Mexico Administrative Code
NMDGF	New Mexico Department of Game and Fish
NMDOT	New Mexico Department of Transportation
NMED	New Mexico Environment Department
NO_2	nitrogen dioxide
NOA	Notice of Availability
NO_x	nitrous oxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
OSHA	Occupational Safety and Health Administration
OSH	occupational safety and health
OWS	oil/water separator
Pb	lead
PCB	polychlorinated biphenyl
PJ/CRO	Pararescue and Combat Rescue Officer
$PM_{2.5}$	particulate matter less than 2.5 microns
PM_{10}	particulate matter less than 10 microns
POL	petroleum, oils, and lubricants
ppb	parts per billion
PPE	personal protective equipment
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTAI	Primary Training Aircraft Inventory
QRP	Qualified Recycling Program
RCRA	Resource Conservation and Recovery Act
RHS	RED HORSE Squadron
SDWA	Safe Drinking Water Act
SF	square feet
SFG	Security Forces Group
SHPO	State Historic Preservation Officer
SIP	State Implementation Plans
SM	square meters
SNL	Sandia National Laboratories
SO_2	sulfur dioxide
SOW	Special Operations Wing
SPCC	Spill Prevention, Control, and Countermeasure

SWPPP	Stormwater Pollution Prevention Plan
TEAMS	Technical Evaluation Assessment Monitor Site
THPO	Tribal Historic Preservation Officer
TMDL	Total Maximum Daily Load
TNW	Traditional Navigable Waters
tpy	tons per year
µg/m ³	micrograms per cubic meter
UFC	Unified Facilities Code
US	United States
USACE	US Army Corps of Engineers
USAF	US Air Force
USC	United States Code
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
UTC	Urban Training Complex
VOC	volatile organic compound
WFMP	Wildland Fire Management Plan
WOTUS	Waters of the United States

(This page intentionally left blank)

CHAPTER 1 PURPOSE AND NEED FOR ACTION

This chapter begins with a brief overview of Kirtland Air Force Base (KAFB), and then follows with a synopsis of the 58 Special Operations Wing (SOW) and one of its primary helicopters. This chapter also describes the purpose of and need for the Proposed Action, which is the Combat Rescue Helicopter (CRH) transition for the 58 SOW at KAFB. The Proposed Action is evaluated as part of a focused Environmental Assessment (EA) that also addresses several elements associated with the CRH transition. This chapter provides summaries of the scope of the environmental review process, presents an overview of the organization of the document, and discusses the interagency and intergovernmental coordination/consultations conducted during the development of this EA.

The National Environmental Policy Act (NEPA) (Public Law 91-190, 42 United States Code [USC] Section 4321 et seq.) requires that federal agencies consider potential environmental consequences of proposed and alternative actions in their decision-making process. NEPA encourages federal agencies to protect, restore, and enhance the environment through well-informed decisions. The Council on Environmental Quality (CEQ) was established under NEPA for the purpose of implementing and overseeing federal policies related to this process. The CEQ regulations provide the implementation guidelines for NEPA (40 Code of Federal Regulations [CFR] §§ 1500–1508), and require federal agencies to develop agency-specific NEPA guidelines.

In compliance with CEQ regulations, the United States (US) Department of Defense (DoD) implemented DoD Instruction 4715.9 *Environmental Planning Analysis*, to assign responsibilities for integration of environmental considerations into DoD activities and operational planning. Additionally, the US Air Force (USAF) implemented the Environmental Impact Analysis Process (EIAP) to provide procedures for conducting environmental analyses at its installations (32 CFR § 989).

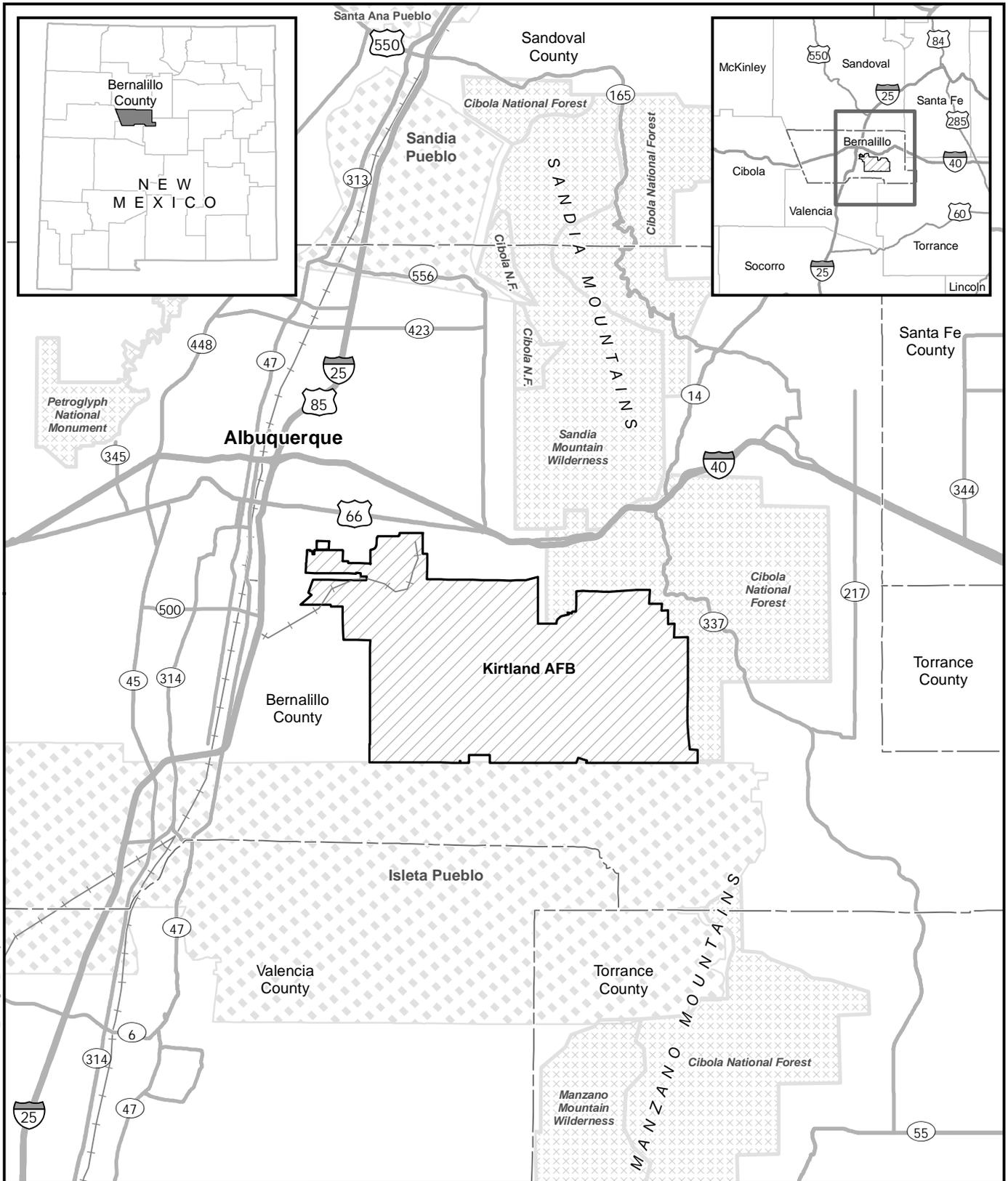
1.1 Introduction

1.1.1 KAFB Overview

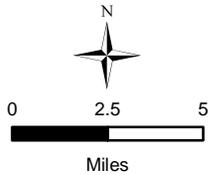
KAFB is located southeast of Albuquerque, New Mexico at the foot of the Manzanita Mountains as seen in **Figure 1-1**. KAFB encompasses 51,585 acres, and is the sixth largest installation in the USAF. The USAF is responsible for the management of 44,052 acres, while the US Department of Energy (DOE) is responsible for the remaining 7,533 acres. KAFB is located adjacent to the Albuquerque International Sunport, hereafter referred to as the Sunport, which is a joint-use civilian airport with runways serving civilian, military, and other government aircraft. The land uses adjacent to KAFB include the Cibola National Forest to the northeast and east, Isleta Pueblo to the south, Bernalillo County developments to the southwest, and city of Albuquerque developments to the west and north.

KAFB was established in the late 1930s as a training installation for the US Army Air Corps. In January 1941, construction of the Albuquerque Army Air Base began with permanent barracks, warehouses, and a chapel. The installation served as a training site for aircrews for many of the country's bomber aircraft used during World War II, including the B-17, B-18, B-24, and B-29 during the early 1940s. In February 1942, Albuquerque Army Air Base was renamed Kirtland Army Air Field in honor of Colonel Roy C. Kirtland, one of the US Army's earliest aviation pioneers (KAFB 2013).

In 1942, the US Army Air Corps established a training depot for aircraft support and logistics to the east of Kirtland Army Air Field, near the original private airport, Oxnard Field. The depot became known as Sandia Base. With the completion of the ground crew training program in 1943, Sandia Base was used as a convalescent center for wounded aircrew members, and then as a storage and dismantling facility for war-weary and surplus aircraft as the war ended. In February 1945, Kirtland Army Air Field participated in training combat crews for the B-29 Super Fortress, which eventually brought an end to the hostilities with Japan by dropping the first atomic bombs on Hiroshima and Nagasaki.



File: L:\AGE\Projects\EN\Kirtland AFB Helicopter EA\16_EA\FONSI\GIS\MXD\Draft_EA\Fig1-1_Vicinity.mxd 7/18/2017 4:16:12 PM



- Kirtland AFB Boundary
- County Boundary
- Major Road
- Railroad
- National Park, Forest, Reserve
- Native American Trust

Figure 1-1
Kirtland AFB Vicinity Map
Combat Rescue Helicopter EA
Final - September 2017



Kirtland Army Air Field Circa 1945 (looking east)

Source: Unknown

In July 1945, the Los Alamos Laboratory Z-Division was formed to manage the engineering design, production, assembly, and field testing of non-nuclear components of nuclear bombs. In September 1945, the Z-Division transferred its field-testing group to an area just east of Kirtland Army Air Field, called Sandia Base, along with staff from the US Army Air Corps' 509th Composite Group at Wendover Air Base in Utah to do weapon assembly. The Atomic Energy Commission (AEC) was created by the US Congress in 1946 as a civilian organization, withdrawing control from the military, with control of atomic energy to include nuclear research and development. In 1948, under the AEC, the Z-Division was renamed Sandia Laboratory and became a separate branch from the Los Alamos Laboratory (KAFB 2013).

In February 1946, Kirtland Army Air Field's flying and training mission was terminated, and its new mission entailed flight test activities for Sandia Laboratory, development of aircraft modifications for weapons delivery, and characterizing nuclear weapon ballistics. In 1947, the US Army Air Corps became the USAF and Kirtland Army Air Field was renamed KAFB. In 1949, the USAF established its own Special Weapons Center and testing laboratory near Sandia Base. A majority of the testing and evaluation activities were conducted on a 46,000-acre tract in the Manzano Mountains, referred to as the New Mexico Proving Ground, on the southern part of KAFB, which includes US Forest Service lands withdrawn for DoD and AEC research, testing, and development activities (KAFB 2013).

The late 1940s and 1950s were expansion years as both KAFB and Sandia Base played increasing roles in the nation's defense efforts. New buildings, hangars, and the east-west runway, which is now owned by the city of Albuquerque, were constructed. In 1971, the installation and its adjoining military neighbors to the east, Sandia and Manzano Bases, were merged to form what is known today as KAFB. In January 1993, KAFB changed hands to the newly formed USAF Materiel Command where it remained until October 2015 when it was transferred to the USAF Global Strike Command (KAFB 2013).

The host unit at KAFB is the 377 Air Base Wing (ABW), which provides support to more than 100 mission partners with personnel, resources, equipment, and facilities. Other military units at KAFB include the

58 SOW, 150 SOW (New Mexico Air National Guard), 21st Explosive Ordnance Division (US Army), Air Force Research Laboratory (AFRL), USAF Inspection Agency, USAF Nuclear Weapons Center, USAF Operational Test and Evaluation Center, USAF Safety Center, USAF Reserve Officer Training Corps, Battlefield Airmen Training Squadron Pararescue and Combat Rescue Officer (PJ/CRO) Training School, Advanced Systems and Development Directorate, Distributed Mission Operations Center, Joint Navigation Warfare Center, and the Operationally Responsive Space. Non-military entities at KAFB include the American Red Cross, the New Mexico Civil Air Patrol, National Nuclear Security Administration Albuquerque Complex and Sandia Field Office, and Sandia National Laboratories (SNL) (KAFB 2016a).



1.1.2 58 SOW and HH-60G Pave Hawk Helicopter Overview

Located at KAFB since April 1994, the 58 SOW's mission is to train warriors, professionalize Airmen, and employ airpower. This mission has existed at KAFB since 20 February 1976, when the 1550 Aircrew Training and Test Wing (ATTW) moved from Hill Air Force Base (AFB). The 1550 ATTW trained helicopter and fixed-wing aircrews. The USAF redesignated the unit as the 1550 Combat Crew Training Wing (CCTW) in May 1984, inactivating it in October 1991, and transferring the training mission to the 542 Crew Training Wing (CTW). The USAF then deactivated the 542 CTW in April 1994, transferring the training mission to the 58 SOW (KAFB 2015a).

Drawing upon its history and experience with combat search and rescue operations, the 58 SOW now serves as a test center and school house for rescue aircrews and technology for the USAF. The 58 SOW provides undergraduate, graduate, and refresher aircrew training for special operations and personnel rescue by helicopter as well as fixed-wing and tilt-rotor aircraft. The 58 SOW trains over 14,000 students per year and operates six different aircraft systems, including two versions of the Bell Huey helicopter (TH-1H and UH-1N), one version of the Sikorsky Pave Hawk helicopter (HH-60G), two versions of the Lockheed Martin C-130 Hercules fixed-wing transport (HC-130J and MC-130J), and one version of the Bell Boeing Osprey tilt-rotor transport (CV-22) (KAFB 2015a). This EA assesses the 58 SOW's use of the HH-60G helicopter, details of which are provided below.



Sikorsky HH-60G Pave Hawk Helicopter

The HH-60G entered service with the USAF in 1982 as a twin-engine medium-lift helicopter. The primary mission of the HH-60G is to conduct day or night personnel recovery operations and is also tasked to perform civil search and rescue, medical evacuation, disaster response, humanitarian assistance, security cooperation/aviation advisory, space flight support, and rescue command and control. The HH-60G is a highly-modified version of existing US Army Black Hawk helicopters (UH-60A and UH-60L), featuring upgraded communications and navigation equipment. All HH-60Gs have an automatic flight control system, night vision goggles with lighting, and forward-looking infrared system that greatly enhances low-level night

operations. Additionally, HH-60Gs have color weather radar and an engine/rotor blade anti-ice system that gives them an adverse weather capability. Other HH-60G equipment includes a retractable in-flight refueling probe, internal auxiliary fuel tanks, and an 8,000-pound (3,600-kilogram) capacity cargo hook. HH-60G combat enhancements include a radar warning receiver, infrared jammer, and a flare/chaff countermeasure dispensing system. HH-60G rescue equipment includes a hoist capable of lifting a 600-pound load (270 kilograms) from a hover height of 200 feet (60.7 meters), and a personnel locating system. In addition, HH-60Gs are equipped with an over-the-horizon tactical data receiver that is capable of receiving near real-time mission update information. The HH-60Gs were originally powered by the General Electric T700-GE-701C engine, and each helicopter weighs approximately 22,000 pounds (USAF 2004). At KAFB, the 58 SOW has a current aircraft fleet of 11 HH-60G Primary Training Aircraft Inventory (PTAI) and 1 Backup Aircraft Inventory (BAI).

Because the HH-60G helicopters first entered service over 30 years ago, and most of the helicopters currently being used are nearing the end of their life cycle, the USAF began searching for a suitable replacement. In June 2014, Sikorsky was awarded a contract by the USAF to produce a new CRH, which has now been designated as the HH-60W helicopter (USAF 2014). Very similar to the HH-60G, the new HH-60W is a twin-engine medium-lift helicopter that is also a highly-modified version of an existing US Army Black Hawk helicopter (UH-60M). Updated features are expected to include an all-digital flight deck and avionics system, improved communications and navigation equipment, increased internal fuel

capability for greater range, modified in-flight refueling probe, improved flight performance and reliability, new flight control system, updated weather radar system, improved flare/chaff countermeasure dispensing system, and updated rescue equipment. Additionally, the HH-60Ws would use the updated General Electric T700-GE-701D engine. The first test flights for the new HH-60W are expected by late Fiscal Year (FY) 2018 or 2019, with operational capability in FY 2020 or 2021 (FlightGlobal 2016; Airforce Technology 2016).

1.2 Purpose of and Need for Proposed Action

According to 40 CFR § 1502.13, a federal agency is required to specify the purpose of and need for a proposed action. The assessment of a proposed action's purpose and need is the primary foundation for the identification of reasonable and feasible alternatives and the evaluation of impacts resulting from those alternatives.

The purpose of the Proposed Action is to improve the overall efficiency of the CRH and the special operations and search and rescue missions conducted by the 58 SOW. The aging HH-60Gs are critical assets for the 58 SOW. The HH-60Gs are used to conduct search and rescue operations, medical evacuations, disaster response, and humanitarian assistance throughout the country and across the world. The aging HH-60Gs first entered service over 30 years ago, as discussed in **Section 1.1.2**, and are nearing the end of their life cycle. Delivery of the new HH-60Ws would allow the 58 SOW at KAFB to continue providing undergraduate, graduate, and refresher aircrew training for special operations and personnel rescue.



Sikorsky HH-60G Pave Hawk Helicopter

The Proposed Action is needed to address increased helicopter maintenance costs, resolve reliability deficiencies and enhance mission capability, improve training of military personnel, as well as maintain tactical superiority in operations of the 58 SOW that could be compromised by the continued use of the existing HH-60G helicopters. It is anticipated the activities of the 58 SOW would remain unchanged for the foreseeable future. The new HH-60Ws are needed for those future activities, as the existing HH-60Gs are expected to be phased out by FY 2029.

KAFB is considered the prime location for the CRH transition due to the fact that search and rescue training is currently conducted by the 58 SOW. Keeping new Sikorsky helicopters (HH-60W) co-located with the existing training assets (i.e., Bell Huey helicopter, C-130 fixed-wing transport, and Bell Boeing Osprey tilt-rotor transport) would maintain a training synergy for the USAF. Separating the HH-60W from the existing training assets would greatly reduce effectiveness and increase training costs. Further, the helicopter/aircraft maintenance personnel and logistics lines are already in place at KAFB with the 58 SOW. Additionally, KAFB is considered the prime location for the CRH transition due to the availability of existing helicopter training landing zones in multiple areas (e.g., mountainous, desert, high density altitude, forested, etc.). KAFB has established helicopter aerial refueling tracks, weapons ranges, drop zones, low-level training routes, and installation entry and exit procedures. These established areas provide needed training for USAF personnel, and would need to be re-established elsewhere if the CRH transition does not occur at KAFB.

1.3 Scope of the Analysis

The scope of this EA includes the range of actions, alternatives considered, and direct, indirect, and cumulative impacts. In accordance with CEQ regulations, the No-Action Alternative is analyzed to provide the baseline against which the environmental impacts of implementing the range of alternatives

considered can be compared. Further, per CEQ regulations (40 CFR 1501.7 [a][3]), federal agencies are allowed to analyze only those environmental resource areas that apply to the Proposed Action. Given the focused nature of the Proposed Action, certain environmental resource areas are eliminated from detailed analysis in this EA, as explained below. Additionally, this EA identifies appropriate minimization measures, where needed, that are not already included in the Proposed Action or alternatives in order to avoid, reduce, or compensate for adverse environmental impacts in accordance with CEQ regulations.

This EA is organized into seven chapters and five appendices. **Chapter 1** provides relevant background information and describes the purpose of and need for the Proposed Action, while **Chapter 2** contains a detailed description of the Proposed Action and the alternatives considered. **Chapter 3** describes the affected environment or existing conditions currently experienced at KAFB and evaluates the direct and indirect environmental consequences of implementing all reasonable alternatives. **Chapter 3** also explains those environmental resource areas eliminated from detailed analysis or not assessed in this EA. **Chapter 4** identifies the both direct and indirect cumulative impacts, including adverse and beneficial impacts; the compatibility of the Proposed Action with the objectives of federal, regional, and local land use plans, policies, and controls; the relationship between short-term uses and long-term productivity; and the irreversible and irretrievable commitment of resources. **Chapter 5** provides the names of those persons involved in the preparation of this EA, while **Chapter 6** lists the persons and agencies consulted/coordinated. **Chapter 7** lists the references used to support the analyses. Finally, the appendices contain copies of the interagency/intergovernmental coordination; EA Notice of Availability (NOA) and comments obtained; a list of regulatory requirements; air pollutant emissions calculations; and Building 954 survey and State Historic Preservation Officer (SHPO) consultation.

To comply with NEPA, the planning and decision-making process involves an analysis of other relevant environmental laws, regulations, and Executive Orders (EOs). The NEPA process does not replace procedural or substantive requirements of other environmental laws; rather, it addresses them collectively in an analysis that enables decision makers to have a comprehensive view of major environmental issues and requirements associated with the Proposed Action. According to CEQ regulations, the requirements of NEPA must be integrated “with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively” (40 CFR 1500.2). As required in 40 CFR 1500.2(c), this EA will contain a discussion of federal permits, licenses, and coordination required in implementing the Proposed Action or alternatives.

Where relevant, the coordination discussed above would be described in more detail in the appropriate environmental resource areas presented in **Chapter 3** of this EA. The scope of the analysis of potential environmental consequences would also consider direct, indirect, and cumulative impacts.

1.4 Interagency and Intergovernmental Coordination/Consultations

1.4.1 Interagency Coordination/Consultation

40 CFR §1506.6, *Protection of the Environment, Public Involvement*, states “Agencies shall provide public notice of NEPA related hearings, public meetings, and the availability of environmental documents so as to inform those persons and agencies who may be interested or affected. Scoping letters have been provided to relevant federal, state, and local agencies notifying them that the USAF is preparing an EA to evaluate the CRH transition at KAFB (i.e., the Proposed Action). The agencies were requested to provide information regarding impacts of the Proposed Action on the natural environment or other environmental aspects that they felt should be included and considered in the preparation of this EA. Two responses were received. One from the SHPO and one from New Mexico Department of Game and Fish (NMDGF). The SHPO requested further evaluation and consultation on Buildings 954, 960, and 957. The NMDGF requested the EA determine the potential for bats, prairie dogs, and burrowing owls to occur within the Proposed Action area. Should these species occur within the Proposed Action area, analysis should include necessary conservation actions to eliminate any adverse impacts to them. **Appendix A** contains the list of agencies consulted during the scoping process for this analysis, copies of the Scoping letters, and copies of correspondence received from the agencies.

1.4.2 Intergovernmental Coordination/Consultation

EO 13175 *Consultation and Coordination with Indian Tribal Governments* (6 November 2000) directs federal agencies to coordinate and consult with federally recognized Native American Tribal governments whose interests might be directly and substantially affected by the Proposed Action. The tribal coordination process is distinct from the interagency coordination/consultation process described above and requires separate notification to all relevant tribes. The timelines for tribal consultation are distinct from the process described above. The KAFB point-of-contact for Native American Tribes is the KAFB Commander. The installation point-of-contact for consultation with the Tribal Historic Preservation Officer (THPO) and the Advisory Council on Historic Preservation is the KAFB Cultural Resources Manager. USAF requested that federally recognized tribes provide information regarding impacts of the Proposed Action on the natural and physical environment they feel should be included and considered in the analysis.

During the Scoping process, to comply with legal mandates, federally recognized tribes that are historically affiliated with the KAFB geographic region were invited to consult on the Proposed Action. The agencies were requested to provide information regarding impacts of the Proposed Action on the natural environment or other environmental aspects that they felt should be included and considered in the preparation of this EA. One response was received from the Hopi Tribal Council. The Hopi Tribal Council requested further consultation if proposed activities in the EA disturb any known prehistoric sites or inadvertently uncover any previously unknown prehistoric sites. **Appendix A** contains the list of the federally recognized Native American Tribal governments consulted during this analysis, copies of the Scoping letters, and copies of correspondence received from the tribes.

1.5 Public and Agency Review of Draft EA

The USAF published a Notice of Availability (NOA) for the Draft EA and the Draft Finding of No Significant Impact (FONSI) in the *Albuquerque Journal* on 16, 17, 18, and 20 August 2017. The publication of the NOA initiated a 30-day review period. At the closing of the public review period, one comment was received from the general public, six responses were received from government agencies (Mid-Region Council of Governors, FAA, NM Department of Game and Fish, US Department of the Interior, NM Commissioner of Public Lands, and the US Forest Service. One response from Tribal Nations (Pueblo of Tesuque) was also received. These comments were incorporated into the analysis of potential environmental impacts performed as part of this EA, where applicable, and included in **Appendix B** of the final EA.

A copy of the Draft EA was made available for review at the San Pedro Public Library located at 5600 Trumbull Avenue SE, Albuquerque, NM 87108 and at the Central New Mexico Community College Montoya Campus Library located at 4700 Morris Street NE, J Building, Room 123, Albuquerque, NM 87111. A copy of the Draft EA was also made available for review on line at <http://www.kirtland.af.mil> under the environmental issues tab.

(This page intentionally left blank)

CHAPTER 2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

CEQ regulations implementing NEPA (40 CFR 1500.2, 1502.14 and 1505.1) and USAF EIAP procedures (32 CFR 989) for conducting environmental analyses stipulate that alternatives be considered in relevant environmental documents supporting a decision by the USAF. The alternatives selected for analysis must satisfy the purpose of and need for the Proposed Action, as well as be reasonable and feasible to implement. The intent of the alternatives evaluation is to ensure that reasonable alternatives have been considered, including those that avoid/minimize adverse environmental impacts and/or that may enhance environmental quality.

2.1 Proposed Action

As discussed in **Chapter 1**, the Proposed Action would transition aging HH-60G helicopters assigned to KAFB's 58 SOW with new HH-60W helicopters (also known as CRH). It is anticipated the current activities of the 58 SOW would remain unchanged for the foreseeable future. Delivery of the new HH-60Ws would allow the 58 SOW at KAFB to continue providing undergraduate, graduate, and refresher aircrew training for special operations and personnel rescue.

2.2 Selection Standards

In accordance with 32 CFR Part 989.8(c), the development of selection standards is an effective tool for identifying, comparing, and evaluating reasonable and feasible alternatives in NEPA documents. The following selection standards were developed by the USAF to be consistent with the purpose of and need for the Proposed Action discussed in **Chapter 1**:

- Use a helicopter that shares a commonality with the HH-60G helicopter. If a different helicopter is chosen, operations and maintenance requirements would be more complicated and increase cost, resulting in a longer transition time.
- Reduce USAF operations and maintenance costs associated with the HH-60G.

2.3 Detailed Description of the Alternatives

Two alternatives, the Proposed Action and the No-Action Alternative, are analyzed comprehensively in this EA. The Proposed Action would satisfy the purpose and need because it would use a common helicopter that is familiar to the 58 SOW and its mission, reduce logistic requirements regarding operations and maintenance activities of an alternate helicopter technology, keep training assets co-located at KAFB, and use established training areas and features currently in place at KAFB. While the No-Action Alternative does not satisfy the purpose of or need for the Proposed Action, it was retained to provide a comparative baseline against which to analyze the impacts of other alternatives. Additionally, CEQ regulations (40 CFR Part 1502.14) specify the inclusion of a No-Action Alternative against which potential impacts would be compared.

2.3.1 Proposed Action

The USAF is proposing to transition aging HH-60G helicopters to new HH-60W helicopters currently assigned to the 58 SOW at KAFB. The current aircraft fleet of 11 HH-60G PTAI and 1 BAI assigned to the 58 SOW would be transitioned to 11 HH-60W PTAI and 3 BAI helicopters. The aircraft fleet would remain the same except for minor overlap to accommodate additional training requirements and additional helicopters during the CRH transition, but is expected to be no more than one or two helicopters at any one time. The Proposed Action would allow the 58 SOW to continue its current mission of providing undergraduate, graduate, and refresher aircrew training for special operations and personnel rescue. It is anticipated the 58 SOW's current mission requirements would continue into the

foreseeable future, and the HH-60Ws are needed for those future activities, as the existing HH-60Gs are expected to be phased out by FY 2029.

Table 2-1 highlights the differences between the HH-60G helicopter and the HH-60W helicopter. As identified in the table, the new HH-60W has a slightly larger rotor diameter, length, height, and weight. The overall speed of the helicopter is expected to slightly decline. The new HH-60W is anticipated to have a higher ceiling altitude, which should increase its value. Additionally, the newer General Electric T700-GE-701D engine provides increased horsepower and energy, while using nearly equal amounts of fuel. Thus, a negligible amount of additional fuel use is expected with the new HH-60W as compared with the HH-60G. Overall, the HH-60G and HH-60W are essentially the same helicopter, with updated technology to improve its effectiveness.

Table 2-1: HH-60G/HH-60W Comparison

Characteristics	HH-60G	HH-60W
Rotor Diameter ^{1,2}	53 feet, 7 inches	53 feet, 9 inches
Length ^{1,2}	64 feet, 8 inches	64 feet, 11 inches
Height ^{1,2}	16 feet, 8 inches	16 feet, 11 inches
Weight ^{1,2}	22,000 pounds	22,500 pounds
Speed ^{1,2}	184 miles per hour	174 miles per hour
Ceiling Altitude ^{1,2}	14,000 feet	15,180 feet
Crew ^{1,2}	Two pilots, Two Special Mission Aviators	Two pilots, Two Special Mission Aviators
Engine ^{3,4}	Two T700-GE-701D	Two T700-GE-701D
Thrust (horsepower) ^{3,4}	1,662 – 1,940	1,716 – 2,000
Kilowatts (energy) ^{3,4}	1,239 to 1,447	1,279 – 1,491
Fuel Consumption (pounds/shaft horsepower-hour) ^{3,4}	0.459 – 0.462	0.462 – 0.465
Engine Weight (pounds) ^{3,4}	456	456
Introduction Date	1982	2020 (projected)

Notes: Since no data is available at this time regarding the HH-60W, as it is still under development, the US Army UH-60M Black Hawk helicopter is used as a surrogate for comparative purposes as the HH-60W would be a variant of the UH-60M. The two helicopter models are anticipated to have the same engines and transmission. Differences include a slightly modified fuselage on the HH-60W to accommodate increased interior fuel tank, an aerial refueling probe, wide cord rotor blades, and different armaments.

Sources: ¹ USAF 2004; ² Sikorsky 2016; ³ GE 2016a; ⁴ GE 2016b



Foxtronics Fox Air 60 Air Conditioning Unit

The commonality between the HH-60G helicopter and the HH-60W helicopter would reduce USAF logistic requirements regarding maintenance activities since both helicopters share many similar characteristics. The maintenance equipment needed to service the HH-60W consists of similar items that are currently used. It is also expected that much of the ground support equipment currently used could continue to be used in the future, except for one new notable item. The HH-60G has an analogue flight deck and avionics system, while the HH-60W is expected to have an all-digital flight deck and avionics system. In order to control the heat generated from the all-digital flight deck and avionics system when the helicopter is on the ground, a cooling system is

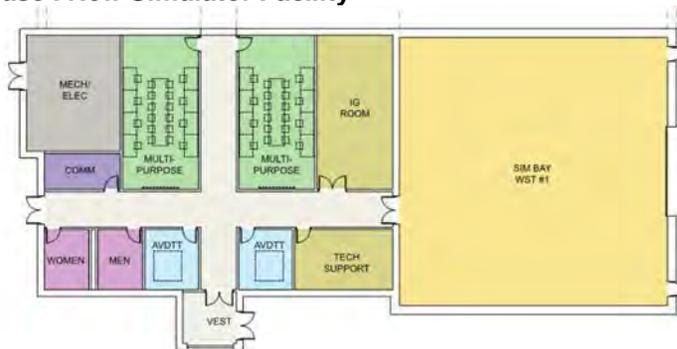
needed to maintain its reliability. At this time, it is anticipated that four new Foxtronics Fox Air 60 air conditioning units would be allocated to the 58 SOW for the HH-60W CRH transition. Each air conditioning unit delivers up to 24,000 British thermal units (BTUs) (approximately 2 tons) of preconditioned air to control the aircraft climate during pre-flight or routine maintenance operations. Each

air conditioning unit is a convenient and portable solution for pre-conditioning ambient air in the helicopter cockpit and reduces fuel consumption from use of the helicopter's auxiliary power unit (Foxtronics 2016).

The Proposed Action also includes the following components as shown on **Figure 2-1**. Delivery of the HH-60W helicopters at KAFB without the following components would compromise their effectiveness.

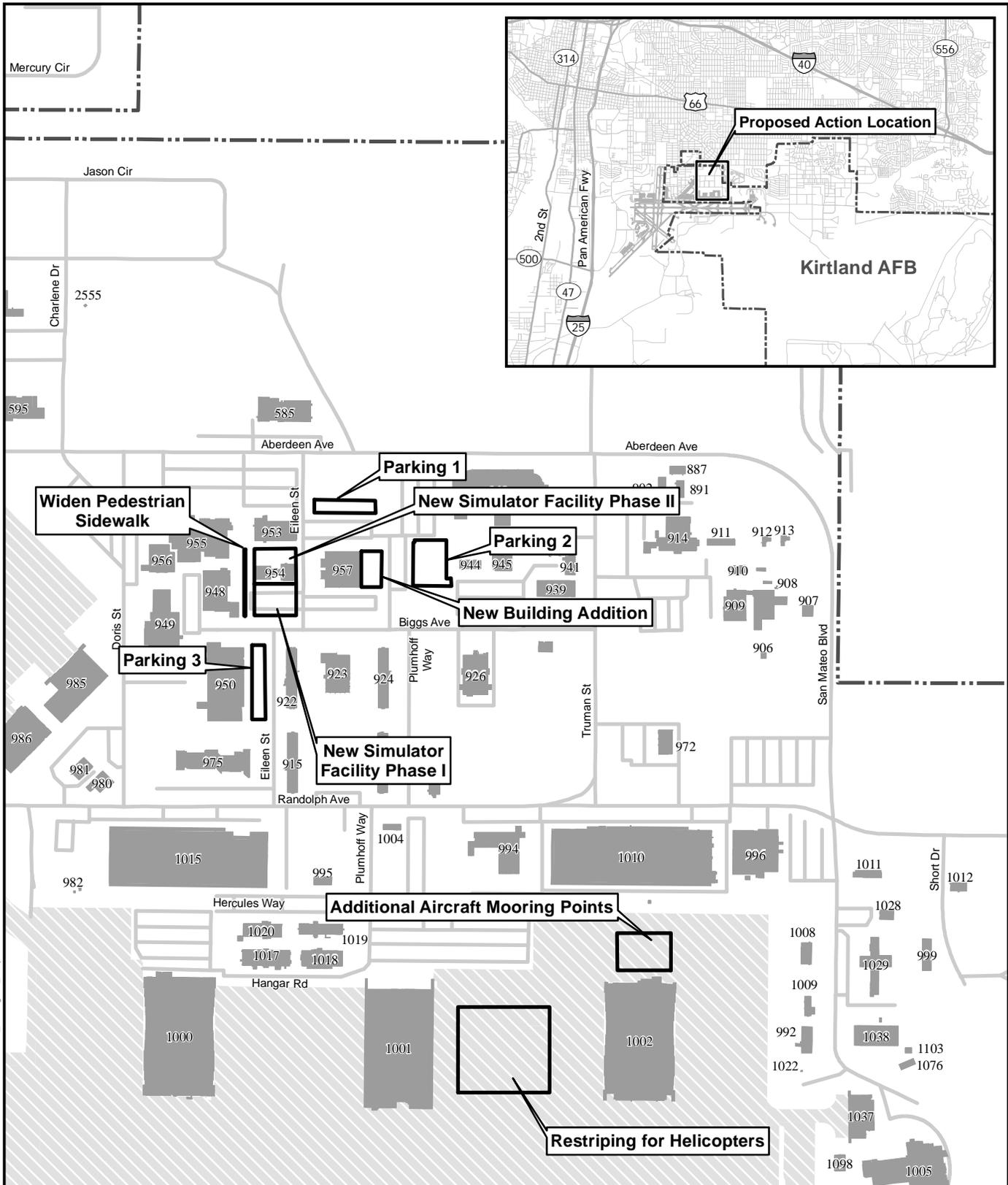
- Helicopter restriping between Hangars 1001 and 1002 to provide flexibility to park additional helicopters and alleviate apron area congestion. Currently, up to eight helicopters can be parked between the hangars, and space is needed for up to four additional helicopters. The restriping would not require modifications to the concrete apron area
- Additional mooring points north of Hangar 1002 for C-130 aircraft, which would allow one C-130 aircraft to be tied down during high wind events and free up space in Hangar 1002 to park helicopters inside for protection. Currently, during high wind events, C-130 aircraft are parked inside Hangar 1002 for protection because there are not enough available mooring points to tie down all aircraft outside the hangar. At this time, it is expected that up to 15 mooring points (3 sets of 5 each) are needed and would result in minor disturbance to the concrete apron area.
- Addition of a two-level building of 11,000 square feet (SF) (5,500 SF per level) to the east side of Building 957. The addition would include relocation and consolidation of a student resource center, registrar, and night vision goggle training currently in the flight simulator complex with student training in the Aircrew Training Academic Building 957.
- Construction of a new building adjacent to Building 948 in two phases totaling 35,973 SF to accommodate the HH-60W helicopter flight simulator facility for aircrew training. The new building would be constructed in two phases as detailed below. The total area for construction of the CRH Simulator Facility (Phase I) is 9,709 SF (902 square meters [SM]). There is minimal to no disturbance to the parking lot on which the CRH Simulator facility is to be constructed. The total area for construction of the Addition/Alteration (ADAL) CRH Simulator Facility (Phase II) is 26,264 SF (2,440 SM). Buildings 954 and 960 containing a total of 8,277 SF (769 SM) are to be demolished to make room for the new CRH Simulator Facility. Descriptions of the work to be included along with the individual demolition disturbances are provided below.

Phase I New Simulator Facility

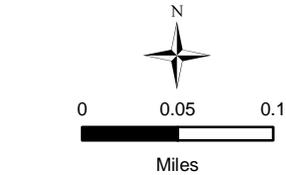


Phase I includes the construction of a new 9,709 SF building on an existing parking lot. The new building would include one helicopter simulator facility bay, simulator support rooms, a communications room, multi-purpose meeting rooms, a mechanical/electrical room, and restrooms.

Source: Jacobs / Huitt-Zollars 2016.



File: L:\AGE\Projects\EN\Kirtland AFB Helicopter EA16_EA & FONSI\GIS\WXD\Draft_EA\Fig2-1_Proposed.mxd 7/19/2017 2:57:24 PM



- Proposed Action Location
- Building
- Road
- Airfield
- Kirtland AFB Boundary

Figure 2-1
Proposed Action Locations
Combat Rescue Helicopter EA
Final - September 2017

Phase II New Simulator Facility



Source: Jacobs / Huitt-Zollars 2016.

Phase II would include the demolition of existing Buildings 954 and 960 to accommodate the construction of a new 26,264 SF addition to Phase I. This addition would include two additional helicopter simulator facility bays, simulator support rooms, a communications room, multi-purpose meeting rooms, a mechanical/ electrical room, and restrooms. Note the Phase I building is shown in tan in the center of the image, while the Phase II building is shown in light grey on the right side of the image.

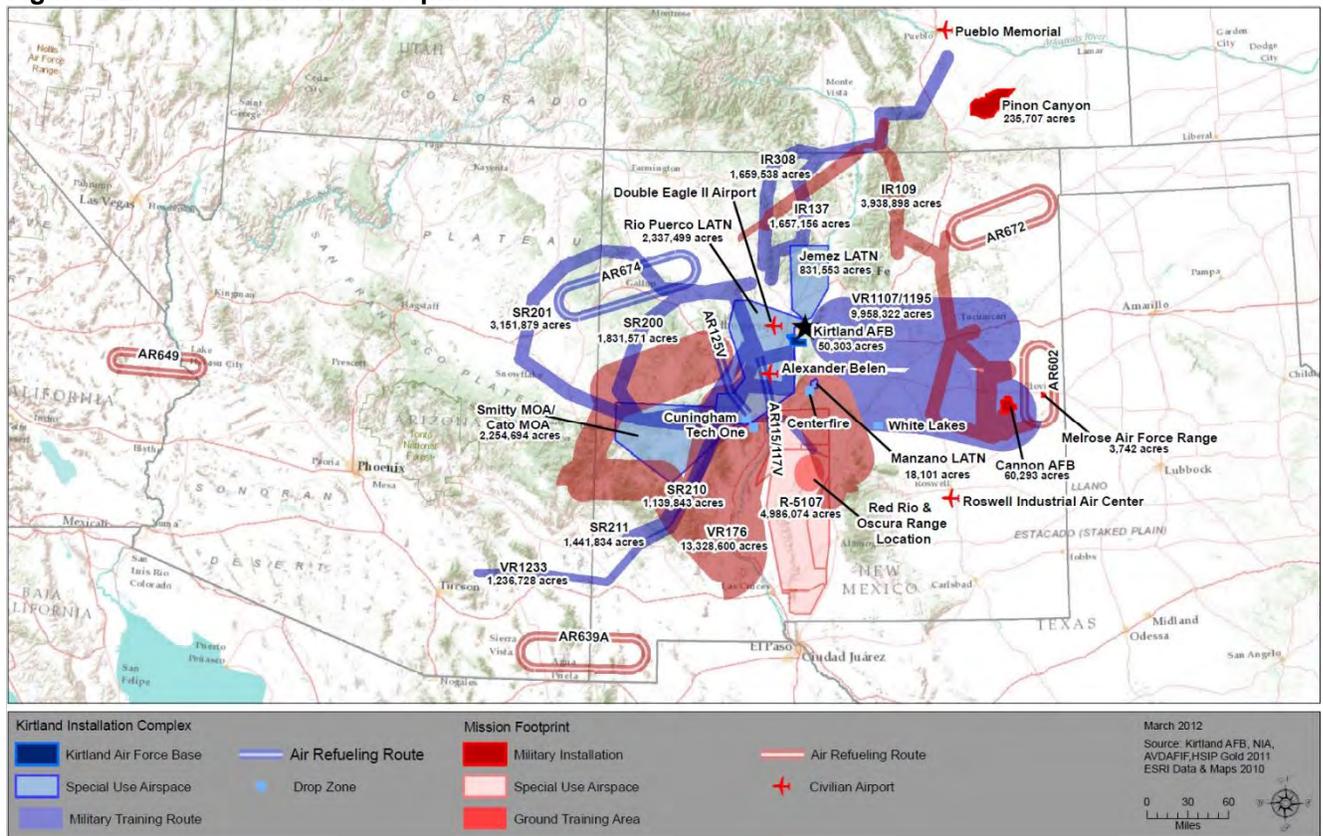
- Removal of 50 personnel parking spaces would result from Phase I construction of the new CRH Simulator facility adjacent to Building 948. Twenty-four new parking spaces would result from the planned extension of the parking lot north of Building 957, without displacing the existing static display. An additional 120 personnel parking spaces would be available east of Building 957 adjacent to the unused Visitor's Quarters, which is slated for demolition. Demolition of the Visitor's Quarters is not currently programmed or scheduled. When demolition is scheduled, additional environmental analysis may be required; however, this is not a component of the Proposed Action being analyzed in this EA.
- The existing learning center in Building 954 and the instructor facility in Building 960 would be incorporated into the new Phase II ADAL CRH Simulator facility addition.
- Widen an existing pedestrian walkway from 5 feet to 30 feet between Building 948 and new CRH Simulator facility.

Under the Proposed Action, 58 SOW activities would not change, as no new flight operations or additional student throughput are planned or anticipated at this time. The existing flight approach and flight departure tracks to and from KAFB would also remain unchanged. In year 2016, the 58 SOW conducted 1,457 helicopter flights, also known as sorties, to the areas in which it operates (KAFB 2017). Helicopter sorties generally access areas to the west of Albuquerque (west of Interstate (I) 25 and identified as the Rio Puerco Low Altitude Tactical Navigation (LATN) on **Figure 2-2**) between Los Alamos and Socorro, New Mexico and areas to the south of Albuquerque (east of I-25 and identified as the Manzano LATN on **Figure 2-2**). Use of Bureau of Land Management (BLM) lands for helicopter landing zones is currently undergoing a concurrent, but separate, EA.

2.3.2 No-Action Alternative

Under the No-Action Alternative, the HH-60G helicopters would continue to be used to provide undergraduate, graduate, and refresher aircrew training for special operations and personnel rescue for the 58 SOW at KAFB. As the HH-60Gs continue to age, it is anticipated that helicopter maintenance costs would increase, reliability deficiencies and enhanced mission capability would not be addressed, training of military personnel would be conducted with outdated equipment, and no increase in tactical superiority in operations would be realized. The HH-60Gs are expected to be phased out by FY 2029. If a helicopter much different from the HH-60Gs were to be utilized, then the USAF logistic requirements for operations and maintenance activities could increase significantly.

Figure 2-2: 58 SOW Mission Footprint



Since its introduction in 1982, the HH-60G helicopter has received minor upgrades to extend its service life and enhance its capabilities. Those minor upgrades have almost reached their life cycle of effectiveness. Most HH-60Gs currently in service with the 58 SOW at KAFB have logged flight service hours that are approaching their upper limits and are approaching the need of outright replacement to maintain safe and effective performance.

Under the No-Action Alternative, 58 SOW activities would not change as no new flight operations and no additional student throughput are currently planned or anticipated. The flight approach and flight departure tracks to and from KAFB would also remain unchanged. Helicopter sorties or flights would continue to generally access areas to the west and south of Albuquerque as seen on **Figure 2-2**. No improvements to KAFB airfield or facilities would occur under the No-Action Alternative.

2.4 Alternatives Eliminated From Further Consideration

In FY 2006, the USAF evaluated the use of seven air vehicles as a replacement for the aging HH-60G helicopter: Lockheed Martin Agusta Westland HH-71, Bell-Boeing HV-22, Airbus EADS EC-725, Airbus EADS NH90, Sikorsky HH-60M, Boeing Chinook CH-47, and the Sikorsky UH-60M. After an extensive evaluation of each air vehicle's ability to meet USAF key performance parameters, and a check for US Airworthiness Certificate and DoD Developmental/Live Fire Test Certificate, Lockheed Martin Agusta Westland HH-71, Bell-Boeing HV-22, Airbus EADS EC-725, Airbus EADS NH90, Sikorsky HH-60M were eliminated from consideration. The USAF eliminated the Boeing Chinook CH-47 from consideration due to its lack of commonality with the existing HH-60G helicopter and logistic requirements regarding operations and maintenance activities. Since the initial evaluation for the HH-60G replacement, the Sikorsky UH-60M was upgraded to the UH-60W with greater range and payload. After considering the purpose of and need for the Proposed Action, and the USAF selection standards described in

Section 2.2, the use of an air vehicle other than the HH-60W was not considered viable and this option was eliminated from further consideration and analysis in this EA.

2.5 Comparative Summary of Impacts

A summary of the impacts anticipated under the Proposed Action and No-Action Alternative is provided in **Table 2-2**.

Table 2-2: Summary of Potential Impacts

Affected Resource	Proposed Action	No-Action Alternative
Noise	<p>The proposed transition to the HH-60W airframe is expected to result in a long-term, negligible, adverse impact. Rotor blade, engine, and weight differences between the HH-60G and HH-60W are not expected to result in a significant difference in noise levels.</p> <p>Construction activities are expected to result in a short-term, negligible to minor, adverse impact. Noise levels in the immediate vicinity would increase slightly; however, only during construction hours (0700-1700). The nearest sensitive noise receptor are residential areas approximately 1,500 feet north.</p>	<p>Implementation of the No-Action Alternative would not result in any new or additional impacts.</p>
Air Quality	<p>The proposed transition to the HH-60W airframe is not expected to result in a change in air emissions; therefore, no short- or long-term impacts are expected.</p> <p>Construction activities are expected to result in a short-term, minor, adverse impact. Ground-disturbing activities would result in fugitive dust; however implementation of best management practices (BMPs) would reduce any impact. Vehicles would be well maintained and diesel vehicles would use diesel particle filters to reduce emissions. Should a new emergency back-up generator be installed, a construction permit would be required prior to installation.</p>	<p>Implementation of the No-Action Alternative would not result in any new or additional impacts.</p>
Water Resources	<p>The proposed transition to the HH-60W airframe is not expected to result in short- or long-term impacts. No new flight operations and no additional student throughput are planned or anticipated at this time.</p> <p>Construction activities are expected to result in a short-term, negligible to minor, adverse impact. The construction areas are anticipated to be larger than 1 acre; therefore, compliance with the Municipal Separate Storm Sewer System (MS4) Permit would be required. The proposed new facilities and associated stormwater controls would be designed in accordance with Unified Facilities Code (UFC) Low Impact Design (LID) requirements to maintain or restore the natural hydrologic functions of the area. Adherence to BMPs, good housekeeping measures, and restablization and revegation of the area following construction would reduce any adverse impacts. No impacts on floodplains are expected. The Proposed Action area is approximately 1-1/2 miles north of the Tijeras Arroyo and sits at a higher elevation.</p>	<p>Implementation of the No-Action Alternative would not result in any new or additional impacts.</p>

Table 2-2: Summary of Potential Impacts (Continued)

Affected Resource	Proposed Action	No-Action Alternative
Safety	<p>The proposed transition to the HH-60W airframe is expected to result in a long-term, negligible to minor, beneficial impact on military personnel safety. Replacement of the aging HH-60G helicopters and associated flight simulator would resolve reliability deficiencies and enhance mission capability, improve training of military personnel, and maintain tactical superiority in 58 SOW operations.</p> <p>Construction activities are expected to result in a short-term, minor, adverse impact. The safety risk to personnel in the area would slightly increase due to construction activities in the area. Installation personnel would be required to vacate the areas during construction activities. The construction area would be fenced and signs would be posted to further reduce safety risks to installation personnel. The selected construction contractor would be required to create and administer a site-specific health and safety plan with BMPs. Adherence to all federal, state, and local rules and regulations and the installation's Hazardous Waste Management Plan (HWMP) by contractors during demolition activities would prevent the potential exposure of military personnel to asbestos and lead wastes.</p>	<p>Implementation of the No-Action Alternative would not result in any new or additional impacts.</p>
Hazardous Materials and Wastes	<p>The proposed transition to the HH-60W airframe is not expected to result in any long- or short-term impacts. 58 SOW would continue to implement standard BMPs and participate in the Environmental Management System (EMS) and Enterprise Environmental, Safety, and Occupational Health Management Information System (EESOH-MIS) programs.</p> <p>Construction activities would result in a short-term, minor, adverse impact. Heavy equipment would be well maintained to avoid the potential for spills or leakage. Construction contractors would be made aware of the EMS program. Building 954 would be surveyed prior to demolition and all friable asbestos (including asbestos that would be made friable during demolition), lead-based paint (LBP), and polychlorinated biphenyls (PCBs) would be separated from the remainder of the demolition materials as required and remediated and disposed of in accordance with all regulations. Construction activities are not expected to result in any impacts on or be impacted by Environmental Restoration Program (ERP) sites.</p>	<p>Implementation of the No-Action Alternative would not result in any new or additional impacts.</p>
Cultural Resources	<p>The proposed transition to the HH-60W airframe is not expected to result in short- or long-term impacts.</p> <p>Construction activities would result in a short-term, negligible, adverse impact on cultural resources. No known archaeological sites exist within the Proposed Action area. Should an inadvertent discovery of human or cultural remains occur, all project activities shall stop and operational procedures outlined in the Installation Cultural Resources Management Plan (ICRMP) shall be followed.</p>	<p>Implementation of the No-Action Alternative would not result in any new or additional impacts.</p>

Table 2-2: Summary of Potential Impacts (Continued)

Affected Resource	Proposed Action	No-Action Alternative
Cultural Resources (Continued)	The NM SHPO requested, and KAFB performed an Historic Property Survey of Building 954. Upon completion and submittal, the SHPO concurred with the KAFB determination that Building 954 is not eligible for the National Register for Historic Places (NRHP). This concurrence was provided on 2 August 2017; therefore, no impacts on cultural resources would be expected to result from the demolition of this building.	
Infrastructure	<p>The proposed transition to the HH-60W airframe is expected to result in a long-term, negligible, adverse impact on the electrical distribution system from the use of four new portable air conditioning units. Because these units would be used on an as-needed basis and during preflight and maintenance activities only, it is expected that their use would not result in a significant impact. No other short- or long-term impacts on infrastructure and transportation are expected.</p> <p>Construction activities are expected to result in a short-term, negligible to minor, adverse impact. During construction activities, installation roadways would be used by haul and delivery trucks; however, transportation would not occur during peak travel times. Minimal amounts of water would be used for dust-suppression. During construction activities, utility service interruptions might be experienced should lines need to be rerouted or as new facilities are connected to the utility systems. Because implementation of the Proposed Action would not result in new flight operations and additional student throughput above current levels, it is anticipated that the current utility systems would be able to accommodate the new facilities without exceeding current capacity. Materials that could be recycled or reused would be diverted from landfills to the greatest extent possible.</p>	Implementation of the No-Action Alternative would not result in any new or additional impacts.
Socioeconomics and Environmental Justice	<p>Implementation of the Proposed Action is expected to result in a short-term, negligible, beneficial impact on the socioeconomic environment. The existing construction industry should adequately provide enough workers as required for construction activities. Beneficial impacts would result from the increase in payroll tax revenues and the purchase of materials, goods, and services in the area.</p> <p>Implementation of the Proposed Action is not expected to result in a short- or long-term impact on environmental justice or protection of children. No schools or day care centers are located within 1/2-mile of the Proposed Action area and all activities would occur in the Flightline District on KAFB, which is a restricted access area.</p>	Implementation of the No-Action Alternative would not result in any new or additional impacts.

The Proposed Action was identified as the preferred alternative because it best meets the purpose and need of the USAF by deploying an updated and improved helicopter to meet the 58 SOW's mission to train warriors, professionalize Airmen, and employ airpower.

(This page intentionally left blank)

CHAPTER 3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter is organized by individual environmental resource area and includes descriptions of the potentially affected resource. Only those resources that have the potential to be affected by any of the alternatives considered are described, as per CEQ guidance (40 CFR 1507.7[3]). The first subsection presents the regulatory context for each environmental resource area (**Section 3.1**), the second subsection discusses those environmental resource areas eliminated from detailed consideration (**Section 3.2**), while the third subsection describes the natural and human environments that exist within KAFB and the consequences of the Proposed Action and No-Action Alternative on resources within that environment (**Section 3.3**).

3.1 Environmental Laws, Regulations, and Executive Orders

To comply with NEPA (Public Law 91-190, 42 USC Section 4321 et seq.), the planning and decision-making process involves a study of other relevant environmental laws, regulations, and EOs. The NEPA process does not replace procedural or substantive requirements of other environmental laws; it addresses them collectively in an analysis, which enables decision makers to have a comprehensive view of major environmental issues and requirements associated with the Proposed Action. According to CEQ regulations, the requirements of NEPA must be integrated “with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively” (40 CFR 1500.2). **Table 3-1** contains a list of other environmental agencies with which coordination and permitting may be required for the Proposed Action.

Appendix C contains summaries of the environmental laws, regulations, and EOs that might apply to this project. Where relevant, these laws are described in more detail in the appropriate resource areas. The scope of the analysis of potential environmental consequences will also consider direct, indirect, and cumulative impacts.

Table 3-1: Sample List of Coordination and Permits Associated with the Proposed Action

US Fish and Wildlife Service (USFWS)	<ul style="list-style-type: none"> · Endangered Species Act, Section 7 Consultation · Migratory Bird Treaty Act Coordination
US Army Corps of Engineers	<ul style="list-style-type: none"> · Clean Water Act (CWA) Section 404 Permit
US Environmental Protection Agency	<ul style="list-style-type: none"> · National Pollutant Discharge Elimination System (NPDES) Permit
Albuquerque Environmental Health Department Air Quality Division (AEHD-AQD)	<ul style="list-style-type: none"> · Applicable air quality permits <ul style="list-style-type: none"> ○ 20.11.20 New Mexico Administrative Code [NMAC] Fugitive Dust Control ○ 20.11.21 NMAC Open Burning · Title V Permit
New Mexico Historic Preservation Division	National Historic Preservation Act (NHPA) Section 106 Consultation

3.2 Environmental Resource Areas Eliminated from Detailed Consideration

Based upon the scope of the Proposed Action, resource areas with no impacts were identified through a preliminary screening process. The following sections describe those resource areas not being carried forward for detailed analysis, along with the rationale for their elimination.

3.2.1 Airspace Management

Under the Proposed Action, current 58 SOW activities would not change, as no new flight operations or additional student throughput are planned or anticipated at this time. Therefore, no increase in flight sorties is anticipated. The existing flight approach and flight departure tracks to and from KAFB would also remain unchanged. Helicopter sorties generally access areas to the west and south of the city of Albuquerque (see **Figure 2-2**). Because the Proposed Action would use established helicopter aerial refueling tracks, weapons ranges, drop zones, low-level training routes, and installation entry and exit procedures, the USAF anticipates no short- or long-term impacts on airspace management. Therefore, airspace management has been eliminated from detailed analysis in this EA.

3.2.2 Land Use

Land use is not addressed in this EA because none of the proposed activities would result in a change in the current land use designations within the Proposed Action area. According to the 2016 Installation Development Plan (IDP), the Proposed Action area is located within land designated as the Flightline District and implementation of the Proposed Action would not change this designation (KAFB 2016b). As a result, the USAF anticipates no short- or long-term impacts on land use at KAFB. Therefore, land use has been eliminated from detailed analysis in this EA.

3.2.3 Visual Resources

Short-term construction activities at the 58 SOW Campus would be consistent with KAFB's installation construction practices and would not adversely affect the existing visual landscape. Construction of the new CRH simulator facilities would not introduce a substantial visual intrusion into the military landscape. These structures would be similar to those located within the Proposed Action area and would comply with the architectural compatibility standards described in KAFB's Architectural Compatibility Plan. As a result, the USAF anticipates no short- or long-term impacts on visual resources at KAFB. Therefore, visual resources has been eliminated from detailed analysis in this EA.

3.2.4 Biological Resources

Biological resources is not addressed in this EA because none of the proposed activities would result in adverse impacts on sensitive wildlife or vegetation. Under the Proposed Action, current 58 SOW activities would not change, as no new flight operations or additional student throughput are planned or anticipated at this time. No increase in flight sorties is anticipated and the existing flight approach and flight departure tracks to and from KAFB would also remain unchanged. Therefore, the potential for bird/wildlife strikes associated with the transition to the HH-60W helicopter is not expected to increase. 58 SOW would continue to follow the requirements of the Bird/Wildlife Aircraft Strike Hazard Plan and the semi-annual bird hazard working group meetings to help reduce bird/wildlife incidents on KAFB.

There are no federally-listed threatened or endangered species occurring on KAFB. The Proposed Action area is in the Flightline District and consists of hangars, miscellaneous structures with minimal landscaping and impervious surfaces such as taxiways, ramps, and parking areas. While the NMDGF requested the EA determine the potential for bats, prairie dogs, and burrowing owls to occur within the Proposed Action area, this area has been deemed a no tolerance zone for prairie dogs. Therefore, the potential to encounter or impact prairie dogs or burrowing owls is eliminated in this area. The structures proposed for demolition are not vacant; therefore, the potential for roosting bats to be impacted is minimal. All structures and associated landscaping would be surveyed by a biologist within 48 hours of proposed demolition activities to ensure no nesting birds or other animals in the vicinity of the demolition are impacted. As a result, the USAF anticipates no short- or long-term impacts on biological resources at KAFB. Therefore, biological resources has been eliminated from detailed analysis in this EA.

3.2.5 Geology and Soils

Geology and soils are not addressed in this EA because none of the proposed activities would result in adverse impacts. The Proposed Action area is in the Flightline District and consists of hangars and miscellaneous structures with minimal landscaping and impervious surfaces such as taxiways, ramps, and parking areas. The underlying soil type in this area is Latene sandy loam and consists of deep, well drained soils, with 1 to 5 percent slopes, a low shrink-swell potential (i.e., less than 3 percent), a high risk of corrosion of uncoated steel, a low risk of corrosion for concrete, and has slight limitations for shallow excavations, buildings without basements, and roadways. These attributes would be taken into consideration in the design. As a result, the USAF anticipates no short- or long-term impacts on geology and soils at KAFB. Therefore, geology and soils have been eliminated from detailed analysis in this EA.

3.3 Environmental Resource Areas Requiring Detailed Consideration

The following resource areas are analyzed and discussed in detail for potential impacts from implementation of the Proposed Action: Noise, Air Quality, Water Resources, Safety, Hazardous Materials and Wastes, Cultural Resources, Infrastructure, and Socioeconomics and Environmental Justice.

Specific criteria for evaluating the potential environmental impacts of the Proposed Action and No-Action Alternative are discussed in the following text by resource area. The significance of an action is measured in terms of its context and intensity. The context and intensity of potential environmental impacts are described in terms of duration, the magnitude of the impact, and whether they are adverse or beneficial as summarized below:

- **Short-term or long-term.** In general, short-term impacts are those that would occur only with respect to a particular activity, for a finite period, or only during the time required for construction or installation activities. Long-term impacts are those that are more likely to be persistent and chronic.
- **Significant, moderate, minor, negligible, or no impact.** These relative terms are used to characterize the magnitude or intensity of an impact. Significant impacts are those effects that would result in substantial changes to the environment (as defined by 40 CFR 1508.27) and should receive the greatest attention in the decision-making process. Less than significant impacts are those that would be slight but detectable.
- **Adverse or beneficial.** An adverse impact is one having unfavorable or undesirable outcomes on the man-made or natural environment. A beneficial impact is one having positive outcomes on the man-made or natural environment. All impacts are considered adverse unless specifically stated otherwise.

3.3.1 Noise

Sound is defined as a particular auditory impact produced by a given source, for example the sound of rain on a rooftop. Noise and sound share the same physical aspects, but noise is considered a disturbance while sound is defined as an auditory impact. Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise annoying. Noise can be intermittent or continuous, steady or impulsive, and can involve any number of sources and frequencies. Noise can be readily identifiable or generally nondescript. Human response to increased sound levels varies according to the source type, characteristics of the sound source, distance between the source and receptor, receptor sensitivity, and time of day. Affected receptors are specific (e.g., residential areas, schools, churches, or hospitals) or broad (e.g., nature preserves or designated districts) areas in which occasional or persistent sensitivity or noise above ambient levels exists. These are generally referred to as sensitive noise receptors.

Sound levels vary with time. For example, the sound increases as an aircraft approaches, then falls and blends into the ambient, or background, as the aircraft recedes into the distance. Because of this

variation, it is often convenient to describe a particular noise "event" by its highest or maximum sound level (L_{max}). It should be noted that L_{max} describes only one dimension of an event; it provides no information on the cumulative noise exposure generated by a sound source. In fact, two events with identical L_{max} levels may produce very different total noise exposures. One may be of very short duration, while the other may last much longer.

Human response to noise varies, as do the metrics used to quantify it. Generally, sound can be calculated with instruments that record instantaneous sound levels in decibels (dB). A-weighted decibel (dBA) is the unit used to characterize sound levels that can be sensed by the human ear. "A-weighted" denotes the adjustment of the frequency range to what the average human ear can sense when experiencing an audible event. The threshold of audibility is generally within the range of 10 to 25 dBA for normal hearing. The threshold of pain occurs at the upper boundary of audibility, which is normally in the region of 135 dBA (USEPA 1981a). **Table 3-2** compares common sounds and shows how they rank in terms of auditory impacts. As shown, a whisper is normally 30 dBA and considered to be very quiet while an air conditioning unit 20 feet away is considered an intrusive noise at 60 dBA. Noise levels can become annoying at 80 dBA and very annoying at 90 dBA. To the human ear, each 10 dBA increase seems twice as loud (USEPA 1981b).

Table 3-2: Sound Levels and Human Response

Noise Level (dBA)	Common Sounds	Effect
10	Just audible	Negligible
30	Soft whisper (15 feet)	Very quiet
50	Light auto traffic (100 feet)	Quiet
60	Air conditioning unit (20 feet)	Intrusive
70	Noisy restaurant or freeway traffic	Telephone use difficult
80	Alarm clock (2 feet)	Annoying
90	Heavy truck (50 feet) or city traffic	Very annoying Hearing damage (8 hours)
100	Garbage truck	Very annoying
110	Pile drivers	Strained vocal effort
120	Jet takeoff (200 feet) or auto horn (3 feet)	Maximum vocal effort
140	Carrier deck jet operation	Painfully loud

Source: USEPA 1981a

Under the Noise Control Act of 1972, the Occupational Safety and Health Administration (OSHA) established workplace standards for noise. The minimum requirement states that constant noise exposure must not exceed 90 dBA over an 8-hour period. The highest allowable sound level to which workers can be constantly exposed to is 115 dBA, and exposure to this level must not exceed 15 minutes within an 8-hour period. These standards limit instantaneous exposure, such as impact noise, to 140 dBA. If noise levels exceed these standards, employers are required to provide hearing protection equipment that will reduce sound levels to acceptable limits.

The average day/night sound level (DNL) metric is a measure of the total community noise environment. DNL is the average A-weighted sound level over a 24-hour period, with a 10 dBA adjustment added to the nighttime levels (between 2200 and 0700 hours). This adjustment is an effort to account for increased human sensitivity to nighttime noise events. DNL was endorsed by the US Environmental Protection Agency (USEPA) for use by federal agencies and was adopted by the US Department of Housing and Urban Development. DNL is an accepted unit for quantifying annoyance to humans from general environmental noise, including aviation and construction noise. Land use compatibility and incompatibility are determined by comparing the predicted DNL at a site with the recommended land uses. Noise levels occurring at night generally produce a greater annoyance than those of the same levels occurring during

the day. It is generally agreed that people perceive intrusive noise at night as being 10 dBA louder than those occurring during the day, at least in terms of its potential for causing community annoyance.

Due to the DNL descriptor's close correlation with the degree of community annoyance from aircraft noise, most federal agencies have formally adopted DNL for measuring and evaluating aircraft noise for land use planning and noise impact assessment. Federal committees such as the Federal Interagency Committee on Urban Noise and the Federal Interagency Committee on Noise, which include the USEPA, the Federal Aviation Administration (FAA), DoD, Department of Housing and Urban Development, and the Veterans Administration, found DNL to be the best metric for land use planning. They also found no new cumulative sound descriptors or metrics of sufficient scientific standing to substitute for DNL.

DNL accounts for the noise levels in terms of sound exposure level of all individual aircraft events, the number of times those events occur, and the period day/night in which they occur. Values of DNL can be measured with standard monitoring equipment or predicted with computer models such as NOISEMAP. Air Force Instruction (AFI) 32-7063 requires plotting DNL contours of 65, 70, 75, 80, and 85 dB for use in analyzing land use compatibility for both the current mission and the projected mission in the 5- to 10-year range. Air Force Handbook 32-7084 requires the use of NOISEMAP to produce these noise contours and to analyze noise levels at noise-sensitive areas, except at major commercial airports where the NEPA noise requirement is met by using the FAA methodology and noise model.

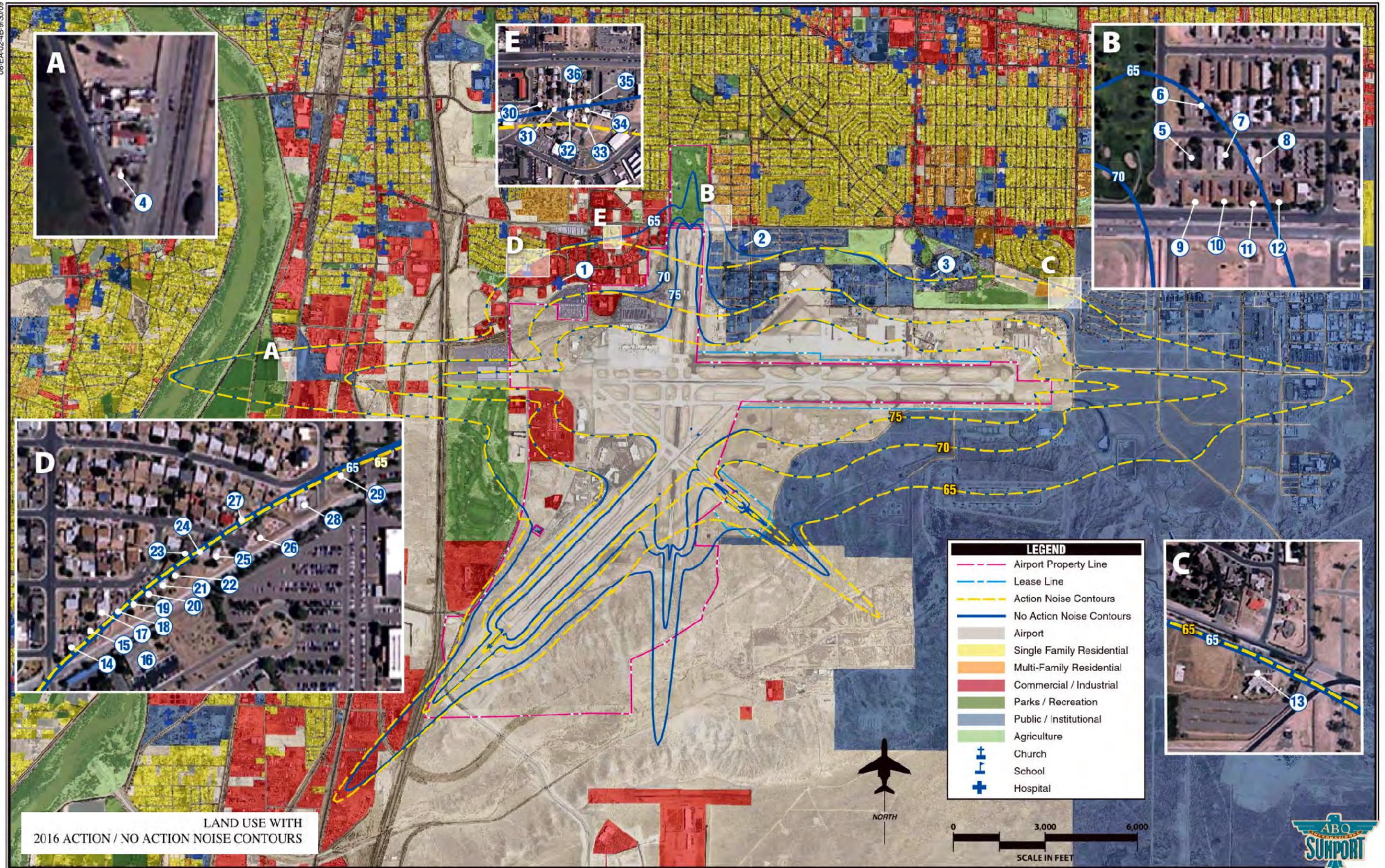
Federal guidance, as provided in FAA Order 1050.1F § 4-3.3, concerning compatible land use in regard to noise levels indicates noise exposure impacts are significant if there is a 1.5 dB increase in DNL in noise-sensitive areas exposed to DNL of 65 dB or greater. If this increase occurs, then the analysis must determine if there is an increase of 3.0 dB in DNL in noise-sensitive areas exposed to DNL 60 dB or greater.

3.3.1.1 Affected Environment

The ambient noise environment at KAFB is affected mainly by USAF and civilian aircraft operations and military vehicles. The commercial and military aircraft operations at the Sunport are the primary source of noise in the northern and northwestern areas of the installation. The Sunport completed a noise analysis in 2011 in support of the EA for the closure of Runway 17/35. This DNL Noise Contour projected the 2016 noise condition with Runway 17/35 closed, indicated in yellow, is shown in **Figure 3-1** and represents the existing condition at the Sunport and KAFB. The figure also indicates that sensitive noise receptors in the vicinity of the Sunport that were predicted to fall within the 2016 DNL 65 dB noise contour include the Presbyterian Healthcare System (No. 1), the Springstone Montessori School (No. 16), and single- and multi-family residential areas (insets A, B, C, D, and E). The projected 2016 noise contour from the EA is representative of approximately 197,000 aircraft operations while the FAA's Terminal Area Forecast predicted 2016 aircraft operation levels at the Sunport to be approximately 131,000 annually. The FAA's EA resulted in a Finding of No Significant Impact determining that the closure of Runway 17/35 would not result in an increase of DNL 1.5 dB for any sensitive noise receptors (FAA 2011).

These noise contours include noise data from aircraft operations associated with the Sunport and KAFB, as these two entities share the same runways and taxiways. As seen on the figure, certain components of the Proposed Action are located inside of the DNL 70 dB noise contour (i.e., proposed HH-60W helicopters, helicopter restriping, and additional mooring points), while other components of the Proposed Action are located inside of the DNL 65 dB noise contour (i.e., Building 957 addition, Building 957 parking, CRH Simulator Facility/ADAL CRH Simulator Facility, CRH Simulator Facility parking, and pedestrian sidewalk).

(This page intentionally left blank)



SOURCE:
Final EA for the Proposed Closure of Runway
17-35, Albuquerque International Sunport,
October, 2011.

Figure 3-1
Existing Noise Contours at KAFB
Combat Rescue Helicopter EA
Final - September 2017

(This page intentionally left blank)

3.3.1.2 Environmental Consequences

Proposed Action

The proposed transition to the HH-60W airframe is expected to result in a long-term, negligible, adverse impact on the noise environment. The proposed transition would result in no change in aircraft operational levels at KAFB or the Sunport. Because the HH-60W helicopter is still under development, noise data is not available in any currently approved noise models; therefore, the UH-60M Black Hawk helicopter is used as a surrogate for comparative purposes. The Air Force Civil Engineer Center (AFCEC), NEPA Division provided the following summary of all relevant information and data for use in this EA:

- Rotor blades: National Aeronautics and Space Administration report (NASA-97-53AHS-OLS, *Acoustics of UH-60 Black Hawk with Growth Rotor Blades*) concluded that there was no significant difference in noise during level flight between growth rotor blades, as used by HH-60W, and standard rotor blades, as used by HH-60G. It further states that growth rotor blades produce lower noise on the ground than standard rotor blades; therefore, it can be assumed that there would be no increase in noise generated from the HH-60W transition due to rotor blade differences.
- Engine: The HH-60G converted from the T700-GE-701C engines to the T700-GE-701D engines in 2012. The HH-60W airframe is proposed to have the same engines as the HH-60G. Therefore, no change in current conditions would occur.
- Weight: The weight difference between the HH-60G and the HH-60W is 500 pounds. This difference in weight (less than 30% of total weight) between the models is unlikely to cause a significant difference in noise volume. Weight is less of a factor in driving rotorcraft noise levels than the rotor system or engine selection.

In summary, rotor blade, engine, and weight differences between the HH-60G and HH-60W are not expected to result in a significant difference in noise levels. If these contributors would not individually cause a significant increase, it can be assumed that combined they also would not cause a significant increase in overall noise levels. There are other contributing factors to rotorcraft noise levels and some of these lesser factors could influence the analysis (Fisher 2017).

Based on the information regarding the HH-60W provided by AFCEC, implementation of the Proposed Action would not result in any noise related impacts on sensitive noise receptors in the vicinity of KAFB. Therefore, a quantitative analysis of operational CRH noise is not included in this EA.

Construction and demolition activities associated with the Proposed Action are expected to result in a short-term, negligible to minor, adverse impact on the noise environment at KAFB. Construction activities would include, but are not limited to: land clearing, grading, and excavation; pavement construction, demolition, and removal; and building construction, demolition, and removal. These activities would involve the use of vehicles, heavy construction equipment, and machinery and would be conducted during the daytime hours of 0700 to 1700. Construction activities would temporarily increase noise levels in the immediate vicinity of the Proposed Action area; however, because distance rapidly attenuates noise levels, the area would experience only a minor increase in ambient noise conditions during construction hours. The nearest sensitive noise receptor are residential areas located approximately 1,500 feet north of the Proposed Action area. **Table 3-3** presents measured noise levels of common construction equipment at 50 feet. The table also provides the attenuation of these sound levels at 500 and 1,500 feet. Therefore, implementation of the Proposed Action would not be expected to result in a significant impact on the noise environment.

Table 3-3: Construction Equipment Noise Levels

Construction Equipment	L _{max} at 50 feet	L _{max} at 500 feet	L _{max} at 1,500 feet
Backhoe	78	58	48
Chain Saw	84	64	54
Compactor (Ground)	83	63	53
Concrete Mixer Truck	79	59	49
Concrete Pump Truck	81	61	51
Concrete Saw	90	70	60
Crane	81	61	51
Dozer	82	62	52
Excavator	81	61	51
Front End Loader	79	59	49
Grapple (Backhoe)	87	67	57
Impact Pile Drive	101	81	71
Jack Hammer	89	69	59
Pavement Scarifier	90	70	60
Pneumatic Tools	85	65	55
Vacuum Excavator	85	65	55

Source: Federal Highway Administration 2006

No-Action Alternative

Under the No-Action Alternative, the proposed transition to the HH-60W helicopters and the associated construction activities would not occur and existing conditions discussed in **Section 3.3.1.1** would continue. Implementation of the No-Action Alternative would not result in any new or additional impacts on the noise environment.

3.3.2 Air Quality

In accordance with federal Clean Air Act (CAA) requirements, the air quality in a region or area is measured by the concentration of criteria pollutants in the atmosphere. The air quality in a region is a result of not only the types and quantities of atmospheric pollutants and pollutant sources in an area, but also surface topography, the size of the topological “air basin,” and the prevailing meteorological conditions.

Ambient Air Quality Standards. Under the CAA, the USEPA developed numerical concentration-based standards, or National Ambient Air Quality Standards (NAAQS), for pollutants that have been determined to affect human health and the environment. The NAAQS represent the maximum allowable concentrations for ozone (O₃) measured as either volatile organic compounds (VOCs) or total nitrogen oxides (NO_x), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable particulate matter (including particulate matter equal to or less than 10 microns in diameter [PM₁₀] and particulate matter equal to or less than 2.5 microns in diameter [PM_{2.5}]), and lead (Pb) (40 CFR Part 50). The CAA also gives states the authority to establish air quality rules and regulations. The state of New Mexico has adopted the NAAQS and has promulgated additional State Ambient Air Quality Standards for criteria pollutants. In some cases, the New Mexico Ambient Air Quality Standards (NMAAQs) are more stringent than the federal primary standards. **Table 3-4** presents the USEPA NAAQS and NMAAQs for the federally-listed criteria pollutants.

Attainment versus Non-attainment and General Conformity. USEPA classifies the air quality of an Air Quality Control Region (AQCR), or subareas of an AQCR, according to whether the concentrations of criteria pollutants in ambient air exceed the NAAQS. Areas within each AQCR are therefore designated as either “attainment,” “non-attainment,” “maintenance,” or “unclassified” for each of the six criteria pollutants. Attainment means that the air quality within an AQCR is better than the NAAQS; non-attainment indicates that criteria pollutant levels exceed one or more of the NAAQS; maintenance indicates that an area was

Table 3-4: National and New Mexico Ambient Air Quality Standards

Pollutant	Averaging Time	Primary Standard		Secondary Standard
		Federal	New Mexico	
CO	8-hour	9 ppm (10 mg/m ³)	8.7 ppm	None
	1-hour	35 ppm (40 mg/m ³)	13.1 ppm	None
Pb	Rolling 3-Month	0.15 µg/m ³ (1)	0.15 µg/m ³	Same as Primary
NO ₂	Annual Arithmetic Mean	53 ppb(2)	50 ppb	Same as Primary
	24-hour	--	100 ppb	None
	1-hour	100 ppb	--	None
PM ₁₀	24-hour	150 µg/m ³	150 µg/m ³	Same as Primary
PM _{2.5}	Annual Arithmetic Mean	12 µg/m ³	--	15 µg/m ³
	24-hour	35 µg/m ³	--	Same as Primary
O ₃	8-hour	0.07 ppm(3)	0.07 ppm	Same as Primary
SO ₂	Annual Arithmetic Mean	--	0.02 ppm	None
	24-hour	--	0.10 ppm	None
	1-hour	75 ppb(4)	--	0.5 ppm (3-hour)

Sources: USEPA 2015, State of New Mexico 2009

Notes: mg/m³ = milligrams per cubic meter

ppb = parts per billion

ppm = parts per million

µg/m³ = micrograms per cubic meter

Notes:

- (1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m³ as a calendar quarter average) also remain in effect.
- (2) The level of the annual NO₂ standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.
- (3) Final rule signed 1 October 2015, and effective 28 December 2015. The previous (2008) O₃ standards additionally remain in effect in some areas. Revocation of the previous (2008) O₃ standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.
- (4) The previous SO₂ standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which implementation plans providing for attainment of the current (2010) standard have not been submitted and approved and which is designated nonattainment under the previous SO₂ standards or is not meeting the requirements of a State Implementation Plan (SIP) call under the previous SO₂ standards (40 CFR 50.4(3)), A SIP call is a USEPA action requiring a state to resubmit all or part of its SIP to demonstrate attainment of the required NAAQS.

previously designated non-attainment, but is now in attainment; and an unclassified air quality designation by USEPA means that there is not enough information to appropriately classify an AQCR, so the area is considered to be in attainment for the NAAQS.

USEPA has delegated the authority for ensuring compliance with the NAAQS in New Mexico to the New Mexico Environment Department (NMED) Air Quality Bureau. The NMED Air Quality Bureau has delegated authority over air quality in Bernalillo County to the AEHD-AQD. In accordance with the CAA, each state must develop a SIP. A SIP is a compilation of regulations, strategies, schedules, and enforcement actions designed to move the state into compliance with all of the NAAQS. The General Conformity Rule requires that any federal action meet the requirements of a SIP or Federal Implementation Plan. More specifically, CAA conformity is ensured when a federal action does not: (1) cause a new violation of the NAAQS; (2) contribute to an increase in the frequency or severity of violations of the NAAQS; or (3) delay the timely attainment of any of the NAAQS, interim progress milestones, or other milestones toward achieving compliance with the NAAQS. The General Conformity Rule applies only to significant actions in non-attainment or maintenance areas. The federal *de minimis* threshold emissions rates were established by the USEPA in the General Conformity Rule to focus analysis requirements on those federal actions with the potential to substantially affect air quality.

Table 3-5 presents these thresholds, by regulated pollutant. As shown in **Table 3-5**, *de minimis* thresholds vary depending on the severity of the nonattainment area classification.

Table 3-5: Conformity *de minimis* Emissions Thresholds

Pollutant	Status	Classification	<i>de minimis</i> Limit (tpy)
O ₃ (measured as NO _x or VOCs)	Nonattainment	Extreme	10
		Severe	25
		Serious	50
		Moderate/marginal (inside ozone transport region)	50 (VOCs)/100 (NO _x)
		All others	100
	Maintenance	Inside ozone transport region	50 (VOCs)/100 (NO _x)
		Outside ozone transport region	100
CO	Nonattainment/maintenance	All	100
PM ₁₀	Nonattainment/maintenance	Serious	70
		Moderate	100
		Not Applicable	100
PM _{2.5} (measured directly, as SO ₂ , or as NO _x)	Nonattainment/maintenance	All	100
SO ₂	Nonattainment/maintenance	All	100
NO _x	Nonattainment/maintenance	All	100

Source: 40 CFR 93.153
 Notes: tpy = tons per year

With respect to the General Conformity Rule, effects on air quality would be considered significant if the proposed federal action would result in an increase of a nonattainment or maintenance area's emissions inventory above the *de minimis* threshold levels established in 40 CFR 93.153(b) for individual nonattainment pollutants or for pollutants for which the area has been redesignated as a maintenance area. 40 CFR 93.153(c) exempts certain federal actions from a general conformity determination.

Federal Prevention of Significant Deterioration. Federal Prevention of Significant Deterioration (PSD) regulations apply in NAAQS attainment areas to a major new stationary source (i.e., source with the potential to emit 250 tpy of any criteria pollutant, such as a new power plant), or a significant modification to a major stationary source (i.e., a change that adds 15 to 40 tpy to the facility's potential to emit depending on the pollutant). Additional PSD major source and significant modification thresholds apply for greenhouse gases (GHGs), as discussed below in the Greenhouse Gas Emissions subsection.

Title V Requirements. Title V of the CAA Amendments of 1990 requires states and local agencies to permit major stationary sources. A Title V major stationary source has the potential to emit more than 100 tpy of any one criteria air pollutant, 10 tpy of a hazardous air pollutant (HAP), or 25 tpy of any combination of HAPs. The purpose of the permitting rule is to establish regulatory control over large, industrial-type activities and monitor their impact on air quality. Section 112 of the CAA defines the sources and kinds of HAPs.

Greenhouse Gas Emissions. GHGs are gaseous emissions that trap heat in the atmosphere. These emissions occur from natural processes and human activities. The most common GHGs include carbon dioxide (CO₂), methane (CH₄), and NO_x. On 22 September 2009, USEPA issued a final rule for mandatory GHG reporting from large GHG emissions sources in the United States. The purpose of the rule is to collect comprehensive and accurate data on CO₂ and other GHG emissions that can be used to inform future policy decisions. In general, the threshold for reporting is 25,000 metric tons or more of carbon dioxide equivalent (CO₂e) emissions per year, but excludes mobile source emissions. The first

emissions report under the GHG Reporting Program was published with 2010 emissions data. For the 2011 reporting year, USEPA added 12 additional emissions sources; during this time frame, approximately 8,000 facilities reported 3.3 billion tons of CO₂ equivalent direct emissions (USEPA GHGRP 2013). GHG emissions will also be factors in PSD and Title V permitting and reporting, according to a USEPA rulemaking issued on 3 June 2010 (75 Federal Register 31514). GHG emissions thresholds of significance for permitting of stationary sources are 75,000 tons CO₂ equivalent per year and 100,000 tons CO₂ equivalent per year under these permit programs.

Fugitive Dust Control Regulation. The AEHD-AQD has fugitive dust control requirements in 20.11.20 NMAC, *Fugitive Dust Control*. A fugitive dust control construction permit is required for projects disturbing 0.75 acres or more, as well as the demolition of buildings containing more than 75,000 cubic feet of space. This regulation also contains a provision for buildings containing asbestos-containing material (ACM) as stated in 20.11.20.22 NMAC *Demolition and Renovation Activities; Fugitive Dust Control Construction Permit and Asbestos Notification Requirements*.

3.3.2.1 Affected Environment

KAFB is located in Bernalillo County, New Mexico, which is located within Albuquerque-Mid Rio Grande Intrastate (AMRGI) AQCR 152. The AMRGI AQCR also includes portions of Sandoval and Valencia counties within New Mexico (USEPA 2002). As defined by 40 CFR §81.332, KAFB is in an area that is designated as attainment/unclassified for all criteria pollutants.

KAFB manages a number of air quality permits, including 20.11.41 NMAC Construction Permits, 20.11.21 NMAC Open Burn Program permits, 20.11.20 NMAC Fugitive Dust Control permits, and 20.11.40 NMAC Source Registrations, all of which include operating or emissions limits to ensure compliance with the CAA. KAFB must also comply with 20.11.42 NMAC Title V Operating Permit #527, which covers a majority of the permitted stationary emission sources on the installation. KAFB is considered a synthetic minor source of HAPs under Title I, Section 112 of the CAA. There are various air emissions sources on the installation, including emergency generators, fire pump engines, boilers, water heaters, fuel storage tanks and fuel dispensing systems, gasoline service stations, surface coating operations, aircraft engine testing, fire training, remediation activities, mulching activities, miscellaneous chemical usage, and open detonation of munitions for military training, emergency remediation, and research and development. The 2016 Air Emissions Inventory for KAFB is found in **Table 3-6**.

Table 3-6: Calendar Year 2016 Air Emissions Inventory for KAFB

Actual Emissions	NO _x (tpy)	VOC (tpy)	CO (tpy)	SO ₂ (tpy)	PM ₁₀ (tpy)
	5.63	41.59	2.93	0.42	0.62

KAFB also holds a Fugitive Dust Control Programmatic Permit, Permit No. 8091-P, with the AEHD-AQD that covers routine heavy equipment activities. The permit includes BMPs such as watering during ground-disturbing activities, using soil stabilization agents for dust suppression, and decreasing speed limits on unpaved roads.

3.3.2.2 Environmental Consequences

Proposed Action

The proposed transition to the HH-60W airframe is not expected to result in a change in air emissions; therefore, no short- or long-term impacts are expected. The CRH mission will operate the HH-60W equipped with the T700-GE-701D engine, which the HH-60G converted to in 2012 (Fisher 2017). The existing mission conducts 1,457 sorties per year and implementation of the Proposed Action will result in no additional sorties. Therefore, a quantitative analysis of operational CRH emissions is not included in this EA.

Other than the addition of up to four electrically powered Fox Air 60 air conditioning units, aerospace ground equipment utilization will not change with implementation of the Proposed Action. These air conditioning units are rated at 24,000 Btu each. Because these air conditioners do not combust fossil fuel, an increase in emissions is not anticipated with their operation.

Construction and demolition activities associated with the Proposed Action are expected to result in a short-term, minor, adverse impact on air quality. Construction activities would include, but are not limited to: land clearing, grading, and excavation; pavement construction, demolition, and removal; and building construction, demolition, and removal. These activities would involve the use of passenger vehicles, heavy construction equipment, and machinery. Per the New Mexico Air Quality Control Act and 20.11.20 NMAC, *Fugitive Dust Control*, a fugitive dust control construction permit is required for projects disturbing 0.75 acre or more as well as the demolition of buildings containing more than 75,000 cubic feet of space.

As stated in 20.11.20.12 NMAC, *General Provisions*, each person shall use reasonably available control measures or any other effective control measure during active operations or on inactive disturbed surface areas, as necessary to prevent the release of fugitive dust, whether or not the person is required by 20.11.20 NMAC to obtain a fugitive dust control permit. As stated in 20.11.20.22 NMAC, *Demolition and Renovation Activities; Fugitive Dust Control Construction Permit and Asbestos Notification Requirements*: “All demolition and renovation activities shall employ reasonably available control measures at all times, and, when removing ACM, shall also comply with the federal standards incorporated into 20.11.64 NMAC, *Emission Standards for Hazardous Air Pollutants for Stationary Sources*. A person who demolishes or renovates any commercial building, residential building containing five or more dwellings, or a residential structure that will be demolished in order to build a nonresidential structure or building shall file an asbestos notification with the department no fewer than 10 calendar days before the start of such activity. Written asbestos notification certifying to the presence of ACM is required even if regulated ACM is not or may not be present in such buildings or structures.”

The quantity of uncontrolled fugitive dust emissions from a construction site is proportional to the area of land being worked and the level of construction activity. Construction and demolition activities would incorporate BMPs and control measures to minimize fugitive particulate matter emissions. Typical BMPs include watering during ground-disturbing activities, using soil stabilization agents for dust suppression, use of rip-rap to prevent vehicle track-out, and installing silt/fabric fences. Additionally, the construction vehicles are assumed to be well-maintained and could use diesel particle filters to reduce emissions. Construction workers commuting daily to and from the construction site in their personal vehicles would also result in criteria pollutant air emissions. It is not expected that emissions from construction and demolition activities would contribute to or affect local or regional attainment status with the NAAQS.

The Air Conformity Applicability Model (ACAM) was used to estimate emissions associated with these construction activities using known material quantities and an estimate of construction phasing. **Table 3-7** presents the anticipated emissions for construction activities, including construction worker travel, associated with the Proposed Action. As shown, construction-related emissions of all criteria pollutants are below the applicable *de minimis* threshold of 100 tpy. Therefore, construction-related emissions comply with the applicable SIP and a General Conformity Determination is not required. See **Appendix D** for the Record of Conformity Analysis and technical analysis documentation generated using ACAM.

Table 3-7: Construction Activity Emissions

Pollutant	Emissions (tons/year)				
	2017	2018	2019	2020	2021
CO	1.67	1.27	1.65	4.01	0.54
CO _{2e}	333.9	244.3	349.5	833.9	107.8
NO _x	1.97	1.40	1.78	4.23	0.55
PM ₁₀	0.50	0.11	0.40	0.72	0.03
PM _{2.5}	0.10	0.08	0.09	0.21	0.03
SO _x	<0.01	<0.01	<0.01	0.01	<0.01
VOC	0.30	1.33	0.28	0.68	0.09

Source: ACAM, USAF 2016.

Implementation of the Proposed Action is expected to result in a long-term, negligible, adverse impact on air quality. Per 20.11.41 NMAC, *Construction Permits*, should new stationary sources (i.e., emergency back-up generator) be installed, a construction permit would be required prior to installation and operation. All generators are required to have a construction permit from the AHED-AQD in place prior to purchasing the unit. AFCEC approval of generator sizing and design is required prior to permitting. Because, the emergency generator would be used on an as-needed basis only, emissions resulting from its use are anticipated to be minimal. Therefore, assuming adherence to guidance outlined in the NMACs by obtaining proper permits and adhering to permit-associated BMPs, implementation of the Proposed Action would not be expected to result in a significant impact on air quality.

No-Action Alternative

Under the No-Action Alternative, the proposed transition to the HH-60W helicopters and the associated construction activities would not occur and existing conditions discussed in **Section 3.3.2.1** would continue. Implementation of the No-Action Alternative would not result in any new or additional impacts on air quality.

3.3.3 Water Resources

Water resources are natural and man-made sources of water that are available for use by, and for the benefit of, humans and the environment. Water resources relevant to KAFB's location in New Mexico include groundwater, surface water, floodplains, and wetlands. Evaluation of water resources examines the quantity and quality of the resource and its demand for various purposes and ensures compliance with the CWA.

Groundwater. Groundwater is water that exists in the saturated zone beneath the Earth's surface and includes underground streams and aquifers. Groundwater is an essential resource that functions to recharge surface water and is used for drinking, irrigation, and industrial purposes. Groundwater typically can be described in terms of depth from the surface, aquifer or well capacity, water quality, recharge rate, and surrounding geologic formations.

Groundwater quality and quantity are regulated under several federal and state programs. The federal Underground Injection Control regulations, authorized under the Safe Drinking Water Act (SDWA), require a permit for the discharge or disposal of fluids into a well. The federal Sole Source Aquifer regulations, also authorized under the SDWA, protect aquifers that are critical to water supply. The state of New Mexico passed state drinking water rules, which incorporate the federal SDWA regulations, under 20.70.10 NMAC and regulates water rights under 72-1 New Mexico Statutes Annotated.

Surface Water. Surface water resources generally consist of wetlands, lakes, rivers, and streams. Surface water is important for its contribution to the economic, ecological, recreation, and human health of a community or locale. Wetlands perform several hydrologic functions including: water quality improvement, groundwater recharge and discharge, pollution mitigation, nutrient cycling, stormwater attenuation and storage, sediment detention, and erosion protection. Wetlands are protected as a subset of "Waters of the United States" (WOTUS) under Section 404 of the CWA. The term WOTUS has a broad meaning under the CWA and incorporates deep water aquatic habitats and special aquatic habitats (including wetlands). US Army Corps of Engineers (USACE) defines wetlands as "those areas that are inundated or saturated with ground or surface water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (33 CFR Part 329). For regulatory purposes, wetlands are defined by three factors: hydrologic regime, soil characteristics, and vegetation. In addition, many states have local regulations governing wetlands and their buffer areas.

In 2006, the US Supreme Court addressed the jurisdictional scope of Section 404 of the CWA, specifically the term WOTUS, in *Rapanos v. United States* and in *Carabell v. USACE*; hereafter referred to as the *Rapanos* decision. As a consequence of the associated US Supreme Court decisions, the USEPA and USACE, in coordination with the Office of Management and Budget and the CEQ, developed

the *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States and Carabell v. United States Army Corps of Engineers Memorandum* (USEPA and USACE 2007a). This guidance requires a greater level of documentation to support an agency's Jurisdictional Determination (JD) for a particular water body. As a result of these decisions, the agencies now assert jurisdiction over the following categories of water bodies: Traditional Navigable Waters (TNWs), all wetlands adjacent to TNWs, non-navigable tributaries of TNWs that are relatively permanent (i.e., tributaries that typically flow year-round or have continuous flow at least seasonally), and wetlands that directly abut such tributaries. In addition, the agencies assert jurisdiction over every water body that is not a Relatively Permanent Water if that water body is determined (on the basis of a fact-specific analysis) to have a significant nexus with a TNW.

An additional memorandum regarding USEPA and USACE coordination on JDs under Section 404 of the CWA, in light of recent Supreme Court Decisions, was developed and signed (USEPA and USACE 2007b). Headquarters originally required the districts to request concurrence for only those JDs where the district was considering asserting jurisdiction over a non-navigable, intrastate, isolated water or wetland. The agencies now require that all JDs for non-navigable, isolated waters be elevated for USACE and USEPA Headquarters review prior to the district making a final decision on the JD.

The guidance provided in the June 2007 memorandum was superseded in a December 2008 memorandum, which incorporated the regulations definition of "adjacent" and recognition that USEPA regions and the Corps districts need guidance to ensure that JDs, permitting actions, and other relevant actions are consistent with the decision. It noted that the agencies will continue to monitor implementation of the *Rapanos* decision in the field and recognizes that further consideration of jurisdictional issues, including clarification and definition of key terminology may be appropriate in the future, either through issuance or additional guidance or through rulemaking (USEPA and USACE 2008).¹

The classes of water bodies that are subject to CWA jurisdiction only if such a significant nexus is demonstrated are: non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally; wetlands adjacent to such tributaries; and wetlands adjacent to, but that do not directly abut, a relatively permanent, non-navigable tributary. A significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or an insubstantial impact on the chemical, physical, or biological integrity of a TNW. Principal considerations when evaluating significant nexus include the volume, duration, and frequency of the flow of water in the tributary and the proximity of the tributary to a TNW, plus the hydrologic, ecologic, and other functions performed by the tributary and all of its adjacent wetlands.

A water body can be deemed "impaired" if water quality analyses conclude that exceedances of the water quality standards, established under the CWA, occur. The CWA requires that states establish a Section 303(d) list to identify impaired waters and establish Total Maximum Daily Loads (TMDLs) for the source(s) causing the impairment. A TMDL is the maximum amount of a substance that can be assimilated by a water body without causing impairment. The CWA also mandated the NPDES program, which regulates the discharge of point (end of pipe) and non-point (stormwater) sources of water pollution and requires a permit for any discharge of pollutants into WOTUS.

Stormwater is an important component of surface water systems because of its potential to introduce sediments and other contaminants that could degrade surface waters. Proper management of stormwater flows, which can be intensified by high proportions of impervious surfaces associated with buildings, roads, and parking lots, is important to the management of surface water quality and natural flow characteristics. Prolonged increases in stormwater volume and velocity associated with development and increased impervious surfaces have the potential to impact adjacent streams as a result of stream bank erosion and channel widening or down cutting associated with the adjustment of the stream to the change in flow characteristics. Stormwater management systems are typically designed to contain runoff onsite

¹ The Clean Water Rule is currently enjoined from implementation until the U.S. Court of Appeals for the Sixth Circuit issues a decision on this issue – 803 F.3d 804, *; 2015 U.S. App. LEXIS 17642, **; 2015 FED App. 0246P (6th Cir.), ***, 2015 AMC 2409.

during construction and to maintain pre-development stormwater flow characteristics following development through either the application of infiltration or retention practices. Failure to size stormwater systems appropriately to hold or delay conveyance of the largest predicted precipitation event often leads to downstream flooding and the environmental and economic damages associated with flooding.

The USEPA published the technology-based Final Effluent Limitations Guidelines (ELGs) and New Source Performance Standards for the Construction and Development Point Source Category on 1 December 2009 to control the discharge of pollutants from construction sites. The rule became effective on 1 February 2010. After this date, all USEPA- or state-issued Construction General Permits (CGPs) were to be revised to incorporate the ELG requirements, with the exception of the numeric limitation for turbidity, which has been suspended while the USEPA further evaluates this limitation. The USEPA currently regulates large (equal to or greater than 1 acre) construction activity through the 2017 CGP. The 2017 CGP provides coverage for a period of 5 years.

Construction activities, such as clearing, grading, trenching, and excavating, disturb soils and can create sediment. If not managed properly, disturbed soils can be easily washed into nearby surface water bodies during storm events, where water quality is reduced and sedimentation is increased. Section 438 of the Energy Independence Security Act (EISA) (42 USC §17094) establishes into law new stormwater design requirements for federal development projects that disturb a footprint of greater than 5,000 SF. EISA Section 438 requirements are independent of stormwater requirements under the CWA. The project footprint consists of all horizontal hard surface and disturbed areas associated with project development. Under these requirements, pre-development site hydrology must be maintained or restored to the maximum extent technically feasible with respect to temperature, rate, volume, and duration of flow. Pre-development hydrology shall be modeled or calculated using recognized tools and must include site-specific factors, such as soil type, ground cover, and ground slope.

Post-construction analyses shall be conducted to evaluate the effectiveness of the as-built stormwater reduction features (DoD 2010a). These regulations were incorporated into an applicable DoD UFC in April 2010, which states that LID features need to be incorporated into new construction activities to comply with the restrictions on stormwater management promulgated by EISA Section 438. LID is a stormwater management strategy designed to maintain site hydrology and mitigate the adverse impacts of stormwater runoff and non-point source pollution. LIDs can manage the increase in runoff between pre- and post-development conditions on the project site through interception, infiltration, storage, and evapotranspiration processes before the runoff is conveyed to receiving waters. Examples of LID methods include bio-retention, permeable pavements, cisterns/recycling, and green roofs (DoD 2010b). Additional guidance is provided in USEPA's *Technical Guidance on Implementing the Storm Water Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act* (USEPA 2009). Site design shall incorporate LIDs to promote stormwater retention and re-use to the maximum extent technically feasible.

Floodplains. Floodplains are areas of low, level ground present along rivers, stream channels, or coastal waters that are subject to periodic or infrequent inundation due to rain or melting snow. Floodplain ecosystem functions include natural moderation of floods, flood storage and conveyance, groundwater recharge, nutrient cycling, water quality maintenance, and provision of habitat for a diversity of plants and animals. Flood potential is evaluated by the Federal Emergency Management Agency, which defines the 100-year floodplain as an area within which there is a 1 percent chance of inundation by a flood event in a given year, or a flood event in the area once every 100 years. The risk of flooding is influenced by local topography, the frequencies of precipitation events, the size of the watershed above the floodplain, and upstream development. Federal, state, and local regulations often limit floodplain development to passive uses, such as recreation and conservation activities, to reduce the risks to human health and safety. EO 13690, *Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input*, requires the Federal Government to take action, informed by the best available and actionable science, to improve the nation's preparedness and resilience against flooding. It amends EO 11988, *Floodplain Management*, by establishing the Federal Flood Risk Management Standard.

3.3.3.1 Affected Environment

Groundwater. KAFB is located within the limits of the Rio Grande Underground Water Basin, which is defined as a natural resources area and designated as a “declared underground water basin” by the state of New Mexico. The average depth to groundwater beneath KAFB is 450 to 550 feet below ground surface (bgs). The Rio Grande Basin’s source of groundwater is the Santa Fe Aquifer, which has an estimated 2.3 billion acre-feet of recoverable water. This aquifer is most likely recharged east of the installation in the Manzanita Mountains where the sediment soil materials favor rapid infiltration (KAFB 2012).

The regional aquifer present under KAFB ranges in depth from near surface to 200 feet bgs east of the major fault zones in the eastern portion of the installation, and to depths of 350 to 500 feet bgs west of the fault zone. The regional aquifer is used for the installation’s water supply. KAFB has a court-decreed² water right that allows it to divert approximately 6,400 acre-feet of water, or approximately 2 billion gallons, per year from the underground aquifer (KAFB 2016b). In 2015, KAFB pumped 2,495 acre-feet (813 million gallons) of water from these wells (KAFB 2016c).

Surface Water. KAFB is located within the Rio Grande watershed. The Rio Grande is the major surface hydrologic feature in central New Mexico, flowing north to south through Albuquerque, approximately 5 miles west of the installation. Surface water resources on KAFB reflect its dry, high-desert climate with surface water primarily visible only a few times a year. The average annual rainfall in Albuquerque is 9 inches, with half of the average annual rainfall occurring from July to October during heavy thunderstorms. Surface water generally occurs in the form of storm water sheet flow that drains into small gullies during heavy rainfall events (KAFB 2012). Surface water generally flows across the installation in a westerly direction toward the Rio Grande.

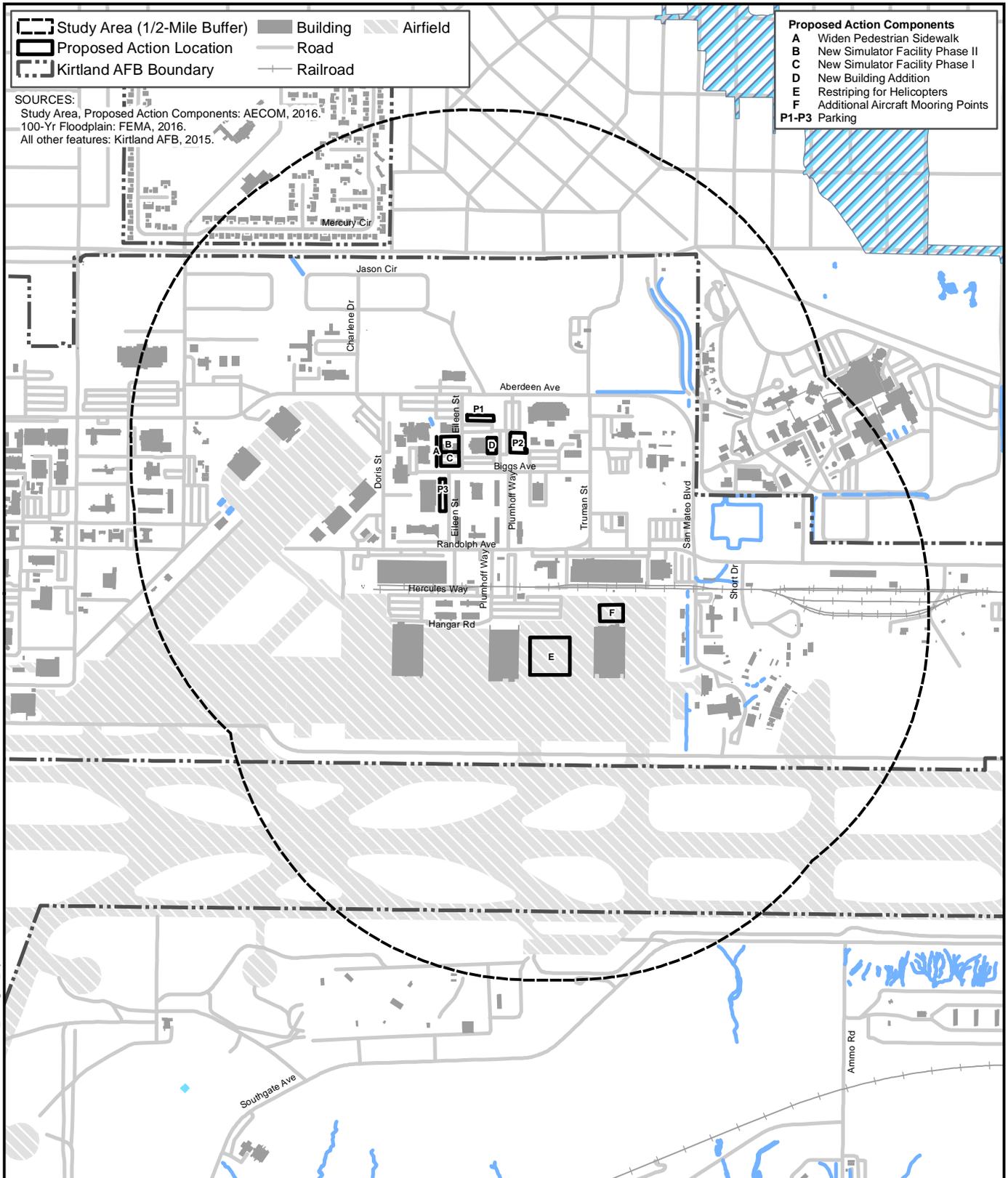
Wetlands are considered WOTUS if they are determined to be jurisdictional by the USACE and USEPA. There are 10 wetlands supplied by at least 15 naturally occurring springs on KAFB; however, no JDs have been made concerning these water features. There are no natural lakes or rivers on KAFB; however, six man-made ponds have been created on the Tijeras Arroyo Golf Course. (KAFB 2012). The Tijeras Arroyo Golf Course ponds are located approximately 3 miles southeast of the Proposed Action area.

The two main surface water drainage channels on KAFB are the Tijeras Arroyo and the smaller Arroyo del Coyote, which joins the Tijeras Arroyo approximately 1 mile west of the Tijeras Arroyo Golf Course. The Tijeras Arroyo and Arroyo del Coyote are tributaries to the Rio Grande. The Tijeras Arroyo and Arroyo del Coyote flow intermittently during heavy thunderstorms and the spring snowmelt, but most of the water percolates into alluvial deposits or is lost to the atmosphere via evapotranspiration. The Tijeras Arroyo, which is dry for most of the year, is the primary surface channel that drains surface water from KAFB to the Rio Grande. Precipitation reaches the Tijeras Arroyo through a series of storm drains, flood canals, and small, mostly unnamed arroyos. Nearly 95 percent of the precipitation that flows through the Tijeras Arroyo evaporates before it reaches the Rio Grande. The remaining 5 percent is equally divided between groundwater recharge and runoff (KAFB 2012).

Tijeras Arroyo is located to the south and east of the KAFB runways and approximately 1-1/2 miles south of the Proposed Action area. It is the primary surface drainage in the vicinity of the Proposed Action area (USGS 2016). **Figure 3-2** shows the locations of surface water relative to the Proposed Action. No major surface water features are located within or adjacent to the Proposed Action area.

KAFB operates under three NPDES Permits: the Multi-Sector General Permit (MSGP) for industrial activities, the MS4 Permit for water conveyances from installation development, and the CGP for

² On 27 November 1973, the U.S. District Court for the District of New Mexico issued a Judgment and Order granting Kirtland AFB a right to divert 6,398 acre-feet of groundwater from two wells within the Rio Grande Underground Water Basin (4,500 acre-feet and 1,898 acre-feet), as well as three minor decrees to divert 3 acre-feet per year of groundwater from three domestic wells.



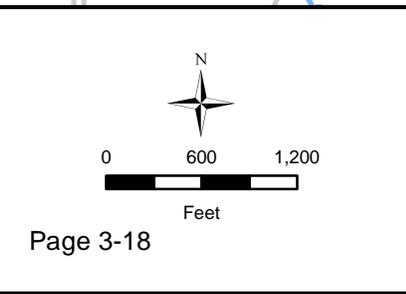
 Study Area (1/2-Mile Buffer)
 Building
 Airfield
 Proposed Action Location
 Road
 Railroad
 Kirtland AFB Boundary

Proposed Action Components

- A Widen Pedestrian Sidewalk
- B New Simulator Facility Phase II
- C New Simulator Facility Phase I
- D New Building Addition
- E Restriping for Helicopters
- F Additional Aircraft Mooring Points

P1-P3 Parking

SOURCES:
 Study Area, Proposed Action Components: AECOM, 2016.
 100-Yr Floodplain: FEMA, 2016.
 All other features: Kirtland AFB, 2015.



Surface Drainage Line
 100-Yr Floodplain

Figure 3-2
 Water Resources Adjacent to
 the Proposed Action Area
 Combat Rescue Helicopter EA
 Final - September 2017

construction projects. Stormwater runoff on the installation predominantly flows through the drainage patterns created by natural terrain and paved surfaces. In some areas, runoff is directed through ditches and piping, with direct discharges into a receiving stream or surface water body.

Issued in December 2015, the MSGP requires the installation to have a Stormwater Pollution Prevention Plan (SWPPP) and includes specific requirements for implementing control measures (e.g., minimize exposure, good housekeeping, maintenance, spill prevention and response), conducting self-inspections and visual assessments of discharges, taking corrective action, and conducting training, as appropriate. The MS4 Permit, issued in September 2015, regulates stormwater sediment and pollutant discharges from the installation. The MS4 collects and conveys stormwater from storm drains, pipes, and ditches and discharges into the Tijeras Arroyo and the city of Albuquerque's MS4. KAFB has developed a Storm Water Management Plan as required by the MS4 permit. When construction projects are not subject to NPDES CGP requirements (i.e., due to the size of the project or waivers), the contractor must implement appropriate BMPs to minimize stormwater pollutants.

KAFB operates under a 2017 CGP (#NMR100000), which expires 16 February 2022. It includes a number of guidelines to implement erosion and sedimentation control, pollution prevention, and stabilization. Permittees must select, install, and maintain effective erosion- and sedimentation-control measures as identified and as necessary to comply with the 2017 CGP, including the following:

- Sediment controls, such as sediment basins, sediment traps, silt fences, vegetative buffer strips
- Off-site sediment tracking and dust control
- Runoff management
- Erosive velocity control
- Post-construction stormwater management
- Construction and waste materials management
- Non-construction waste management
- Erosion control and stabilization
- Spill/release prevention.

If a project at KAFB is subject to the CGP requirements, the contractor must develop a site-specific SWPPP and provide the plan to the KAFB Environmental Office for review and approval. Upon approval, both the contractor and KAFB must submit Notices of Intent and be granted approval from USEPA before work begins.

Floodplains. A 100-year floodplain encompasses both the Arroyo del Coyote and Tijeras Arroyo. These are the only two arroyos with a floodplain on the installation. Arroyo del Coyote and Tijeras Arroyo floods occur infrequently and are characterized by high peak flows, small volumes, and short durations (KAFB 2012). **Figure 3-2** shows the locations of floodplains relative to the Proposed Action. The Proposed Action area is not located within a floodplain.

3.3.3.2 Environmental Consequences

Proposed Action

All aspects associated with implementation of the Proposed Action are not expected to result in short- or long-term impacts on floodplains. Because the Proposed Action area is approximately 1-1/2 miles north of the Tijeras Arroyo and sits at a higher elevation, flooding potential is considered to be low. In addition, the proposed transition to the HH-60W airframe is not expected to result in short- or long-term impacts on water resources. Implementation of the Proposed Action is not expected to result in any changes to water resources as no new flight operations and no additional student throughput are planned or anticipated at this time. Therefore, these aspects of the Proposed Action and their potential impacts will not be discussed further.

Groundwater. Construction and demolition activities associated with the Proposed Action are expected to result in a short-term, negligible to minor, adverse impact on groundwater. Construction and demolition activities would require minimal amounts of water, primarily for dust-suppression purposes. This water would be obtained from the KAFB water supply system. Because the annual water use (approximately 2,495 acre-feet) on KAFB is well below the 6,000 acre-feet withdrawal allowed per year in the Water Rights Agreement with the state of New Mexico, it is anticipated that sufficient water resources would be available on the installation.

No impacts on groundwater quality are anticipated from implementation of the Proposed Action. The average depth to groundwater beneath KAFB is 450 to 550 feet; therefore, groundwater would not be encountered during construction activities associated with the Proposed Action. Due to the depth to groundwater, it is also not anticipated that any potential petroleum or hazardous material spills during construction would reach groundwater. Proper housekeeping, maintenance of equipment, and containment of fuels and other potentially hazardous materials would be conducted to minimize the potential for a release of fluids.

No impacts on groundwater recharge are anticipated from the Proposed Action. Recharge of the Santa Fe Aquifer most likely occurs east of the installation in the Manzanita Mountains and would not be affected by the Proposed Action. Therefore, implementation of the Proposed Action would not be expected to result in a significant impact on groundwater.

Surface Water. Construction and demolition activities associated with the Proposed Action are expected to result in a short-term, negligible to minor, adverse impact on surface water. Since the construction areas associated with the Proposed Action are anticipated to be larger than 1 acre, compliance with KAFB's MS4 Permit would be required. The MS4 permit requires all construction activities, regardless of size, to implement BMPs to ensure that stormwater pollutants are contained to the maximum extent practical and do not enter the storm drainage system. It is anticipated that a project-specific CGP would be required for the construction of the proposed facilities; therefore, a site-specific SWPPP would be developed and all BMPs outlined therein would be implemented prior to any ground disturbance thereby reducing any adverse impact on surface water. The goal of the SWPPP is to reduce or eliminate stormwater pollution from construction activities by planning and implementing appropriate pollution control practices to protect water quality. Soil disturbance from construction and demolition activities has the potential to result in a minor disruption of natural drainage patterns, contamination of stormwater discharge, and heavy sediment loading. The proposed new facilities and associated stormwater controls would be designed with consideration for the UFC LID requirements, in accordance with EISA Section 438, to maintain or restore the natural hydrologic functions of the area.

Construction activities would include the use of equipment, petroleum, oil, and lubricants (POLs), and hazardous materials that would be stored on site. The selected construction contractor would follow industry-standard BMPs during construction activities, which would include the following: routine inspection of containers for proper condition and labeling; proper maintenance of equipment; use of drip pans and absorbent mats at refueling locations to collect leaks or spills; adherence to the guidelines outlined in the KAFB HWMP; and adherence to federal, state, and local regulations regarding the storage, use, and transportation of hazardous materials. Additionally, it is expected that the selected construction contractor would use good housekeeping measures such as installing silt fencing and performing street cleaning around construction areas to reduce the potential for erosion and equipment track out. Following construction, restabilization and revegetation of the area along with other BMPs to abate runoff and wind erosion would reduce potential impacts of erosion and runoff. Proper housekeeping and retention of debris within the site boundaries would prevent construction and demolition debris from entering waterways. Therefore, assuming proper development of the site-specific SWPPP and adherence to associated BMPs, implementation of the Proposed Action would not be expected to result in a significant impact on surface waters.

No-Action Alternative

Under the No-Action Alternative, the proposed transition to the HH-60W helicopters and the associated construction activities would not occur and existing conditions discussed in **Section 3.3.3.1** would continue. Implementation of the No-Action Alternative would not result in any new or additional impacts on water resources.

3.3.4 Safety

A safe environment is one in which there is no, or an optimally reduced, potential for death, serious bodily injury or illness, or property damage. Human health and safety address workers' and public health and safety during and following construction, demolition, and training activities. Site safety requires adherence to regulatory requirements imposed for the benefit of employees and the public. Site safety includes implementation of engineering and administrative practices that aim to reduce risks of illness, injury, death, and property damage. The health and safety of onsite military and civilian workers are safeguarded by numerous DoD and military branch-specific requirements designed to comply with standards issued by federal OSHA, USEPA, and state occupational safety and health agencies. These standards specify health and safety requirements, the amount and type of training required for workers, the use of personal protective equipment (PPE), administrative controls, engineering controls, and permissible exposure limits for workplace stressors.

Health and safety hazards can often be identified and reduced or eliminated before an activity begins. Necessary elements for an accident-prone situation or environment include the presence of the hazard itself, together with the exposed (and possibly susceptible) population or public. The degree of exposure depends primarily on the proximity of the hazard to the population. Hazards include transportation, maintenance, and repair activities, and the creation of a noisy environment or a potential fire hazard. The proper operation, maintenance, and repair of vehicles and equipment carry important safety implications. Any facility or human-use area with potential explosive or other rapid oxidation process creates unsafe environments due to noise or fire hazards for nearby populations. Noisy environments can also mask verbal or mechanical warning signals such as sirens, bells, or horns.

3.3.4.1 Affected Environment

Contractor Safety. All contractors performing construction and demolition activities on KAFB are responsible for following federal and state safety regulations and are required to conduct construction and demolition activities in a manner that does not increase risk to workers or the public. New Mexico is one of several states that administer their own occupational safety and health (OSH) program according to the provision of the federal OSHA of 1970, which permits a state to administer its own OSH program if it meets all of the federal requirements regarding the program's structure and operations. The New Mexico Occupational Health and Safety Bureau program has the responsibility of enforcing Occupational Health and Safety Regulations within the state of New Mexico. Its jurisdiction includes all private and public entities such as city, county, and state government employees. Federal employees are excluded as they are covered by federal OSHA regulations.

OSH programs address the health and safety of people at work. OSH regulations cover potential exposure to a wide range of chemical, physical, and biological hazards, and ergonomic stressors. The regulations are designed to control these hazards by eliminating exposure to the hazards via administrative or engineering controls, substitution, or use of PPE. Occupational health and safety is the responsibility of each employer, as applicable. Employer responsibilities are to review potentially hazardous workplace conditions; monitor exposure to workplace chemical (e.g., asbestos, lead, hazardous substances), physical (e.g., noise propagation, falls), and biological (e.g., infectious waste, wildlife, poisonous plants) agents, and ergonomic stressors; recommend and evaluate controls (e.g., prevention, administrative, engineering, PPE) to ensure exposure to personnel is eliminated or adequately controlled; and ensure a medical surveillance program is in place to perform occupational health physicals for those workers subject to the use of respiratory protection, engaged in hazardous waste work, asbestos, lead, or other work requiring medical monitoring.

Building 954, which is proposed for demolition, was constructed in 1972; therefore, there is a potential for ACM, LBP, and PCBs to be present. Demolition activities present health and safety concerns to the contractors performing the work.

Military Personnel Safety. Each branch of the military has its own policies and regulations that act to protect its workers, despite their work location. AFI 91-202, *The U.S. Air Force Mishap Prevention Program*, “establishes mishap prevention program requirements, assigns responsibilities for program elements, and contains program management information.” In order to meet the goals of minimizing loss of USAF resources and protecting military personnel, mishap prevention programs should address: groups at increased risk for mishaps, injury of illness; a process for tracking incidents; funding for safety programs; metrics for measuring performance; safety goals; and methods to identify safety BMPs.

Public Safety. KAFB has its own emergency services department. The emergency services department provides the installation with fire suppression, crash response, rescue, emergency medical response, hazardous substance protection, and emergency response planning and community health and safety education through the dissemination of public safety information to the installation. The Veterans Affairs Medical Center and the 377th Medical Groups’ Outpatient Clinic are the primary military medical facilities at KAFB. A number of other hospitals and clinics, which are devoted to the public, are located off-installation in the city of Albuquerque. These facilities include the Heart Hospital of New Mexico, University of New Mexico Hospital, and Kaseman Presbyterian Hospital (Google 2017).

The Albuquerque Fire Department provides fire suppression, crash response, rescue, emergency medical response, and hazardous substance response to the nearby city of Albuquerque. The Albuquerque Fire Department has 652 full-time, uniformed firefighter/emergency medical technicians; 22 fire engine companies; 7 fire ladder companies; 9 wildland fire or brush trucks; 3 hazardous material response units; 1 mobile command unit; and 20 medical response ambulances (AFD 2016). The city of Albuquerque also has approximately 832 sworn police officers available to provide law enforcement services (APD 2016). The Southeast Area Command (Phil Chacon Memorial Substation) borders the northwest corner of KAFB. A mutual service agreement is in place between the city of Albuquerque and KAFB.

3.3.4.2 Environmental Consequences

Proposed Action

The proposed transition to the HH-60W airframe is expected to result in a long-term, negligible to minor, beneficial impact on military personnel safety. Replacement of the aging HH-60G helicopters and associated flight simulator would resolve reliability deficiencies and enhance mission capability, improve training of military personnel, and maintain tactical superiority in 58 SOW operations. It is expected that replacement of the aging HH-60G helicopters with more modern aircraft would have a beneficial impact on safety.

Construction and demolition activities associated with the Proposed Action are expected to result in a short-term, minor, adverse impact on personnel safety. Construction and demolition activities associated with implementation of the Proposed Action would slightly increase the health and safety risk to personnel at the Proposed Action area during the normal workday because the level of such activity would increase. The selected construction contractor would be required to create and administer a site-specific health and safety plan to outline the industry-standard BMPs used during construction. These BMPs would include, but are not limited to: conducting daily tailgate meetings to review activities and potential hazards, establishing clear zones for heavy equipment use, outlining daily PPE needs, and reviewing the administrative/operational controls to be used. Installation personnel would be required to vacate the areas during construction and demolition activities. Adherence to all federal, state, and local rules and regulations and the installation’s HWMP by contractors during demolition activities would prevent the potential exposure of military personnel to asbestos and lead wastes. The Proposed Action area would be fenced and signs would be posted to further reduce safety risks to installation personnel. Construction and demolition activities would not pose a safety risk to the public or to off-installation areas. Additionally, the removal of buildings containing ACM and LBP would be beneficial to the health and safety of military

personnel. Therefore, with implementation of BMPs and proper use of PPE, implementation of the Proposed Action would not be expected to result in a significant impact on safety.

No-Action Alternative

Under the No-Action Alternative, the proposed transition to the HH-60W helicopters and the associated construction and demolitions activities would not occur and the existing conditions discussed in **Section 3.3.4.1** would continue. Implementation of the No-Action Alternative would not result in any new or additional impacts on safety.

3.3.5 Hazardous Materials and Wastes

Hazardous materials are defined by 49 CFR §171.8 as “hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (49 CFR §172.101), and materials that meet the defining criteria for hazard classes and divisions” in 49 CFR Part 173. Transportation of hazardous materials is regulated by the US Department of Transportation regulations within 49 CFR Parts 105–180.

Hazardous wastes are defined by the Resource Conservation and Recovery Act (RCRA) at 42 USC §6903(5), as amended by the Hazardous and Solid Waste Amendments, as: “a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in, mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.” Certain types of hazardous wastes are subject to special management provisions intended to ease the management burden and facilitate the recycling of such materials. These are called universal wastes and their associated regulatory requirements are specified in 40 CFR Part 273. Four types of waste are currently covered under the universal waste regulations: hazardous waste batteries, hazardous waste pesticides that are either recalled or collected as part of waste pesticide collection programs, hazardous waste thermostats, and hazardous waste lamps.

Special hazards are those substances that might pose a risk to human health and are addressed separately from other hazardous substances. Special hazards include ACM, LBP, and PCBs. USEPA is given authority to regulate these special hazard substances by the Toxic Substances Control Act (15 USC Chapter 53). USEPA has established regulations regarding asbestos abatement and worker safety under 40 CFR Part 763, with additional regulations concerning emissions at 40 CFR Part 61. Whether from LBP abatement or other activities, depending on the quantity or concentration, the disposal of the LBP waste is regulated by the RCRA at 40 CFR Part 260. The disposal of PCBs is addressed in 40 CFR Parts 750 and 761. The presence of special hazards, including describing their locations, quantities, and condition, assists in determining the significance of a proposed action.

The DoD developed the ERP to facilitate thorough investigation and cleanup of contaminated sites on military installations (i.e., active installations, installations subject to Base Realignment and Closure, and Formerly Used Defense Sites). The Installation Restoration Program and Military Munitions Response Program (MMRP) are components of the ERP. The Installation Restoration Program required each DoD installation to identify, investigate, and clean up hazardous waste disposal or release sites. The MMRP addressed non-operational rangelands that are suspected or known to contain unexploded ordnance, discarded military munitions, or munitions constituent contamination. A description of ERP activities provides a useful gauge of the condition of soils, water resources, and other resources that might be affected by contaminants. It also aids in the identification of properties and their usefulness for given purposes (e.g., activities dependent on groundwater usage might be restricted until remediation of a groundwater contamination plume has been completed).

DOE developed the Office of Environmental Restoration and Waste Management in 1989. The goal of this office is to implement DOE’s policy of ensuring that past, present, and future operations do not threaten human health or environmental health and safety. The Environmental Management Office was

reorganized in 1999 to implement procedures to meet these goals through five underlying offices. The Office of Site Closure is responsible for achieving closure of Environmental Restoration sites in a manner that is safe, cost-effective, and coordinated with stakeholders. As a facility operated for DOE under the Albuquerque Operations Office, SNL is part of this program. The current investigation being conducted at SNL under the Environmental Restoration program is intended to determine the nature and extent of hazardous and radioactive contamination and to restore any sites where such materials pose a threat to human health or the environment.

For the USAF, Air Force Policy Directive 32-70, *Environmental Quality*, and Air Force Regulation 32-7000 series incorporate the requirements of all federal regulations and other AFIs and DoD Directives for the management of hazardous materials, hazardous wastes, and special hazards.

3.3.5.1 Affected Environment

Environmental Management System. KAFB has implemented an EMS program in accordance with International Organization for Standardization 14001 Standards; EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*; and AFI 32-7001, *Environmental Management*. The EMS policy prescribes to protect human health, natural resources, and the environment by implementing operational controls, pollution prevention environmental action plans, and training.

All personnel, to include contractors, are made aware of the KAFB EMS program. All project-related activities shall be conducted in a manner that is consistent with relevant policy and objectives identified in the installation's EMS program. Project Managers shall ensure that all personnel are aware of environmental impacts associated with their activities and reduce those impacts by practicing pollution prevention techniques.

Hazardous Materials and Petroleum Products. AFI 32-7086, *Hazardous Materials Management*, establishes procedures and standards that govern management of hazardous materials throughout the USAF to be in compliance with the Emergency Planning and Community Right to Know Act. AFI 32-7086 applies to all USAF personnel who authorize, procure, issue, use, or dispose of hazardous materials, and to those who manage, monitor, or track any of those activities.

KAFB has identified the Environmental Office as the responsible entity to oversee hazardous material tracking on the installation. Part of their responsibilities is to control the procurement and use of hazardous materials to support USAF missions, ensure the safety and health of personnel and surrounding communities, and minimize USAF dependence on hazardous materials. The KAFB Environmental Office is charged with managing hazardous materials to reduce the amount of hazardous waste generated on the installation in accordance with the KAFB HWMP (KAFB 2015c). Typical hazardous materials used within the 58 SOW Campus include solvents; paints; adhesives; sealants; POLs; and batteries. All hazardous materials used by 58 SOW are authorized under their shop code in EESOH-MIS. Contractors bringing hazardous materials onto the installation must notify the KAFB Environmental Office's Hazardous Material Program Team by submitting a completed Hazardous Material Worksheet and a list of all materials along with their associated Safety Data Sheets.

Hazardous and Petroleum Wastes. KAFB maintains a HWMP as directed by AFI 32-7042, *Waste Management*. This plan describes the roles and responsibilities of all entities at KAFB with respect to the waste stream inventory, waste analysis plan, hazardous waste management procedures, training, emergency response, and pollution prevention. The HWMP establishes the procedures to comply with applicable federal, state, and local standards for hazardous waste management.

KAFB is a large-quantity generator of hazardous waste (Handler Identification #NM9570024423). Typical hazardous wastes generated within the 58 SOW Campus include batteries and rags with solvents, paints, adhesives, sealants, and POLs. All hazardous wastes generated are collected in an initial accumulation point within the campus prior to being transferred to the less than 90-day accumulation area for proper disposal.

The KAFB Spill Prevention, Control, and Countermeasure (SPCC) Plan was prepared in accordance with the requirements of 40 CFR 112 and subsequent amendments to address the potential for spills of oil-related products. The plan implements CWA requirements and provides operating procedures to prevent the occurrence of spills, control measures to prevent spills from entering surface waters, and countermeasures to contain and cleanup the effects of an oil spill that could impact surface waters (KAFB 2012).

Special Hazards. Asbestos is regulated by the USEPA under the CAA, Toxic Substances Control Act of 1976, and the Comprehensive Environmental Response, Compensation, and Liability Act. USEPA has established that any material containing more than 1 percent asbestos is considered an ACM. Friable ACM is any material containing more than 1 percent asbestos, and that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM is any ACM that does not meet the criteria for friable ACM. Guidelines and procedures for record-keeping, removal, encapsulation, enclosure, and repair activities associated with ACM-abatement projects are conducted in accordance with all federal, state, and local rules and regulations. 20.11.20.22 NMAC requires National Emissions Standards for Hazardous Air Pollutants (NESHAP) notification to AEHD-AQD for any ACM disturbance. Under NESHAP, any ACM that is friable or will be made friable during renovation or demolition activities in any public access or commercial building must be inspected and properly abated prior to renovation or demolition if the amount exceeds the trigger levels of 260 linear feet on pipes, 160 SF on other surfaces, or the volume equivalent of a 55-gallon drum (35 cubic feet).

The practice of using ACM in building construction was largely phased out by 1990. Building 957 proposed for a building addition was constructed in 1997; therefore, the potential for ACM is not present. Building 954 proposed for demolition was constructed in 1972; therefore, there is a potential for ACM to be present.

Federal agencies are required to comply with applicable federal, state, and local laws related to LBP activities and hazards. With the passing of The Consumer Product Safety Act in 1977, the federal government required all paint manufactured after February 1978 to be below a maximum amount of 0.06 percent lead by weight for use in commercial and residential facilities. Any paint with amounts of lead exceeding that 0.06 percent threshold is considered LBP. Based upon the year of construction, it is anticipated that Building 954 may contain LBP.

PCBs are a group of chemical mixtures used as insulators in electrical equipment, such as transformers and fluorescent light ballasts. Chemicals classified as PCBs were widely manufactured and used in the United States throughout the 1950s and 1960s. PCBs can be present in products and materials produced before the 1979 ban. Common products that might contain PCBs include electrical equipment (e.g., transformers and capacitors), hydraulic systems, and fluorescent light ballasts. Based upon the year of construction, it is anticipated that Building 954 may have products that contain PCBs.

Environmental Restoration Program. A review of the Environmental Restoration Program database for KAFB indicates that there are 27 sites located within or adjacent to the Proposed Action area. There are no MMRP or DOE Environmental Restoration sites located within or adjacent to the Proposed Action area. Adjacent areas are within 1/2-mile of the Proposed Action area. The status of each DoD ERP site is provided in **Table 3-8**.

Table 3-8: ERP Sites Within and Adjacent to the Proposed Action Area

Site No.	Site Title	Site Status	Within or Adjacent
LF-001	Landfill No. 1	Active	Adjacent
SS-C575	Transient Alert Pad	Petitioned for NFA	Adjacent
SS-062	Building 909 Waste Accumulation Area	NFA	Adjacent
SS-077	Abandoned Railroad Spur	NFA	Adjacent
SS-079	Building 381 Spill Site	NFA	Adjacent

Table 3-8: ERP Sites Within and Adjacent to the Proposed Action Area (Continued)

Site No.	Site Title	Site Status	Within or Adjacent
SS-081	Building 907 Detention Pond and Yard	NFA	Adjacent
ST-070B	Building 377 OWS Tank and Drying Rack	CA Complete	Adjacent
ST-070C	Building 381 OWS	CA Complete	Adjacent
ST-070D	Building 471 OWS	CA Complete	Adjacent
ST-070E	Buildings 481 and 482 Former OWS	Active	Adjacent
ST-071	Building 1000/1001 OWS	NFA	Within
ST-106	Bulk Fuels Facility Spill	Active	Adjacent
ST-108	Abandoned JP-4 Fuel Lines	NFA	Adjacent
ST-212	Building 381 OWS	NFA	Adjacent
ST-217	Building 481 OWS	NFA	Adjacent
ST-218	Building 482 OWS	NFA	Adjacent
ST-220	Building 1001 Plating and Anodizing	Petitioned for NFA	Within
ST-226	Building 1037 OWS	NFA	Adjacent
ST-227	Building 1037 Holding Tank	NFA	Adjacent
ST-278	Sanitary Sewer System A	NFA	Within
ST-279	Sanitary Sewer System B	NFA	Adjacent
ST-286	East Storm Sewer System	Petitioned for NFA	Adjacent
ST-287	Building 525 Septic System	NFA	Adjacent
ST-325	Building 1000 H-3/H-53 Phase Dock Floor Drains	Petitioned for NFA	Within
ST-331	Building 1009, C-130 Maintenance Shop Storm Sewer	Petitioned for NFA	Adjacent
ST-341	Building 1033 Condensate Tank	NFA	Adjacent
WP-047	Silver Recovery Unit	NFA	Within

Notes: OWS – Oil/Water Separator
 CA – Corrective Action
 NFA – No Further Action

A description of the three active DoD ERP sites and their status is provided below:

ERP Site LF-001 – Landfill No. 1 was operated as a trench-and-fill landfill from 1951 to 1975. Interviews conducted during investigations implied that the landfill contained green refuse, hard fill, and possibly hazardous waste to include chemical drums, oil-soaked insulation, and numerous 5-gallon cans containing unknown liquids. Numerous investigations have been conducted at the site to include geophysical and soil gas surveys and sampling of soil, groundwater, surface water, and sediment. It was determined that aluminum, antimony, beryllium, chromium, cobalt, iron, lead, manganese, mercury, nickel, thallium, vanadium, anthracene, benzo(a)pyrene, benzo(k)fluoranthene, 1,4-dichlorobenzene, benzo(a)anthracene, benzo(b)fluoranthene, bis(2-ethylhexyl) phthalate, fluorine, indeno(1,2,3-c,d)pyrene, naphthalene, phenol, and pyrene are present in the soil.

NMED selected an evapotranspiration (ET) cover as the recommended corrective measure for this site. The 2006 Corrective Measures Implementation Report noted that the activities completed included construction of the final ET cover and associated drainage/erosion control system, installation of temporary stormwater controls and site fencing, performing required testing and inspections, grading, and

site seeding/revegetation. A voluntary long-term monitoring and maintenance program is conducted using one upgradient and three downgradient wells and monthly inspections are conducted to ensure the integrity of the ET cover and erosion control. Regular maintenance activities and monthly monitoring, as well as monitoring after every 1/2-inch rainfall event are conducted. In addition, groundwater in the vicinity of the landfill is sampled on an annual basis. The samples are analyzed for inorganics and volatile organic compounds. No concentrations above USEPA maximum contaminant levels have been observed since the landfill was capped (KAFB 2014a).

A small portion of this ERP site is located just within the southeastern portion of the 1/2-mile buffer area.

ERP Site ST-070E – Former OWS for Buildings 481 and 482. Petroleum hydrocarbon contamination was found to be present in soils and soil vapor adjacent to the OWS. The concentrations of contaminants in groundwater at the site have been below applicable contaminant thresholds. The site is currently being remediated with soil vapor extraction methods (KAFB 2010, KAFB 2016d).

ERP Site ST-106 – The Bulk Fuels Facility Spill is a groundwater plume located in the northwestern portion of KAFB, east and southeast of the Proposed Action area. The groundwater plume is trending north and east away from the installation toward the city of Albuquerque. The facility and associated infrastructure operated from 1953 until 1999. During this time, the fueling area was separated into a tank holding area where bulk shipments of fuel were received and a fuel loading area where individual fuels trucks were filled. The facility was removed from service in 1999 after the discovery of fuel leaking in subsurface piping at the rail unloading point. It was initially believed that the leak only affected surface soil within the immediate area; however, through further investigation, the installation learned that the leaked fuel reached the groundwater table. As part of the remediation process, soil vapor extraction units were installed to remediate soil contamination and numerous groundwater and soil vapor monitoring wells were installed on and off the installation to further investigate the contamination. These wells are sampled quarterly as part of the regular sampling schedule performed on the plume.

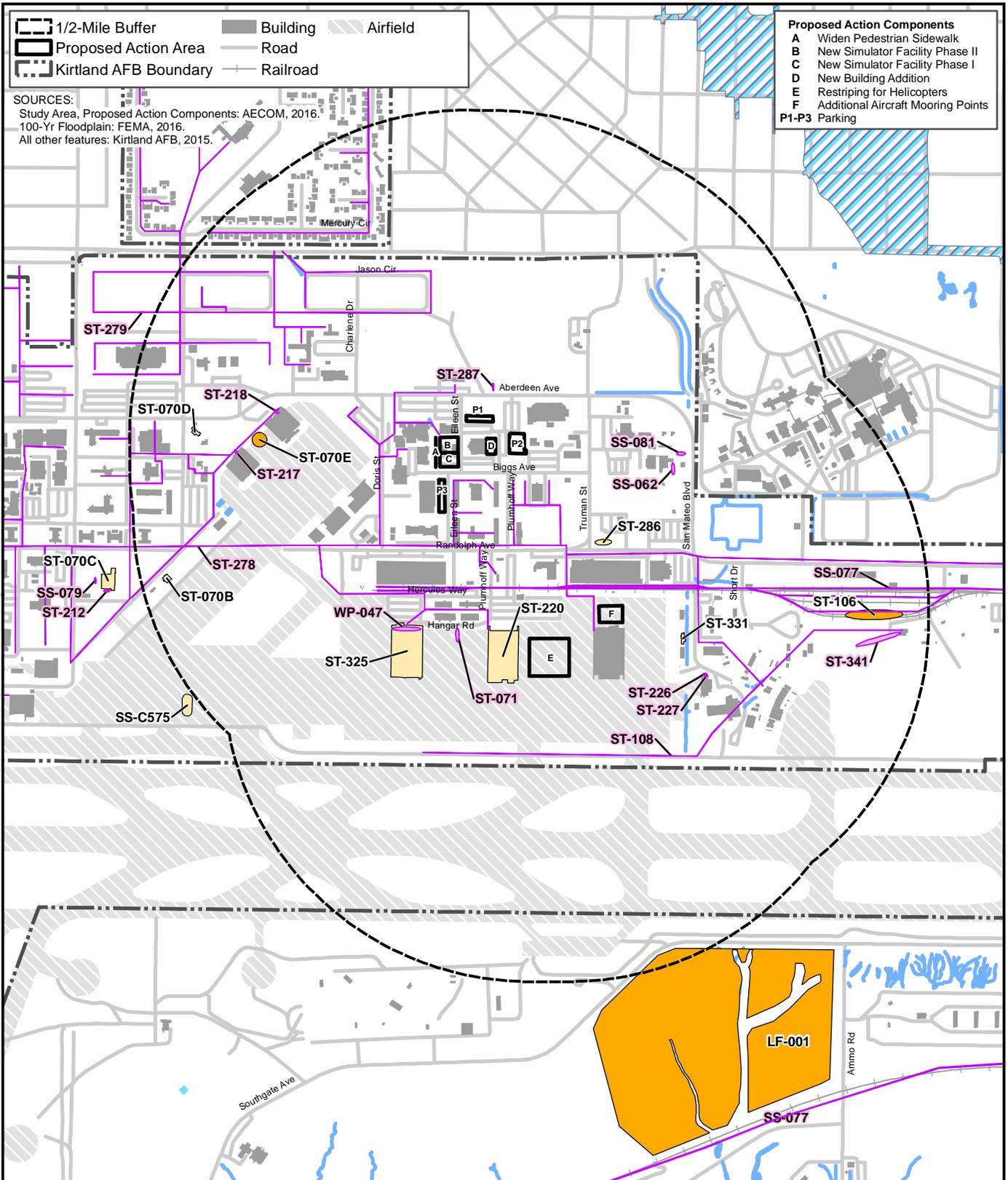
In December 2016, a new full-scale groundwater pump and treat system unit was brought online to remediate dissolved-phase ethylene dibromide in the groundwater. As of July 2017, approximately 235 million gallons of groundwater have been pumped from the off-base groundwater pump and treat system and removed 69 grams of ethylene dibromide (Clark 2017).

Figure 3-3 presents the ERP sites within and adjacent to the Proposed Action Area.

3.3.5.2 Environmental Consequences

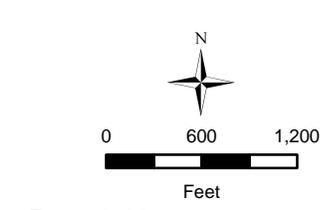
Proposed Action

Environmental Management System. Implementation of the Proposed Action would result in a short-term and long-term, negligible, adverse impact on KAFB's EMS program. 58 SOW would continue to participate in the KAFB's EMS program to ensure continuous process improvement and further reduce the use of hazardous materials associated with the Proposed Action. 58 SOW would continue to implement standard BMPs including compliance with existing standard operating procedure and tech orders and applicable federal and state laws governing the use, generation, storage, and transportation of solid and hazardous materials during operation and maintenance activities associated with the Proposed Action. Contractors associated with the construction and demolition portion of the Proposed Action would be made of aware of KAFB's EMS program by reviewing the environmental commitment statement and ensuring that work is consistent with the policy and objectives of the EMS program. Contractors shall ensure that employees are aware of environmental impacts and would reduce those impacts by practicing pollution prevention techniques. Therefore, implementation of the Proposed Action would not be expected to result in a significant impact on the EMS program.



SOURCES:
 Study Area, Proposed Action Components: AECOM, 2016.
 100-Yr Floodplain: FEMA, 2016.
 All other features: Kirtland AFB, 2015.

- Proposed Action Components**
- A Widen Pedestrian Sidewalk
 - B New Simulator Facility Phase II
 - C New Simulator Facility Phase I
 - D New Building Addition
 - E Restriping for Helicopters
 - F Additional Aircraft Mooring Points
 - P1-P3 Parking



- Surface Drainage Line
- ▨ 100-Yr Floodplain
- Environmental Remediation Sites**
- Active
- CA Complete / Petition for NFA
- No Further Action

Figure 3-3
 ERP Sites within and Adjacent
 to the Proposed Action Area
 Combat Rescue Helicopter EA
 Final - September 2017

Hazardous Materials and Petroleum Products. The proposed transition to the HH-60W airframe is not expected to result in a change in the use of hazardous materials and POLs; therefore, no long- or short-term impacts are expected. Because implementation of the Proposed Action would result in the same number of PTAI helicopters, no increase in the use of hazardous materials and POLs are anticipated. Although implementation of the Proposed Action increases the BAI helicopters by two, these helicopters are strictly backup and enter the active fleet only when a PTAI helicopter is down; therefore, it is not anticipated that the use of hazardous materials and POLs would increase. 58 SOW would continue to participate in EESOH-MIS. Through ongoing participation in EESOH-MIS at KAFB, the specific types and quantities of hazardous materials and POLs present would continue to be monitored and tracked.

Construction and demolition activities associated with the Proposed Action would result in a short-term, minor, adverse impact on hazardous materials management. Heavy equipment used for construction and demolition activities would require the use of POLs and shall be well maintained in order to avoid the potential for spills or leakage. Typical hazardous materials used at construction sites include concrete, asphalt, paints, sealants, adhesives, and POLs. Construction contractors would be responsible for the management of hazardous materials and POL usage, which would be handled in accordance with federal, state, and USAF regulations. Construction contractors must report the use of hazardous materials and POLs to the KAFB Environmental Office to be input into EESOH-MIS. If a material that is less hazardous can be used, the KAFB Environmental Office would make these recommendations. Use of EESOH-MIS would also ensure that ozone-depleting substances are not used. Use of ozone-depleting substances in such products as refrigerants, aerosols, and fire suppression systems is not permitted by the DoD without a formal request for a waiver. There would be no new chemicals or toxic substances used or stored at KAFB in conjunction with the Proposed Action. Therefore, assuming proper tracking of hazardous materials and POLs through EESOH-MIS, implementation of the Proposed Action would not be expected to result in a significant impact on hazardous materials management.

Hazardous and Petroleum Wastes. The proposed transition to the HH-60W airframe is not expected to result in a change in the generation of hazardous or petroleum wastes; therefore, no long- or short-term impacts are expected. Because implementation of the Proposed Action would result in the same number of PTAI helicopters, no increase in the generation of hazardous and petroleum wastes are anticipated. Although implementation of the Proposed Action increases the BAI helicopters by two, these helicopters are strictly backup and enter the active fleet only when a PTAI helicopter is down; therefore, it is not expected that the generation of hazardous and petroleum wastes would increase.

Construction and demolition activities associated with the Proposed Action would result in a short-term, negligible, adverse impact on the generation of hazardous and petroleum wastes. Through pollution prevention and operational control measures implemented by EMS and monitored through EESOH-MIS, it is anticipated that the quantity of hazardous and petroleum wastes generated from the construction and demolition activities would be negligible. Construction contractors would be responsible for the disposal of hazardous waste in accordance with KAFB's HWMP and all federal and state laws and regulations. BMPs, such as secondary containment, drips pans, and absorbent mats would be used to ensure that contamination from a spill would not occur. If, however, a spill does occur, the KAFB SPCC Plan outlines the appropriate measures for spill situations. Therefore, assuming adherence to KAFB's HWMP and SPCC Plan, implementation of the Proposed Action would not be expected to result in a significant impact on hazardous and petroleum waste management.

Special Hazards. The proposed transition to the HH-60W airframe is not expected to result in the introduction or generation of special hazards; therefore, no long- or short-term impacts are expected.

Construction and demolition activities associated with the Proposed Action would result in a short-term, minor, adverse impact on the generation of special hazards. Building 954, which is proposed for demolition, was constructed in 1972; therefore, there is a potential for ACM, LBP, and PCBs to be present. Building 954 would be surveyed prior to demolition and all friable asbestos (including asbestos that would be made friable during demolition), LBP, and PCBs would be separated from the remainder of the demolition materials as required and remediated in accordance with federal, state, and USAF regulations. All special hazard wastes would be handled in accordance with KAFB's HWMP and all

federal, state, and local rules and regulations and would be disposed of at the Keers Special Waste Landfill, the City of Rio Rancho Landfill, or another permitted site. Therefore, implementation of the Proposed Action would not be expected to result in a significant impact on the introduction or generation of special hazards.

Environmental Restoration Program. The proposed transition to the HH-60W airframe is not expected to result in any impacts on or be impacted by ERP sites; therefore, no long- or short-term impacts are expected. Construction and demolition activities associated with the Proposed Action are not expected to result in any impacts on or be impacted by ERP sites. The active ERP sites LF-001, ST-070E, and ST-106 are located adjacent to the Proposed Action area. No construction or demolition activities are proposed for these areas and there is no potential for contamination from these sites to migrate into the Proposed Action area. Therefore, implementation of the Proposed Action would not be expected to result in any impacts on or be impacted by ERP sites.

No-Action Alternative

Under the No-Action Alternative, the proposed transition to the HH-60W helicopters and the associated construction and demolitions activities would not occur and the existing conditions discussed in **Section 3.3.5.1** would continue. Implementation of the No-Action Alternative would not result in any new or additional impacts on hazardous materials and wastes.

3.3.6 Cultural Resources

The term 'cultural resource' refers to any prehistoric or historic resource, such as settlement sites, historic archaeological sites, or other evidence of our cultural heritage. The term 'historic property' refers specifically to a cultural resource that has been determined to be eligible for inclusion in the NRHP. These resources are protected and identified under several federal laws and EOs. Federal laws include the NHPA (1966), the Archaeological and Historic Preservation Act (1974), the American Indian Religious Freedom Act (1978), the Archaeological Resources Protection Act (1979), and the Native American Graves Protection and Repatriation Act (1990).

Five classes of historic properties are defined as eligible for listing in the NRHP: buildings, sites, districts, structures, and objects (36 CFR 60.3). According to the NRHP, the 'historic district' possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects that are historically or aesthetically united by plan or physical development.

To be eligible for the NRHP, properties must be 50 years old (unless they have exceptional historical importance) and have national, state, or local significance in American history, architecture, archaeology, engineering, or culture. They must possess sufficient integrity of location, design, setting, materials, workmanship, feeling, and association to convey their historical significance, and meet at least one of four criteria:

- Criterion A are associated with events that have made a significant contribution to the broad patterns of our history
- Criterion B are associated with the lives of people significant in our past
- Criterion C embody distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction
- Criterion D have yielded or may be likely to yield information important in prehistory or history (36 CFR 60)

Properties that are less than 50 years old can be considered eligible for the NRHP under Criterion Consideration G if they possess exceptional historical importance. Those properties must also retain historic integrity and meet at least one of the four NRHP Criteria for Evaluation (Criteria A, B, C, or D).

Under Section 106 of the NHPA, the USAF is required to assess the effects of undertakings prior to initiation to ensure that there would be no adverse effects on historic properties (36 CFR 800). Under this

process, the USAF evaluates the NRHP eligibility of resources within the proposed undertaking's Area of Potential Effect (APE) and assesses the possible effects of the proposed undertaking on historic resources in consultation with the SHPO and other parties. The APE is defined as the geographic area(s) "within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist." Title 36 CFR Section 60.4 defines the criteria used to establish significance and eligibility for the NRHP. Section 110 of the NHPA requires the USAF to complete an inventory of historic properties located on its land (36 CFR 60, 63, 78, 79, and 800).

Direct impacts could result from terrain disturbance or physical destruction during construction activities, and indirect impacts could result from visual changes and/or increased noise and vibration that could diminish the historical integrity of historic properties. The APE for direct impacts was defined to include the Proposed Action area (areas of direct disturbance). The APE for indirect impacts was defined to include buildings and structures within 1/2-mile of the Proposed Action area.

3.3.6.1 Affected Environment

KAFB has an ICRMP in place. The ICRMP is an integral part of the installation's comprehensive plan and addresses the cultural resources at KAFB. It integrates the Cultural Resources Management Program with ongoing mission activities and the property managed by KAFB, allows for the identification of conflicts between mission activities and cultural resources management, and provides guidelines for mitigating any such conflicts. The ICRMP provides guidelines and standard operating procedures to non-technical managers and planners in order to comply with the installation's legal responsibilities for the preservation of significant archaeological and historic resources (KAFB 2006).

A total of 661 archaeological sites have been recorded on KAFB. Of these sites, 237 have been determined ineligible, 173 have not been evaluated, and 251 have been determined to be eligible for listing in the NRHP. The eligible sites consist of artifacts such as pottery, ground stone, and projectile points. Many of these sites occur within the undeveloped portion of the installation. No eligible sites are located within or adjacent to the Proposed Action area.

A total of 2,183 built environment resources (historic buildings and structures) have been inventoried on KAFB, and 257 have been determined to be eligible for the NRHP. **Table 3-9** presents the NRHP-eligible buildings within a 1/2-mile of the Proposed Action Area (**Figure 3-4**).

Table 3-9: Historical Buildings within a 1/2-Mile of the Proposed Action Area

Building Number	Year Built	Building Type	NRHP Status
Within KAFB Boundary			
423	1958	Dormitory / Air Force Weapons Laboratory Administrative Offices	Eligible, Criteria A and C
426	1958	Dining Hall / Offices	Eligible, Criteria A and C
467	1960	Youth Center / Support Facility (1550th ATTW Pararescue School, Air Force Weapons Laboratory)	Eligible, Criteria A and C
509	1960	Amateur Radio Facility	Eligible, Criteria A and C
909	1952	Standardized Control Center	Eligible, Criterion A (contributor to 34th Air Division Historic District)
910	1952	Power Station	Eligible, Criterion A (contributor to 34th Air Division Historic District)
911	1951	Storehouse	Eligible, Criterion A (contributor to 34th Air Division Historic District)
912	1952	General Quarters	Eligible, Criterion A (contributor to 34th Air Division Historic District)
913	1952	General Quarters	Eligible, Criterion A (contributor to 34th Air Division Historic District)

Table 3-9: Historical Buildings within a 1/2-Mile of the Proposed Action Area (Continued)

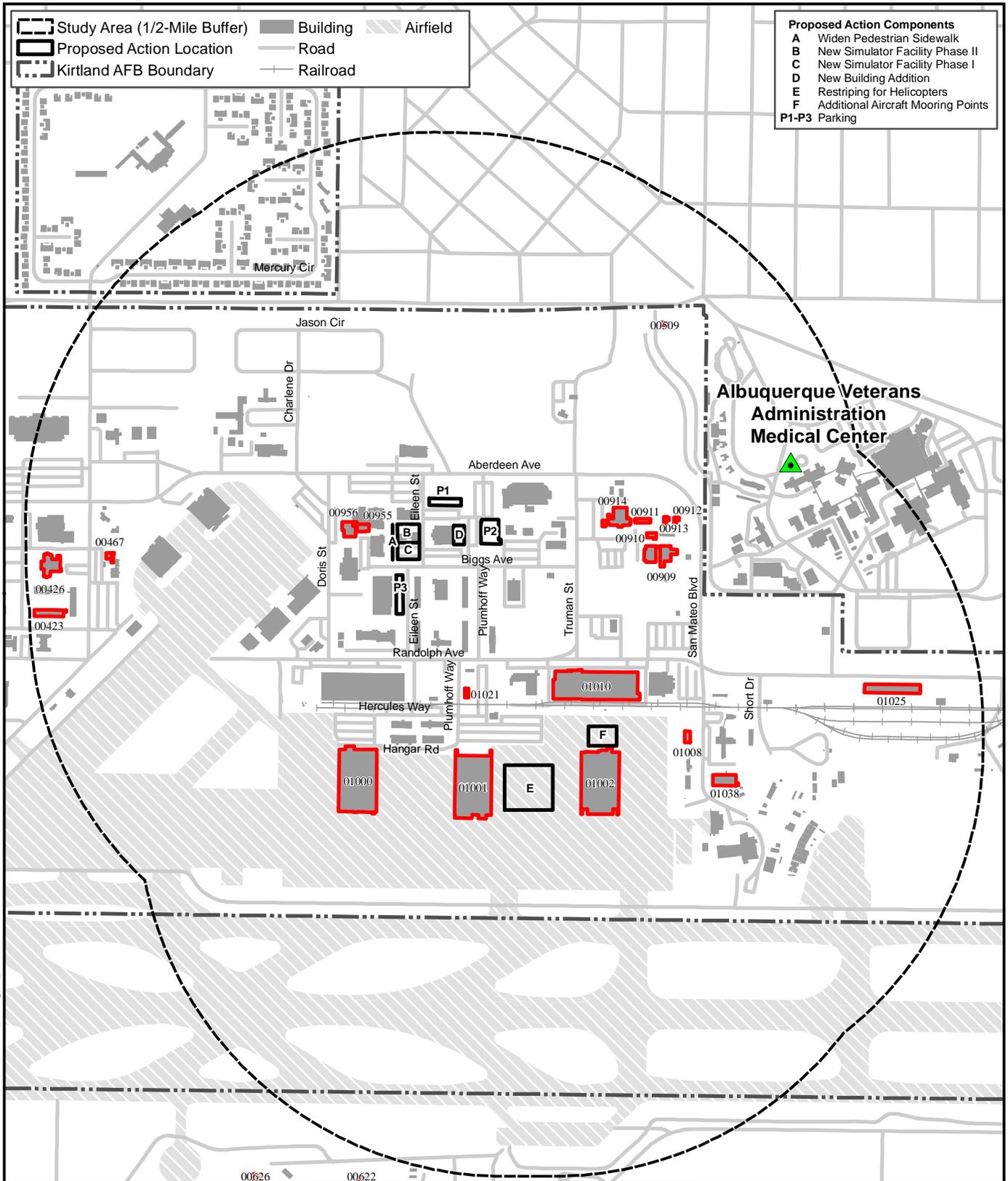
Building Number	Year Built	Building Type	NRHP Status
Within KAFB Boundary (Continued)			
914	1971	Nuclear Engineering Testing Building	Eligible, Criterion A and Criterion Consideration G
955	1977	Flight Simulator Training	Eligible, Criterion A and Criterion Consideration G
956	1981	Flight Simulator Training	Eligible, Criterion A and Criterion Consideration G
1000	1955	Hangar	Eligible, Criterion A
1001	1952	Science Laboratory, Outdoor Equipment	Eligible, Criterion A
1002	1953	Maintenance Hangar	Eligible, Criterion A
1008	1963	Warehouse	Eligible, Criteria A and C
1010	1953	Base Supply and Equipment Warehouse	Eligible, Criteria A and C
1021	1955	Water Fire Pumping Station / Utility Facility	Eligible, Criteria A and C
1025	1961	Base Disposal and Salvage Warehouse	Eligible, Criteria A and C
1038	1956	Fire Station	Eligible, Criteria A and C
Outside of KAFB Boundary			
N/A	1931-1932	Albuquerque Veterans Administration Medical Center Historic District	Listed, Criterion C

Of the facilities listed in **Table 3-9**, only Hangars 1000, 1001, and 1002 and Buildings 1008 and 1010 have the potential to be directly or indirectly impacted by construction and demolition activities associated with the Proposed Action.

Flightline Hangar Area. Three buildings within the APE are in the Flightline Hangar Area. Hangar 1001 was constructed in 1952 to serve the Air Force Special Weapons Center's (AFSWC) mission to provide atomic weapons modification of the Convair B-36, which arrived at KAFB in 1947. Hangar 1000, built 3 years later, also supported AFSWC activities. These hangars were constructed in a typical roll-through design with clear-span roof structures and large sliding doors to accommodate aircraft entry and exit. Ancillary spaces are located on each side of the work bays to accommodate multiple aircraft. Hangar 1002 was constructed in 1955 in support of Naval Air Special Weapons Facility, the US Navy's version of AFSWC. All three hangars retain integrity and were previously determined to be eligible for listing in the NRHP under Criterion A for their role in the AFSWC mission (Van Citters 2003). Hangars 1001 and 1002 are within the APE for indirect impacts. Both hangars are adjacent to the area that would be restriped under the Proposed Action. Hangar 1002 is also adjacent to the area proposed for additional aircraft mooring points.

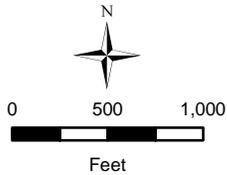
Buildings 1008 and 1010. Building 1008 is a storage facility constructed in 1963 and is east of the Flightline Hangar Area. Building 1010 is a base supply and equipment warehouse constructed in 1953 and is north of the Flightline Hangar Area. Both of these buildings were inventoried and evaluated for listing in the NRHP in 2003, but were determined to be not eligible because they were less than 50 years old and did not possess sufficient significance to be considered eligible under Criterion Consideration G. The buildings are now more than 50 years old, and SHPO has determined that they are eligible under Criteria A and C. Buildings 1008 and 1010 are adjacent to the Proposed Action area for the additional aircraft mooring points and are within the APE for indirect impacts.

During the scoping process, SHPO requested that KAFB review records related to Buildings 954, 957, and 960 to determine if these buildings have been subject to SHPO consultation in the past and take into consideration the results of that consultation. Building 957 was constructed in 1997 and Building 960, a modular building, was constructed in the 1980s. KAFB has determined that neither of these modern buildings have exceptional historical significance that would make them eligible for listing in the NRHP. Therefore, KAFB conducted no additional surveys of these buildings.



- Proposed Action Components**
- A Widen Pedestrian Sidewalk
 - B New Simulator Facility Phase II
 - C New Simulator Facility Phase I
 - D New Building Addition
 - E Restriping for Helicopters
 - F Additional Aircraft Mooring Points
 - P1-P3 Parking

File: L:\AGE\Projects\EN\Kirtland AFB Helicopter EA16_EA & FONSI\GIS\WXD\Draft_EA\Fig3-4_Cultural.mxd 8/7/2017 1:44:34 PM



- National Register of Historic Places
- Potentially Eligible for National Register of Historic Places Listing

SOURCES:
 Study Area, Proposed Action Components: AECOM, 2016.
 National Register of Historic Places: NPS, 2016.
 All other features: Kirtland AFB, 2015.

Figure 3-4
 Historically Eligible Structures
 Within and Adjacent to the
 Proposed Action Area Combat
 Rescue Helicopter EA
 Final - September 2017

Building 954, constructed in 1972, was originally evaluated for NRHP eligibility in 2003. At this time, it was determined not eligible for the NRHP. Because the 2003 evaluation is dated, KAFB conducted a historic building survey to inventory Building 954 and reevaluate its NRHP eligibility. Building 954 was originally constructed as an Arts and Crafts Center or Recreation Workshop and was later converted to a training center and flight simulator facility. Albuquerque architect and former Air Force Captain Dale L. Crawford designed the building, which is utilitarian in style with design elements of the Contemporary or Contractor Modern style. Although Building 954 is within the 900 area of KAFB, it is about 1/4-mile west of the buildings that contribute to the NRHP-eligible 34th Air Division Historic District. The building was constructed approximately 20 years after the district's contributing buildings were constructed and it is not associated with Cold War air defense. Therefore, Building 954 does not contribute to the significance of the district.

Other buildings in the 900 area have been determined to be NRHP eligible due to their historical association with electromagnetic pulse testing during the 1970s and 1980s and with Cold War training. Building 954 was constructed as a recreation building and has no association with electromagnetic pulse testing. Although the building was later converted to a training center and flight simulator facility, it was not converted until 1987 near the end of the Cold War and does not have the physical character-defining features of the NRHP-eligible flight simulator bays, including interior high-bay spaces and multiple large bay doors. Therefore, the building does not appear to be significant under NRHP Criterion A.

Building 954 is not significant under NRHP Criterion C as an important example of a type, period, or method of construction; is not the work of a master; and does not possess high artistic values. The building is an example of a simple, utilitarian building constructed in the early 1970s. Although the building possesses some character-defining features of the Contemporary or Contractor Modern style and its exterior has not been substantially altered since it was constructed, it is an unexceptional example. Albuquerque architect Dale L. Crawford, who designed Building 954, designed numerous buildings in Albuquerque and other towns and cities in New Mexico, and the utilitarian Building 954 is unlikely to represent his master work.

Research did not identify any significant associations with the lives of persons important to history and the building does not appear to have the potential to yield important historical information. Therefore, Building 954 does not appear to be NRHP eligible under Criteria B or D. Although Building 954 retains historical integrity of location, design, setting, materials, feeling, workmanship, and association, the building does not possess exceptional importance that would make it eligible for listing in the NRHP under Criterion Consideration G. Therefore, KAFB has recommended the determination that Building 954 is not eligible for the NRHP and the undertaking will have no effect on historic properties. See **Appendix E** for all documentation regarding the survey of Building 954.

3.3.6.2 Environmental Consequences

Proposed Action

The proposed transition to the HH-60W airframe is not expected to result in short- or long-term impacts on cultural resources.

Construction and demolition activities associated with the Proposed Action would result in a short-term, negligible, adverse impact on cultural resources. No known archaeological sites exist within the Proposed Action area; however, it is recommended that any ground-disturbing activities take into consideration the potential for the discovery of previously undiscovered cultural resources. Should an inadvertent discovery of human or cultural remains occur, all project activities shall stop, the KAFB Cultural Resources Program Manager shall be notified, and operational procedures outlined in the ICRMP shall be followed. This would ensure that no adverse impacts would occur on the newly discovered cultural resource.

Restriping between Hangars 1001 and 1002 would not require any ground disturbance; therefore, no impacts on cultural resources are expected. The proposed restriping would be visible from both hangars;

however, it would not substantially change the current viewshed of the hangars and would have no adverse effect on these historic properties. Installation of mooring points north of Hangar 1002 would result in the production of vibration; however, it would not be expected to diminish the historical integrity of Hangar 1002 and Buildings 1008 and 1010. The proposed aircraft mooring points would be visible from these buildings; however, they would not substantially change the current viewshed of the buildings and would have no adverse effect on these historic properties.

The NM SHPO requested, and KAFB performed an Historic Property Survey of Building 954. Upon completion and submittal, the SHPO concurred with the KAFB determination that Building 954 is not eligible for the National Register for Historic Places (NRHP). This concurrence was provided on 2 August 2017. Therefore, implementation of the Proposed Action would not be expected to result in a significant impact on cultural resources.

No-Action Alternative

Under the No-Action Alternative, the proposed transition to the HH-60W helicopters and the associated construction and demolitions activities would not occur and the existing conditions discussed in **Section 3.3.6.1** would continue. Implementation of the No-Action Alternative would not result in any new or additional impacts on cultural resources.

3.3.7 Infrastructure

Infrastructure consists of the systems and physical structures that enable a population in a specified area to function. Infrastructure is wholly man-made, with a high correlation between the type and extent of infrastructure and the degree to which an area is characterized as “urban” or developed. The availability of infrastructure and its capacity to support growth are generally regarded as essential to the economic growth of an area. The infrastructure information in this section was primarily obtained from the 2016 IDP and provides a brief overview of each infrastructure component and comments on its existing general condition.

The infrastructure components discussed in this section include transportation, utilities, and solid waste management. Transportation is defined as the system of roadways, highways, and transit services that are in the vicinity of the installation and could be reasonably expected to be potentially affected by the Proposed Action. Utilities include electrical, natural gas, liquid fuel, water supply, sanitary sewage/wastewater, stormwater handling, and communications systems. Solid waste management primarily relates to the availability of landfills to support a population’s residential, commercial, and industrial needs.

3.3.7.1 Affected Environment

Transportation

Several major roadways adjacent to KAFB serve as commuter routes and also serve longer distance, non-commuter traffic. I-25 provides a north-south corridor to the west of KAFB and I-40 provides an east-west transportation corridor on the north side of KAFB. Additional transportation activity on KAFB uses existing surface streets, pedestrian paths, bike routes, bike lanes, multi-use trails, and available commercial/public airline service at the Sunport.

Utility Systems

Water Supply System. Water is supplied to KAFB by six groundwater wells and two distribution systems that have a collective water-pumping maximum capacity of 8.1 million gallons per day (MGD). The installation pumps an average of 5.5 MGD of treated, potable water through 160 miles of distribution mains (KAFB 2016b). There are also approximately 50 miles of non-potable water pipeline serving the Tijeras Golf Course and providing water for fire protection.

In 1973, the US District Court for the District of New Mexico decreed that KAFB has the right to divert approximately 6,400 acre-feet per year from the underground aquifer, which is equal to approximately 2 billion gallons of water (KAFB 2016b). In 2015, KAFB pumped a total of 813 million gallons (2,495 acre-feet) of water from these wells. The installation can also purchase water from the Albuquerque-Bernalillo County Water Utility Authority (ABCWUA) to meet demand during peak periods; however, the amount of water purchased from the city has been negligible since 1998, and KAFB did not purchase any water from the city in 2015 (KAFB 2016c). **Figure 3-5** shows the water supply system in the Proposed Action area.

Sanitary Sewer/Wastewater System. KAFB does not have its own sewage treatment facility. Instead, the sanitary sewer system on the installation, which consists of approximately 491,000 linear feet of collection mains, transports wastewater to the city of Albuquerque treatment facility. The permissible discharge rate for KAFB is fixed at 70,805,000 gallons per month. The installation discharges an average of approximately 1.4 MGD (KAFB 2016b). Some facilities in remote areas and other portions of the installation are not serviced by the sanitary sewer system; these facilities use isolated, onsite septic systems to dispose of wastewater. **Figure 3-5** shows the wastewater system in the Proposed Action area.

Electrical System. KAFB purchases electrical power from the Western Area Power Administration. Electric lines are placed above and below ground, feeding the 20 substations on the installation. The installation's average yearly consumption is approximately 407,010 kilowatt hours (KAFB 2016b). **Figure 3-5** shows the electrical system in the Proposed Action area.

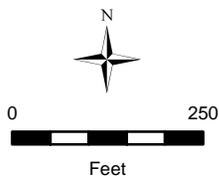
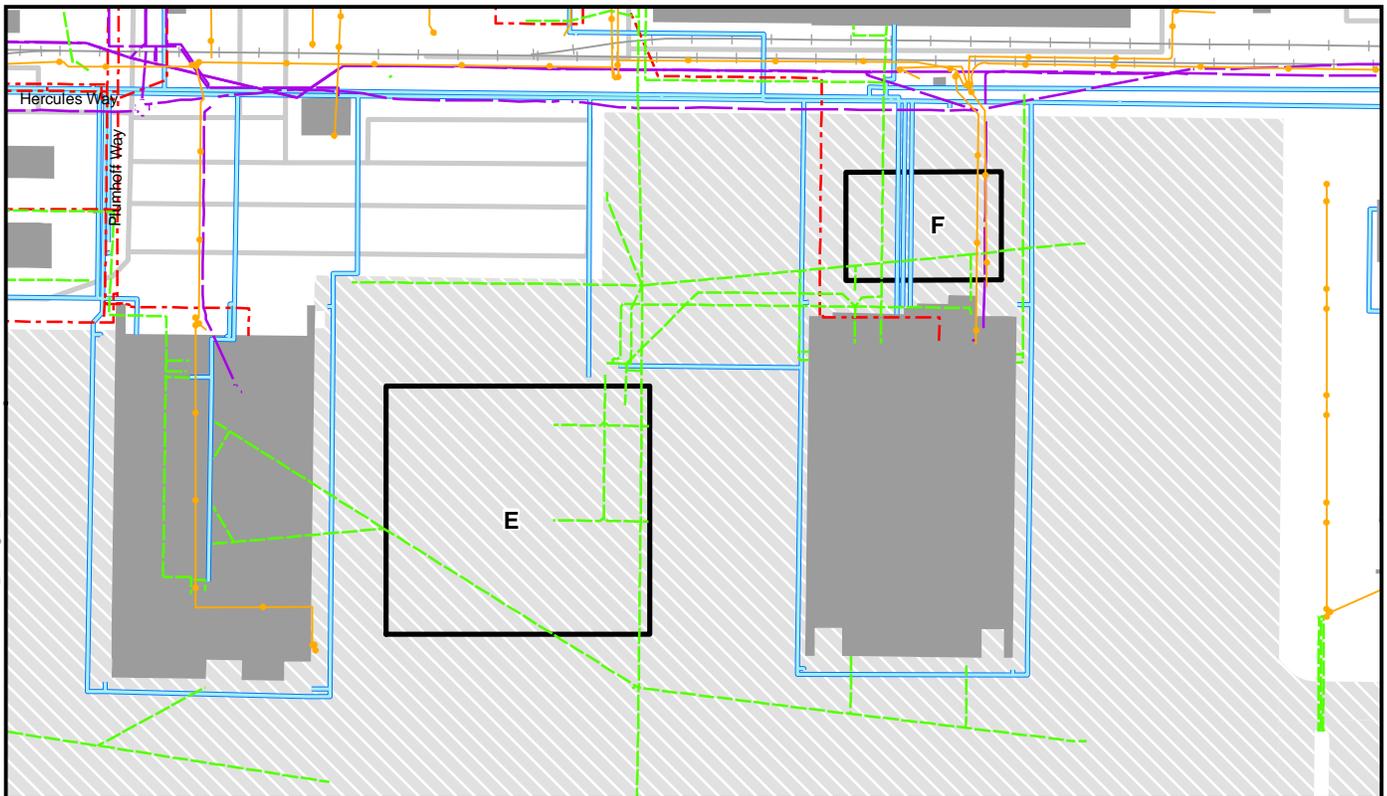
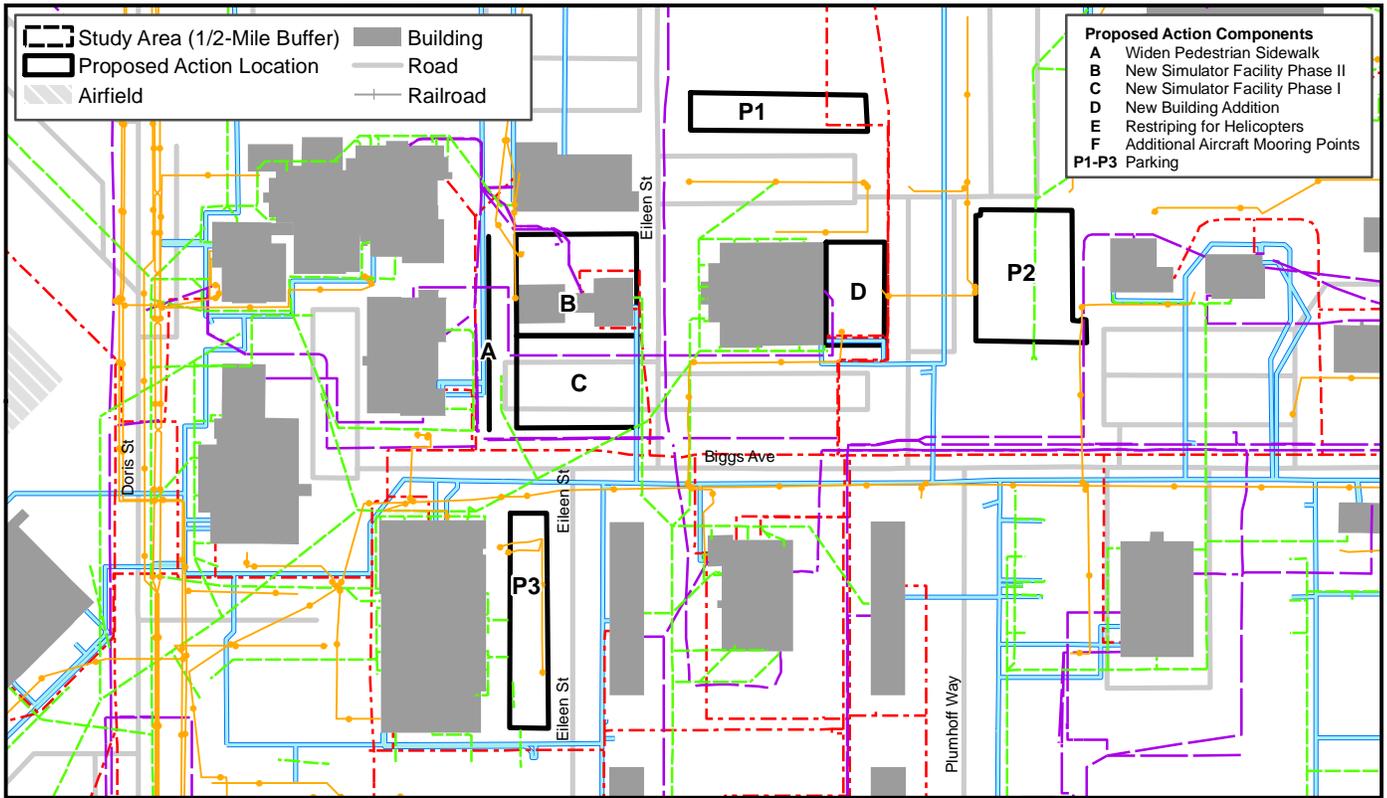
Natural Gas System. Natural gas is supplied by Coral Energy and delivered in New Mexico Gas Company pipelines supplying the industrial complex, family housing, and heating plants on the installation. There are approximately 496,000 linear feet of natural gas mains (KAFB 2016b). Rural portions of the installation do not receive natural gas service and rely on propane, which is delivered to and stored in local propane storage tanks. **Figure 3-5** shows the natural gas system in the Proposed Action area.

Communications System. The communication network on KAFB was originally constructed as two separate systems that were later connected to provide redundancy. The main information transfer node is located in Building 498 on the west side of the installation. This facility is in need of additional capacity and expansion if KAFB expands mission requirements. Building 20449, the Communication Main Switch Facility, is located on Wyoming Boulevard. This facility has capacity for 30,500 users and there are future projects to upgrade the copper cable. The network fiber in the installation communication system is currently in the process of being upgraded (KAFB 2016b). **Figure 3-5** shows the communications system in the Proposed Action area.

Liquid Fuel. Liquid fuels are supplied to KAFB by contractors. The primary liquid fuels supplied include JP-8 (jet propellant [fuel] – type 8), diesel, and unleaded gasoline. Fuels are purchased in bulk, delivered to the installation by tanker truck, and stored in various-sized storage tanks across the installation. Liquid fuels at KAFB are primarily used to power military aircraft and ground-based vehicles (KAFB 2016b). In the Proposed Action area, tanker trucks deliver and administer liquid fuel to aircraft on an as-needed basis.

Solid Waste Management. Municipal solid waste generated at KAFB is collected by a contractor and disposed of at the city of Albuquerque's Cerro Colorado Landfill. The Cerro Colorado Landfill receives approximately 1,700 tpy of municipal solid waste from KAFB.

KAFB operates a construction and demolition waste-only landfill on the installation. This landfill accepts only construction and demolition waste from permitted contractors working on the installation, has a total gross capacity of 10.2 million cubic yards, and has a net waste capacity of 7.2 million cubic yards. As of 31 December 2016, the remaining capacity of this landfill was 2.55 million cubic yards. In 2015 and 2016, an average of 14,375 tons of construction and demolition waste per year was deposited in this landfill



Utility Lines

- Electric
- Wastewater
- Water
- Communication
- Gas

Figure 3-5
Utility Systems within and
Adjacent to the Proposed
Action Area
Combat Rescue Helicopter EA
Final - September 2017

(Wheelock 2017). As of June 2012, the recycling of construction and demolition waste at KAFB has been codified into the Construction Waste Management specification (Section 01 74 19) for all USAF construction and demolition projects on the installation. Green waste generated from land clearing or ground maintenance on the installation is brought to the KAFB landfill for chipping. A Memorandum of Agreement with the ABCWUA has been established to exchange this chipped green waste for finished compost, which is used across the installation for landscaping purposes.

KAFB manages a recycling program to reduce the amount of solid waste sent to landfills. The installation recycles scrap metal under the Qualified Recycling Program (QRP) and collects corrugated cardboard from over 70 drop-off points across the installation. Per the DoD Strategic Sustainability Performance Plan, the diversion rate goal is 60 percent by FY 2015 and thereafter through FY 2020.

3.3.7.2 Environmental Consequences

Proposed Action

Transportation

The proposed transition to the HH-60W airframe is not expected to result in short- or long-term impacts on transportation. Implementation of the Proposed Action is not expected to affect KAFB roadways as no new flight operations and no additional student throughput are planned or anticipated at this time. Therefore, an increase in personnel commuter traffic is not anticipated.

Construction and demolition activities associated with the Proposed Action are expected to result in a short-term, negligible, adverse impact on the transportation system. Temporary impacts to area roadways due to an increase in construction-related vehicles on KAFB are anticipated; however, early coordination with KAFB organizations would ensure necessary safety precautions are taken and would allow ample advance notice to affected commuters and personnel. Typical construction-related traffic would include delivery trucks, haul trucks, and passenger vehicles.

It is anticipated that construction personnel would access the Proposed Action area off Truman Street from Gibson Boulevard given its proximity to the Proposed Action area. All haul and delivery trucks would access the installation off Hickam Street from Gibson Boulevard. During construction activities, installation roadways would be used by haul and delivery trucks; however, transportation would not occur during peak travel times. No disruption in the flow of traffic on the installation is expected. Therefore, implementation of the Proposed Action would not be expected to result in a significant impact on transportation.

Utility Systems

All aspects associated with implementation of the Proposed Action are not expected to result in short- or long-term impacts on the following utility systems: sanitary sewer/wastewater, communications system, and liquid fuels. In addition, the proposed transition to the HH-60W airframe is not expected to result in short- or long-term impacts on the following utility systems: water supply, natural gas, and solid waste. Implementation of the Proposed Action is not expected to result in any changes to these utility systems as no new flight operations and no additional student throughput are planned or anticipated at this time. Therefore, these aspects of the Proposed Action and their potential impacts will not be discussed further.

Water Supply System. Construction and demolition activities associated with the Proposed Action are expected to result in a short-term, negligible to minor, adverse impact on the water supply system. Construction and demolition activities would require minimal amounts of water, primarily for dust-suppression purposes. This water would be obtained from the KAFB water supply system. Because the annual water use (approximately 2,495 acre-feet) on KAFB is well below the 6,000 acre-feet withdrawal allowed per year in the Water Rights Agreement with the state of New Mexico, a significant impact on the water supply system is not expected. During construction activities, water service interruptions might be experienced should underground water lines need to be rerouted outside the Proposed Action area.

Service interruptions might also be experienced when the new facilities are connected to the KAFB water supply system and when Buildings 954 and 960 are disconnected to demolition. Because implementation of the Proposed Action would not result in new flight operations and additional student throughput above current levels, it is anticipated that the water supply system would be able to accommodate the new facilities without exceeding current capacity. Therefore, implementation of the Proposed Action would not be expected to result in a significant impact on the water supply system.

Electrical System. The proposed transition to the HH-60W airframe is expected to result in a long-term, negligible, adverse impact on the electrical distribution system. Implementation of the Proposed Action would include the use of four new Foxtronics Fox Air 60 air conditioning units. Use of these units would be on an as-needed basis and during preflight and maintenance activities only. Because no new flight operations and no additional student throughput are planned or anticipated at this time, it is expected that the use of these units would not result in a significant impact on the electrical distribution system.

Construction and demolition activities associated with the Proposed Action are expected to result in a short- and long-term, negligible, adverse impact on the electrical distribution system. Because construction and demolition activities would be phased and limited to short periods of time, minimal amounts of electricity would be required. Electrical service interruptions might be experienced should aboveground or underground electrical cables need to be rerouted outside of the Proposed Action area, when the new facilities are connected to the installation's electrical distribution system, and when Buildings 954 and 960 are disconnected prior to demolition. Because implementation of the Proposed Action would not result in new flight operations and additional student throughput above current levels, it is anticipated that the electrical supply system would be able to accommodate the new facilities without exceeding current capacity. Therefore, implementation of the Proposed Action would not be expected to result in a significant impact on the electrical distribution system.

Natural Gas System. Construction and demolition activities associated with the Proposed Action are expected to result in a short- and long-term, negligible, adverse impact on the natural gas system. Natural gas service interruptions might be experienced should service lines need to be rerouted outside of the Proposed Action area, when the new facilities are connected to the installation's natural gas system, and when Buildings 954 and 960 are disconnected prior to demolition. Because implementation of the Proposed Action would not result in new flight operations and additional student throughput above current levels, it is anticipated that the natural gas system would be able to accommodate the new facilities without exceeding current capacity. Therefore, implementation of the Proposed Action would not be expected to result in a significant impact on the natural gas system.

Solid Waste. Construction and demolition activities associated with the Proposed Action are expected to result in a short-term, negligible to minor, adverse impact on solid waste. To reduce the amount of waste disposed of at the landfill, materials that could be recycled or reused would be diverted from landfills to the greatest extent possible. Site-generated scrap metals, wiring, clean ductwork, and structural steel would be separated and recycled off site. Cardboard wastes would be recycled as a function of the KAFB QRP. Clean fill material, ground-up asphalt, and broken-up cement would be diverted from the landfills and reused whenever possible.

The weights of all materials diverted for recycling or reuse would be reported to the KAFB QRP to be credited toward the DoD-mandated construction and demolition diversion rate of 60 percent. Nonhazardous construction and demolition waste that is not recyclable or reusable would be transported to the KAFB construction and demolition waste landfill for disposal. Therefore, implementation of the Proposed Action would not be expected to result in a significant impact on solid waste management.

No-Action Alternative

Under the No-Action Alternative, the proposed transition to the HH-60W helicopters and the associated construction and demolitions activities would not occur and the existing conditions discussed in **Section 3.3.7.1** would continue. Implementation of the No-Action Alternative would not result in any new or additional impacts on infrastructure.

3.3.8 Socioeconomics and Environmental Justice

Socioeconomics is the relationship between economics and social elements, such as population levels and economic activity. Factors that describe the socioeconomic environment represent a composite of several inter-related and non-related attributes. There are several factors that can be used as indicators of economic conditions for a geographic area, such as demographics, median household income, unemployment rates, percentage of families living below the poverty level, employment, and housing data. Data on employment identify gross numbers of employees, employment by industry or trade, and unemployment trends. Data on industrial, commercial, and other sectors of the economy provide baseline information about the economic health of a region.

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, pertains to environmental justice issues and relates to various socioeconomic groups and disproportionate impacts that could be imposed on them. The EO requires that federal agencies' actions substantially affecting human health or the environment do not exclude persons, deny persons benefits, or subject persons to discrimination because of their race, color, or national origin. The EO was enacted to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of a proposed action.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, states that each federal agency "(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks."

3.3.8.1 Affected Environment

Socioeconomics. The Albuquerque Metropolitan Statistical Area (MSA) is considered the region of influence for socioeconomic effects of the Proposed Action. The population of the Albuquerque MSA, defined by the US Census Bureau as Bernalillo, Sandoval, and Valencia counties, was 887,077 people in the 2010 US Census. This represents a 24.5 percent increase, from the 2000 US Census for the Albuquerque MSA population (USCB 2010).

The state of New Mexico's population totaled 2,059,179 in 2010. The population of Bernalillo County was 662,564 in 2010, representing 32 percent of the total population for the state of New Mexico. Based on 2000 and 2010 US Census data, the population of Bernalillo County grew 19 percent from 2000 to 2010, while during this same time period Sandoval County experienced a 46.3 percent increase in population and Valencia County grew by 15.7 percent. The growth rate in the Albuquerque MSA from 2000 to 2010 (24.5 percent) was much greater than the growth rate of the state of New Mexico (13.2 percent) and of the United States (9.7 percent) over the same time period. Please see **Table 3-10** for 2000 and 2010 population data (USCB 2010).

Table 3-10: Population in the Region of Influence as Compared to New Mexico and the United States (2000 and 2010)

Location	2000	2010	Percent Change
United States	281,421,906	308,745,538	9.7%
New Mexico	1,819,046	2,059,179	13.2%
Albuquerque MSA	712,738	887,077	24.5%
Bernalillo County	556,678	662,564	19.0%
Sandoval County	89,908	131,561	46.3%
Valencia County	66,152	76,569	15.7%

Source: USCB 2010

Employment Characteristics. The three largest industries in the Albuquerque MSA in terms of percentage of the workforce employed within the industry are: the educational services, and health care and social assistance industry (25 percent); the professional, scientific, and management, and administrative and waste management services industry (13 percent); and the retail trade industry (11 percent). The construction industry represents 7 percent of the workforce (USCB 2011–2015). In April 2017, the Bureau of Labor Statistics reported a 5.6 percent unemployment rate in the Albuquerque MSA while the United States had a lower unemployment rate of 4.1 percent (BLS 2017).

KAFB. During FY 2014, 20,826 individuals were employed by KAFB, of which 4,193 were active-duty personnel. Direct payroll expenditures from the installation totaled over \$2.1 billion. When non-payroll expenditures associated with KAFB are included, total expenditures exceeded \$7.6 billion, with DoD expenditures representing approximately \$4.0 billion of that total (KAFB 2014b).

Environmental Justice and Protection of Children. To provide a baseline measurement for environmental justice, an area around the installation must be established to examine the impacts on minority and low-income populations. For the purpose of this analysis, a 50-mile radius around KAFB was evaluated to identify minority and low-income populations. This 50-mile radius includes numerous towns, villages, census-designated places, and cities. The largest of these is the city of Albuquerque with a population of 545,852. In the city of Albuquerque, 46.7 percent of the population is Hispanic and 4.6 percent is Native American (**Table 3-11**) (USCB 2010).

The city of Rio Rancho is on the northwestern side of Albuquerque and has a population of 87,521 and is the second largest city within 50 miles of KAFB. The Hispanic population represents 36.7 percent of the total population in Rio Rancho and the Native American population represents 3.2 percent of the total population. The third largest population center within 50 miles of the installation is South Valley, situated to the west of KAFB, containing 40,976 persons. In South Valley, the Hispanic population is 80.2 percent of the total population and the Native American population is 2.2 percent of the total population. The percentage of individuals under the age of 5 is very similar in the city of Albuquerque, city of Rio Rancho, and South Valley when compared to the state of New Mexico and the United States (USCB 2010). The average median household income for the Albuquerque MSA is \$48,047, which is slightly less than the United States average of \$51,222 (USCB 2010).

The percentage of families living below the poverty level varies greatly throughout the metropolitan areas of Albuquerque, with the city of Albuquerque having poverty levels similar to the state of New Mexico and the United States (**Table 3-11**). South Valley has a higher poverty rate compared to the state of New Mexico and the United States. Rio Rancho has a significantly lower poverty rate than the state of New Mexico and the United States (USCB 2010).

The closest residential area to the Proposed Action is in the city of Albuquerque approximately 1,500 feet to the north. There are two elementary schools on KAFB, Wherry Elementary located near the intersection of Gibson Boulevard and Pennsylvania Street and Sandia Elementary located near the intersection of Wyoming Boulevard and West Sandia Circle. There are six additional schools near KAFB

Table 3-11: Minority and Low-Income Characteristics (2010)

Race and Origin	Albuquerque	Rio Rancho	South Valley	New Mexico	United States
Total Population	545,852	87,521	40,976	2,059,179	308,745,538
Percent Under 5 Years of Age	7.0	7.2	7.3	7.0	6.5
Percent Over 65 Years of Age	12.1	10.8	12.3	13.2	13.0
Percent White	69.7	76.0	59.5	68.4	72.4

Table 3-11: Minority and Low-Income Characteristics (2010) (Continued)

Race and Origin	Albuquerque	Rio Rancho	South Valley	New Mexico	United States
Percent Black or African American	3.3	2.9	1.2	2.1	12.6
Percent American Indian and Alaska Native	4.6	3.2	2.2	9.4	0.9
Percent Asian	2.6	1.9	0.4	1.4	4.8
Percent Native Hawaiian and Other Pacific Islander	0.1	0.2	0.0	0.1	0.2
Percent Other Race	15.0	11.1	32.7	15.0	6.2
Percent Two or More Races	4.6	4.7	4.0	3.7	2.9
Percent Hispanic or Latino	46.7	36.7	80.2	46.3	16.3
Estimated Median Household Income	\$46,532	\$59,846	\$38,772	\$43,569	\$51,222
Estimated Percent of Families Living Below Poverty	12.2	6.5	16.6	14.0	10.5

Sources: USCB 2010

Note: Hispanic and Latin denote a place of origin.

in the city of Albuquerque with Kirtland Elementary School located near the intersection of Gibson Boulevard and Carlisle Boulevard being the closest. Maxwell Child Development Center is located on KAFB in the Maxwell housing area, north of the aircraft operations/maintenance area and Gibson Boulevard. There are four additional day care centers near KAFB in the city of Albuquerque: the Eastern Child Development Center, Lovelace Child Care, Happy Feet Childcare, and La Petite Academy along Gibson Boulevard (Google 2016). There are no schools or day care centers within 1/2-mile of the Proposed Action area.

3.3.8.2 Environmental Consequences

Proposed Action

Socioeconomics. Implementation of the Proposed Action is expected to result in a short-term, negligible, beneficial impact on the socioeconomic environment of the Albuquerque MSA. The number of workers who would be hired for the construction and demolition activities associated with the Proposed Action would most likely come from the existing supply within the Albuquerque MSA. Relocation of construction workers to meet the demand for the Proposed Action would not be expected as the scope of construction activities should not necessitate out-of-town workers to permanently relocate. The existing construction industry within the Albuquerque MSA should adequately provide enough workers as required for construction and demolition activities associated with the Proposed Action. The number of construction workers necessary is not large enough to outstrip the supply of the industry. Beneficial impacts would result from the increase in payroll tax revenues, purchase of materials, and purchase of goods and services in the area. No short- or long-term change in employment would result under the Proposed Action. Therefore, implementation of the Proposed Action would not be expected to result in a significant impact on the socioeconomic environment.

Environmental Justice and Protection of Children. Implementation of the Proposed Action is not expected to result in a short- or long-term impact on environmental justice or protection of children. The Albuquerque MSA contains elevated minority and low-income populations in comparison to the United States, but similar to the state of New Mexico (see **Table 3-11**). No schools or day care centers are located within 1/2-mile of the Proposed Action area. All activities associated with the Proposed Action would occur in the Flightline District on KAFB, which is a restricted access area. No minority or youth

populations would be disproportionately impacted by the Proposed Action. Therefore, implementation of the Proposed Action would not be expected to result in a significant impact on environmental justice and protection of children.

No-Action Alternative

Under the No-Action Alternative, the proposed transition to the HH-60W helicopters and the associated construction and demolitions activities would not occur and the existing conditions discussed in **Section 3.3.8.1** would continue. Implementation of the No-Action Alternative would not result in any new or additional impacts on socioeconomics or environmental justice.

CHAPTER 4 CUMULATIVE IMPACTS

In accordance with NEPA, this EA considers the overall cumulative impact of the Proposed Action and other projects that are related in terms of time or proximity. This chapter presents an analysis of the cumulative impacts of implementing the Proposed Action in combination with other past, present, and reasonably foreseeable future projects that may result in environmental impacts similar to those discussed in **Chapter 3** of this EA. Informed decision-making is served by consideration of cumulative impacts resulting from projects that are proposed, under construction, recently completed, or anticipated to be implemented. Reasonably foreseeable future projects consist of activities that have been approved and can be evaluated with regard to their impacts. The purpose of the cumulative impacts analysis is to identify those activities that may result in less than significant adverse impacts when individually examined, but collectively may result in significant adverse impacts.

CEQ defines cumulative impacts as “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 such other actions” (40 CFR §1508.7). A cumulative impact includes the combined effect on a natural resource, ecosystem, or human community that is attributable to past, present, or reasonably foreseeable future projects of federal, non-federal, public and private entities. Additionally, spatial and temporal crowding of past, present, or reasonably foreseeable future projects can result in cumulative impacts. In accordance with CEQ guidance, the current impacts of past actions are considered in aggregate as appropriate for each resource area without delving into the historical details of individual past actions.

4.1 Scope of Cumulative Analysis

The scope of the cumulative impact analysis involves both the geographic extent of the effects and the timeframe in which the effects could be expected to occur. The geographic extent of the cumulative impact analysis varies by resource area. For example, the geographic extent of biological resources, cultural resources, and geology and soils is narrow and focused on the location of the resource. In comparison, the geographic extent of air quality and noise is much broader and considers more region-wide activities. The timeframe for the cumulative impact analysis begins with initiation of the Proposed Action (FY 2017) and extends 12 years into the future. The 12-year timeframe was selected because the phase out of the existing HH-60G helicopters would be complete by this time.

4.1.1 Past Actions

Kirtland AFB has been used for military missions since the 1930s and has continuously been developed as DoD missions, organizations, needs, and strategies have evolved. Development and operation of training ranges have impacted thousands of acres with synergistic and cumulative impacts on soil, wildlife habitats, water quality, and noise. Beneficial impacts also have resulted from the operation and management of the installation including increased employment and income for Bernalillo County, the city of Albuquerque, and its surrounding communities; restoration and enhancement of sensitive resources such as Coyote Springs wetland areas; consumptive and nonconsumptive recreation opportunities; and increased knowledge of the history and pre-history of the region through numerous cultural resources surveys and studies.

4.1.2 Present and Reasonably Foreseeable Actions

Kirtland AFB is a large military installation that is continually evolving. Projects that were examined for potential cumulative impacts are included in **Table 4-1**.

Table 4-1: Present and Reasonably Foreseeable Future Projects

Project Name	Description
Military Projects	
New Military Training Activities	<p>The 210 RED HORSE Squadron (RHS) would construct a permanent laydown yard on the BEEST Area to store equipment to be used during monthly training activities. Monthly training activities involve the disturbance of up to 40 acres of ground and include the use of the abandoned dirt airstrip to practice demolishing, denying access to, and reconstructing airstrips; construction of forward operating bases to allow other units to train, with 210 RHS tearing them down; and dirt movement for heavy-equipment training. This recurring training could last up to 5 days and involve approximately 120 personnel.</p> <p>The PJ/CRO school is proposing to construct an Urban Training Complex (UTC) on 25 acres within the Coyote Canyon Training Area. The UTC would consist of the placement of connexes on a gravel base to simulate a mock village similar to those found in the Middle East. Training activities would include the following helicopter operations: pararescue and insertion/extraction. Other training activities would include small team tactics, climbing, and emergency medical. During training activities at the UTC, personnel would use smokes, ground burst simulators, trip flares, flash-bang pyrotechnics, booby trap simulators, and blanks/simunitions. When the UTC is not scheduled for use by PJ/CRO, it would be open for use by other groups. Therefore, it is anticipated that the UTC could be used on a monthly basis.</p> <p>The USAF is proposing to begin firing .50-caliber M107 Barrett sniper rifles and M2 machine guns at SAR East. An existing building located south of Forest Road (FR) 44 would be demolished in order to provide line of sight from the firing point to the target array. Approximately 240 acres would be cleared by tree removal and thinning to create firebreaks along FRs 40, 40B, 530B, and 53. SAR East would continue to be available for training operations and deployment qualification 24 hours a day, 7 days a week.</p> <p>The 377th Security Forces Group (SFG) would begin using the M583A1 parachute illumination round at the M203 Range. This round has a burst height of 500 to 700 feet above ground surface when fired vertically, a candle burn rate of approximately 40 seconds, and an average candlepower of 90,000. The average class using the illumination round would consist of 15 to 30 students, once per month. It is anticipated that an average of 250 to 500 rounds would be dispensed per year. Training would occur during early morning hours, approximately 0300 to 0500, dependent upon coordination with the FAA and air traffic scheduling. Prior to initial use of this round, firebreaks consisting of cleared paths totaling approximately 8 acres would need to be created. The cleared paths would also be used for emergency vehicle access in case of an accidental fire.</p>
Demolition and Construction of Military Support Facilities	<p>The USAF proposes to demolish and construct, operate, and maintain several military personnel support facilities in the northwestern portion of the installation. The areas include the Visiting Officer Quarters, the Main Enlisted Dormitory Campus, the Noncommissioned Officer Academy, and Dormitory Campus 2. This project would include the demolition of facilities totaling approximately 498,000 SF and construction of facilities totaling approximately 389,000 SF, resulting in a net decrease of approximately 109,000 SF of building space on the installation. Approximately 36 acres would be impacted by construction and demolition activities.</p>
Construction, Operation, and Maintenance of a New Fire Station	<p>The USAF proposes to construct, operate, and maintain a new Fire Station south of the intersection of Pennsylvania Street and Powerline Road. The proposed structure would be approximately 7,300 SF; one story, with three high-bay drive-through apparatus stalls.</p>

Table 4-1: Present and Reasonably Foreseeable Future Projects (Continued)

Project Name	Description
Military Projects (Continued)	
Additional Development, Testing, Use, and Associated Training at the Technical Evaluation Assessment Monitor Site (TEAMS)	The Defense Threat Reduction Agency and USAF propose to enhance the testing and training capabilities and use, as well as the functionality of the TEAMS. Specifically, the proposed facilities and activities include: a new radiological source storage facility, a mock train station, in-kind replacement of current TEAMS temporary buildings with permanent buildings, potential increase in testing and training event personnel levels by up to 50 percent. Approximately 2.7 acres would be affected during construction activities.
Building Demolition at KAFB	The USAF is in the process of demolishing 23 buildings totaling approximately 105,000 SF to make space available for future construction and to fulfill its mission as installation host through better site utilization. None of the buildings proposed for demolition are currently occupied or used by installation personnel.
Security Forces Complex	The USAF proposes to construct, operate, and maintain a 42,500 SF security forces complex to provide adequate space and modern facilities to house all 377 SFG administrative and support functions in a consolidated location. The 377 SFG functions that would be transferred to the new security forces complex include a base operations center with command and control facility, administration and office space, training rooms, auditorium or assembly room, guard mount, hardened armory for weapons and ammunition storage, confinement facilities, law enforcement, logistics warehouse, general storage, vehicle garage with maintenance area, and associated communications functions. One existing building (879 SF) within the footprint of the security forces complex would be demolished. This project would result in an increase of 41,621 SF of building space on the installation.
Construct New Military Working Dog (MWD) Facility	The USAF proposes to construct, operate, and maintain a new MWD facility that consists of 14 indoor/outdoor kennels, four isolation kennels, storage and staff space, restrooms, food storage room, a covered walkway, and a veterinarian examining room, totaling 8,000 SF. A parking area with 25 spaces and new access roads would also be constructed as part of the project. Demolition of facilities totaling 2,520 SF would also be included in this project, resulting in a net increase of 5,480 SF of building space on the installation.
21 st Explosive Ordnance Division (EOD) Expansion	The 21 st EOD proposes facility expansion and site improvements for the Weapons of Mass Destruction Company Complex. This unit currently operates from a 90-acre property leased by the US Army within KAFB. The current site has seven structures, six of which are substandard and do not have adequate fire protection. The 21 st EOD proposes to expand this site to a total of 280 acres, add three permanent structures totaling 40,000 SF, demolish five of the six substandard structures (75,000 SF), add two temporary storage containers, tie in to nearby utilities, construct water tanks for fire suppression, and construct several concrete pads for training activities. This project would result in a decrease of 35,000 SF of building space on the installation.
New Deployable Structures Laboratory	AFRL/RV is proposing to construct a new 4,125SF high-bay addition to the southeast corner of Building 472. Proposed new construction would include structural pads on columns and trusses for anchoring active gravity off-load support frame; high precision environmental controls (temperature and humidity with low air currents); Gantry crane; and optically-diffuse wall coatings for high precision optical motion metrology system (videogrammetry).
High Power Joint Electromagnetic Non-Kinetic Strike Laboratory	AFRL/RD is proposing to construct a 5,000 SF addition to Building 332 to include a heavy lab with shielding, a light lab, and office space to support new electromagnetics research.

Table 4-1: Present and Reasonably Foreseeable Future Projects (Continued)

Project Name	Description
Military Projects (Continued)	
Navigation Technology Satellite Integration Laboratory	AFRL/RV is proposing to construct a 10,000 SF high bay laboratory south of Building 590. The facility would contain office space; Near Field Antenna Range and control room; vault; security vestibule; restrooms; loading dock; and conference, break, storage, comm, and mechanical rooms.
Kirtland Exhaust Helium Gas Recovery Facility	AFRL/RV is proposing to construct a 3,700 SF facility between Buildings 580 and 581 to recover helium gas exhaust from experiments occurring within these buildings. The recovered gas would be reliquefied for reuse in the labs.
Enhanced Use Lease	KAFB is in the process of leasing 107 acres of USAF property along Gibson Boulevard to Thunderbird Kirtland Development Ltd. to develop a research park with office, industrial, laboratory, retail, and hospital facilities.
Wildland Fire Management Plan (WFMP)	The USAF proposes to implement the Tier 1 WFMP for KAFB. The plan includes development of a wildland fire training and certification program, funding for a wildland fire vehicle and equipment replacement program, and implementation of a fuels management program. Fuels management would reduce wildland fire hazard via prescribed fire, mechanical vegetation management, wildland fire infrastructure maintenance and development, and timber inventory monitoring.
Renewable Energy Projects	The USAF proposes to develop renewable energy projects at KAFB. The proposed project would include the installation of various renewable energy technologies installation-wide, up to a 20-megawatt solar photovoltaic array, and rooftop/carport solar photovoltaic systems.
Upgrade, Develop, and Maintain the Storm Drainage System	The USAF proposes to develop, upgrade, and maintain storm drainage systems and conduct arroyo erosion repair and damage avoiding measures across the installation. Storm drainage system activities could include constructing stormwater system upgrades and components including cleaning, regrading, ditching, trenching, trench lining, backfilling, bedding, reinforced concrete pipe, culverts, vegetation, rip-rap, drop inlets, and retention and outlet structures. Arroyo repair activities could include excavating, filling, and lining arroyo banks and constructing and repairing box culverts, bank protection, and grade control structures to assist in stabilizing the arroyo bed towards a stable slope.
Non-Military Projects	
Albuquerque International Sunport Projects	<p>The Sunport began the Terminal Improvement Project in February 2017. This project will refurbish and upgrade the ticketing, baggage claim, and exterior areas of the terminal. It is anticipated to take approximately 15 months to complete.</p> <p>Development began on Destination Sunport project in March 2017. The project will transform decommissioned Runway 17-35, approximately 80 acres, into space for aviation and aerospace businesses, high tech companies, and retail. The Aviation Center of Excellence is the centerpiece of the development, which also features "The Landing" a 10-acre strip along Gibson Boulevard that will contain retail businesses.</p> <p>Future projects planned for the Sunport over the next 20 years include rehabilitation of various runways, taxiways, and aprons; installation/expansion of aprons and taxiways; removal/closure of taxiways; construction of an Aircraft Rescue Firefighting Facility; removal of the Belly Freight Building; construction of an addition to Concourse B; and construction of a Federal Inspection Services/International Terminal.</p>

Table 4-1: Present and Reasonably Foreseeable Future Projects (Continued)

Project	Description
Non-Military Projects (Continued)	
Sunport South Business Park <i>(formerly Valle del Sol)</i>	A proposed 330-acre business park expected to attract manufacturing, fabrication, warehousing, and distribution centers. It will be multi-modal to include access to the Sunport and an active rail spur. An additional 200 acres will be reserved for bike trails and walking paths. The site is located south of the Sunport.
I-25 and Rio Bravo Interchange	The New Mexico Department of Transportation (NMDOT) is reconstructing the I-25 and Rio Bravo Interchange and the Rio Bravo roadway corridor from University to the Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) channel. Improvements include a new intersection layout at I-25/ Rio Bravo and new roadway pavement and features within the right-of-way infrastructure including multi-modal improvements.
Sunport Boulevard Extension	NMDOT has proposed an expansion project for Sunport Boulevard from Broadway Boulevard to I-25, consisting of constructing a 4-lane median divided urban arterial roadway. The roadway is approximately 1/2 miles in length and would contain twin bridges over the existing AMAFCA South Diversion Channel and twin bridges over Edmunds Street.
Valle de Oro Phase II	The USFWS is proposing to conduct restoration, development, and management activities on Valle de Oro National Wildlife Refuge in Bernalillo County. The refuge is 570 acres primarily located between 2nd Street SW and the Rio Grande in the South Valley, approximately 3.5 miles southwest of the Sunport and KAFB. Proposed activities include habitat restoration; construction of a visitor's center, a parking lot, trails, and roads; vegetation and wildlife management; construction and management of AMAFCA stormwater drainage facilities, including a swale and water quality structures; and in partnership with Mid-Rio Grande Conservancy District align the Barr Interior Drain.
Juan Tabo Hills West	Juan Tabo Hills West is Phase 4 of the Voltera Village community and sits on approximately 25 acres near Juan Tabo Boulevard and the Tijeras Arroyo. Phase 4 would consist of 250 single-family lots.
Mesa Del Sol Master Plan	Mesa del Sol is a 12,900-acre, mixed-use master planned community. It is bound by the Sunport along the northwestern edge, KAFB on the north and east, the Isleta reservation to the south, and I-25 to the west. The community would be built over 40 years and would cover 9,000 of the 12,900 acres. It is proposed to include 3,200 acres for park and open space; 4,400 acres for residential and supporting retail; 413 acres of office space; and 800 acres for schools, including university branches.

4.2 Cumulative Impact Analysis by Environmental Resource Area

The following analysis considers how the impacts of the actions in **Table 4-1** might affect, or be affected by, the Proposed Action being discussed in this EA. This analysis considers whether such a relationship would result in potentially significant cumulative impacts not identified when the Proposed Action is considered alone. **Sections 4.2.1** through **4.2.8** summarize the cumulative impacts of the past, present, and reasonably foreseeable future projects along with the Proposed Action by environmental resource.

4.2.1 Noise

Construction-related noise is temporary, while operations-related noise is considered to be low except for aviation-related activities. Cumulative noise levels are not expected to substantially change the noise contours currently experienced within the Albuquerque region and use of approved arrival and departure flight tracks would continue to control noise. Therefore, the Proposed Action, when combined with other

past, present, and reasonably foreseeable projects would not contribute to adverse cumulative impacts on the noise environment.

4.2.2 Air Quality

Activities associated with the Proposed Action would result in low levels of air emissions, well below *de minimis* threshold limits, and would not be regionally significant. Activities would be short-term and temporary in nature. BMPs, including dust suppression, stabilization of previously disturbed areas, and shutting down machinery and equipment when not in use for extended periods of time would minimize impacts. Therefore, the Proposed Action, when combined with other past, present, and reasonably foreseeable projects would not contribute to adverse cumulative impacts on air quality at KAFB or regionally.

4.2.3 Water Resources

Implementation of the Proposed Action would not increase personnel located on the installation. KAFB's annual water use (approximately 2,495 acre-feet) is well below the 6,000 acre-feet withdrawal allowed per year in the court-decreed water right. Water used for dust suppression during ground-disturbing activities associated with the Proposed Action would not result in significant impacts on groundwater availability or quality. Implementation of the Proposed Action would not impact any designated floodplains and impacts on surface waters would be controlled through implementation of the BMPs outlined in **Chapter 3**. The projects presented in **Table 4-1** would be conducted in compliance with federal, state, and local regulations as well as agency permits. Large-scale projects would require separate NPDES Permits and associated SWPPPs. Therefore, the Proposed Action, when combined with other past, present, and reasonably foreseeable projects would not contribute to adverse cumulative impacts on water resources.

4.2.4 Safety

No adverse cumulative impacts on health and safety would be expected. Adherence to health and safety plans, which follow federal, state, and local OSHA policies, at the Proposed Action area during construction and facility operation would reduce or eliminate cumulative health and safety impacts on contractors, military personnel, and the general public. The Proposed Action, when combined with other past, present, and reasonably foreseeable projects would not contribute to adverse cumulative impacts on safety.

4.2.5 Hazardous Materials and Wastes

The Proposed Action would result in an increase in the use and generation of hazardous materials and wastes; however, all materials would be handled and disposed of appropriately. BMPs outlined in **Chapter 3** would minimize impacts. The Proposed Action, as well as future projects, would incorporate measures to limit or control hazardous materials and waste into their design and operation plans. Therefore, the Proposed Action, when combined with other past, present, and reasonably foreseeable projects would not contribute to adverse cumulative impacts on hazardous materials and wastes.

4.2.6 Cultural Resources

There are no known archaeological sites within the footprint of the Proposed Action and any ground disturbing activities would take into consideration the potential for the discovery of previously undiscovered cultural resources. Although there are buildings eligible for the NRHP within the Proposed Action area, no impacts to these structures are anticipated. KAFB has recommended Building 954 be determined not eligible for the NRHP; however, should SHPO not agree with this determination, further consultation would be required and the building would not be demolished until KAFB has met all requirements set forth by SHPO. It is assumed that any cultural resources that have the potential to be impacted by the projects listed on **Table 4-1** would also be required to consult with SHPO. Therefore, the Proposed Action, when combined with other past, present, and reasonably foreseeable projects would not contribute to adverse cumulative impacts on cultural resources.

4.2.7 Infrastructure

The Proposed Action has the potential to impact the following infrastructure resources: transportation, water supply system, electrical systems, natural gas systems, and solid waste management. Upgrade of any infrastructure to support additional projects at KAFB (see **Table 4-1**) would largely result in beneficial impacts for the installation due to increased energy efficiency. The Proposed Action, when combined with other past, present, and reasonably foreseeable projects at Kirtland AFB, would not result in a significant cumulative impact on infrastructure. It is assumed that any new construction within the city of Albuquerque would meet energy-efficiency goals, thereby, reducing utility consumption in the area. Therefore, the Proposed Action, when combined with other past, present, and reasonably foreseeable projects would not contribute to adverse cumulative impacts on infrastructure.

4.2.8 Socioeconomics and Environmental Justice

Implementation of the Proposed Action would result in short-term, beneficial impacts on the region's economy through the purchase of construction materials and providing employment for construction personnel during the construction and demolition phases of the project. It is not anticipated that all of the projects listed in **Table 4-1** would occur at the same time, thereby, putting a strain on the construction industry in the area. No impacts on residential areas, population, youth, or minority or low-income families on or off the installation would occur. Therefore, the Proposed Action, when combined with other past, present, and reasonably foreseeable projects would not contribute to adverse impacts on socioeconomics and environmental justice.

4.3 Unavoidable Adverse Impacts

Unavoidable adverse impacts would result from implementation of the Proposed Action. None of these impacts would be significant.

Energy. The use of non-renewable resources is an unavoidable occurrence, although not considered significant. The Proposed Action would require the use of fossil fuels, a non-renewable natural resource, during training, construction, and maintenance activities associated with the Proposed Action.

Hazardous Materials and Waste. The use and generation of hazardous materials and wastes during construction and demolition activities would be unavoidable; however, these materials and wastes would be handled in accordance with federal, state, and local policies and would not be expected to result in significant impacts.

4.4 Compatibility of the Proposed Action with the Objectives of Federal, Regional, and Local Land Use Plans, Policies, and Controls

The Proposed Action would occur on government-owned lands and airspace within which USAF currently operates. The nature of activities for the Proposed Action would not differ from current use of these areas. The USAF would continue to follow all requirements related to helicopter operations and maintenance and would therefore be consistent with current federal, regional, state, and local land use policies and controls. Construction activities associated with the Proposed Action would not be incompatible with any current land uses on KAFB and would not conflict with any applicable off-installation land use ordinances. The Proposed Action would follow all applicable permitting, building, and safety requirements.

4.5 Relationship between Short-Term Uses and Long-Term Productivity

Short-term uses of the physical components of the local environment include direct construction-related disturbances and impacts associated with an increase in population and activity that occurs over a period of less than 5 years. Long-term uses of the local environment include those impacts occurring over a period of more than 5 years, including permanent resource loss.

Implementation of the Proposed Action would not require short-term resources uses that would result in long-term compromises of productivity. The Proposed Action would not result in intensification of land use at KAFB and the surrounding area. Implementation of the Proposed Action would not represent a significant loss of open space. Therefore, it is anticipated that the Proposed Action would not result in any cumulative impacts on land use or aesthetics.

4.6 Irreversible and Irretrievable Commitment of Resources

Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the impacts that the use of these resources will have on future generations. Irreversible impacts primarily result from use or destruction of a specific resource that cannot be replaced within a reasonable timeframe (e.g., energy and minerals). The irreversible and irretrievable commitments of resources that would result from implementation of the Proposed Action involve the consumption of material resources used for construction, energy resources, land, and human labor resources. The use of these resources is considered to be permanent.

Material Resources. Material resources used for the Proposed Action include building materials, concrete and asphalt, and various material supplies. Most of the materials that would be consumed are not in short supply, would not limit other unrelated construction activities, and would not be considered significant.

Energy Resources. Energy resources used for the Proposed Action would be irretrievably lost. This includes petroleum-based products (such as gasoline, diesel, and natural gas) and electricity. 58 SOW operations at KAFB would continue to involve the consumption of fuels in vehicles and helicopters either with or without the Proposed Action. No new flight operations and no additional student throughput are planned or anticipated at this time; therefore, transition to the HH-60W helicopter would result in no change from current conditions. During construction and demolition activities, gasoline and diesel would be used for the operation of vehicles and construction equipment. Consumption of these energy resources would not place a significant demand on their availability in the region; therefore, less than significant impacts would be expected.

Human Resources. The use of human resources for construction and demolition activities is considered an irretrievable loss only in that it would preclude such personnel from engaging in other work activities. However, the use of human resources for the Proposed Action represents employment opportunities and is considered beneficial.

1 **CHAPTER 5 INTERAGENCY/ INTERGOVERNMENTAL**
2 **COORDINATION**

3
4 In accordance with 40 CFR §1506.6, *Protection of the Environment, Public Involvement* and Executive
5 Order 13175, *Consultation and Coordination with Indian Tribal Governments*, Federal and state agencies,
6 Native American tribes, and local units of government were consulted throughout the EA development.

7
8 Details of the Early/Scoping Coordination, including the Point of Contact list and sample coordination
9 letters are provided in **Appendix A**. The Draft EA agency and public coordination details are provided in
10 **Appendix B**, including the Point of Contact List and comments received.
11

(This page intentionally left blank)

CHAPTER 6 LIST OF PREPARERS

Air Education & Training Command

Joshua Adkins
AFCEC/CZN
B.S. Biology
Years of Experience: 10

Arnold Godsey
AFMC/WIE (ISR/SOF Directorate)
B.S. Chemical Engineering
Years of Experience: 7

Kirtland Air Force Base

Melissa Clark
377 MSG/CEIE – Air Quality
B.S. Environmental Engineering
Years of Experience: 15

Martha Garcia
377 MSG/CEIEC – NEPA
B.S. Biology/Conservation
Years of Experience: 9

Michelle Bare
377 MSG/CEIEC – NEPA Contract Support
General Studies
Years of Experience: 27

AECOM Technical Services, Inc.

Keith Dewey
Project Manager
B.A. Geography
Years of Experience: 22

Dan Botto
Senior Noise Specialist / Project Manager
B.S. Aviation Business Administration
Years of Experience: 20

Dave Jury
Quality Control Specialist
B.A. Geography
Years of Experience: 28

Kim Bidle-Moore
Independent Technical Reviewer
B.S. Environmental Science
Years of Experience: 16

Edward Hubbert
Geology/Soils Specialist
B.S. Geology
Years of Experience: 18

Paul Sanford
Senior Air Quality Specialist
B.S. Environmental Science and Policy
Years of Experience: 9

Kirsten Johnson
Cultural Resources Specialist
B.A. History
M.A. Public History and US History
Years of Experience: 19

Ryan Thompson
Biological Resources Specialist
B.S. Wildlife Science
B.S. Rangeland Resources
Years of Experience: 7

(This page intentionally left blank)

CHAPTER 7 REFERENCES

AFD. 2016. Albuquerque Fire Department (AFD). 2016. *The Albuquerque Fire Department 2015 Annual Report*. Available online: <http://www.cabq.gov/fire>.

Airforce Technology 2016. HH-60W Combat Rescue Helicopter (CRH) Program Details. <http://www.airforce-technology.com/projects/hh-60w-combat-rescue-helicopter-crh/>. Website accessed 18 July 2016.

APD. 2016. Albuquerque Police Department (APD). 2016. *Albuquerque Police Department 2015 Annual Report*. Available online: <http://www.cabq.gov/police/internal-reports>.

BLS (Bureau of Labor Statistics). 2017. *Unemployment Statistics*. Available online: <http://www.bls.gov/data/>.

Clark. 2017. Personal communication from Scott Clark (AFCEC) to Martha Garcia (KAFB) regarding the current Bulk Fuels Facility numbers. 1 August 2017.

DoD (Department of Defense). 2010a. *Memorandum from Dorothy Robyn (Office of the Under Secretary of Defense) regarding DoD Implementation of Storm Water requirements under Section 438 of the Energy Independence and Security Act*. 19 January 2010. Available online: http://www.p2sustainabilitylibrary.mil/p2_documents/dusd_ie.pdf.

_____. 2010b. *United Facilities Criteria: Low Impact Development. UFC-3-210-10*. 15 November 2010. Available online: http://www.wbdg.org/ccb/DoD/UFC/ufc_3_210_10.pdf.

FAA (Federal Aviation Administration). 2011. *Final Environmental Assessment for the Proposed Runway 17-35 Closure at Albuquerque International Sunport Albuquerque, New Mexico*. October 2011.

Federal Highway Administration. 2006. *Construction Noise Handbook*. August 2006. Available online: https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/

Fisher 2017. Personal communication from Renae Fisher (AFCEC/CZN) to Joshua Adkins (AFCEC/CZN) regarding the noise analysis comparison between the HH-60G and the HH-60W. 17 February 2017.

FlightGlobal 2016. Analysis: Pave Hawk Replacement Finally Beckons for US Air Force, published February 19, 2016. <https://www.flightglobal.com/news/articles/analysis-pave-hawk-replacement-finally-beckons-for-421784/>. Website accessed 15 July 2016.

Foxtronics 2016. Fox Air 60 Air Conditioning Unit Description. <http://www.aerospecialties.com/aviation-ground-support-equipment-gse-products/pre-conditioned-air-service/air-conditioning-units/foxtronics-fox-air-60-air-conditioning-unit/>. Website accessed 19 July 2016.

GE (General Electric) 2016a. T700-401C/-701C turboshaft engine detail. <http://www.geaviation.com/sites/default/files/datasheet-T700-401C-701C.pdf>. Website accessed 18 July 2016.

_____. 2016b. T700-701D turboshaft engine detail. <http://www.geaviation.com/sites/default/files/datasheet-T700-701D.pdf>. Website accessed 18 July 2016.

Google 2016. Google map search for day care center in proximity to KAFB. Website accessed 26 August 2016.

_____. 2017. Google map search for hospitals in proximity to KAFB. Website accessed 31 July 2017.

Jacobs – Huitt-Zollars 2016. FY17 Combat Rescue Helicopter (CRH) Simulator Planning Charrette Out-Brief. MILCON Project No. 2445/MHMOV103108. KAFB, New Mexico. 09 June 2016.

KAFB (Kirtland Air Force Base). 2006. *Integrated Cultural Resources Management Plan for Kirtland Air Force Base, New Mexico*. 29 June 2006.

_____. 2010. *Hazardous Waste Treatment Facility Operating Permit EPA ID No. NM9570024423*. July 2010.

_____. 2012. *Integrated Natural Resources Management Plan For Kirtland Air Force Base (Final Year Revision-October 2012)*. October 2012.

_____. 2013. Kirtland Air Force Base History published 26 March 2013. <http://www.kirtland.af.mil/About-Us/Fact-Sheets/Display/Article/825960/kirtland-afb-history>. Website accessed 15 July 2016.

_____. 2014a. *Annual Monitoring and Maintenance Activities Report for Solid Waste Management Unit (SWMU) 6-1, Landfill 1 (LF-001); SWMU 6-2, Landfill 2 (LF-002); and SWMU 6-4, Landfills 4, 5, and 6 (LF-008) September 2014*. October 2014.

_____. 2014b. *Kirtland Air Force Base New Mexico Economic Impact Statement Fiscal Year 2014*. Available online: <http://www.kirtland.af.mil/>.

_____. 2015a. 58 SOW History published 21 January 2015. <http://www.aetc.af.mil/About/FactSheets/Display/tabid/5158/Article/562064/58th-sow-history.aspx>. Website accessed 15 July 2016.

_____. 2015b. Kirtland Air Force Base Installation Complex Encroachment Management Action Plan, 377 Air Base Wing, Kirtland Air Force Base, New Mexico, September 2015.

_____. 2015c. Hazardous Waste Management Plan, 377 Air Base Wing, Kirtland Air Force Base, New Mexico. April.

_____. 2016a. Kirtland Air Force Base Units. <http://www.kirtland.af.mil/Units>. Website accessed 15 July 2016.

_____. 2016b. Kirtland Air Force Base Installation Development Plan. 377 Air Base Wing, Kirtland Air Force Base, New Mexico. March.

_____. 2016c. *Annual Consumer Confidence Report on Drinking Water Quality. June 2016*. Available online: <http://www.kirtland.af.mil/environment.asp>.

_____. 2016d. *Final ST-070 – Oil-Water Separator, ST-219 (SWMU ST-70) Interim Measures Workplan, January 2016*. January 2016.

_____. 2017. 58 Special Operations Wing, HH-60G helicopter operational data for year 2016 provided by Major Nathan Lowery to AECOM on 25 July 2017.

Sikorsky 2016. Sikorsky a Lockheed Martin Company, UH-60M Black Hawk Helicopter, Attribute Profile. <http://www.sikorsky.com/Pages/Products/Military/BlackHawk/UH60M.aspx>. Website accessed 18 July 2016.

State of New Mexico 2009. State of New Mexico. 2009. *Title 20, Environmental Protection; Chapter 11, Albuquerque-Bernalillo County Air Quality Control Board; Part 8, Ambient Air Quality Standards*. Last updated on 14 September 2009. Available online: <http://www.nmcp.state.nm.us/nmac/parts/title20/20.011.0008.htm>.

USAF (US Air Force) 2004. HH-60G Pave Hawk Mission and Features Profile published 4 February 2004. <http://www.af.mil/AboutUs/FactSheets/Display/tabid/224/Article/104508/hh-60g-pave-hawk.aspx>. Website accessed 15 July 2016.

_____. 2014. HH-60W Combat Rescue Helicopter Announcement published 29 November 2014. <http://www.af.mil/News/ArticleDisplay/tabid/223/Article/555136/new-combat-rescue-helicopter-hh-60w-to-perform-personnel-recovery-mission.aspx>. Website accessed 15 July 2016.

_____. 2016. U.S. Air Force Civil Engineer Center. Air Conformity Applicability Model (ACAM) version 5.0.7. Accessed September 2016 at <http://aqhelp.com/acam.html>. Hosted by Solutio Environmental, Inc.

USCB (US Census Bureau). 2010. U.S. Census Bureau (USCB). 2010. *American Fact Finder*. Available online: <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>.

_____. 2010-2015. *American Fact Finder. Industry by Occupation for the Civilian Employed Population 16 Years and Over*. Available online: <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>.

USEPA (US Environmental Protection Agency) 1981a. *Noise Effects Handbook: A Desk Reference to Health and Welfare Effects of Noise*. Office of Noise Abatement and Control. October 1979. Revised July 1981. Available online: <http://nonoise.org/epa/Roll7/roll7doc27.pdf>.

_____. 1981b. *Noise and its Management*. January 1981. Available online: <http://nonoise.org/epa/Roll19/roll19doc49.pdf>.

_____. 2002. *Part 81 – Designation of Areas for Air Quality Planning Purposes – Table of Contents, Subpart B – Designation of Air Quality Control Regions, Sec. 81.83 Albuquerque – Mid Rio Grande Intrastate Air Quality Control Region*. Available online: http://edocket.access.gpo.gov/cfr_2002/julqtr/40cfr4.81.83.htm.

_____. 2009. *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act*. December 2009.

_____. 2015. *National Ambient Air Quality Standards*. Available online: <https://www3.epa.gov/ttn/naaqs/criteria.html>.

_____. GRGRP (Greenhouse Gas Reporting Program). 2013. *GRGRP 2013: Waste*. Available online: <https://www.epa.gov/ghgreporting/ghgrp-2013-waste>.

_____. and USACE (US Army Corps of Engineers). 2007a. *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States*. 5 June 2007.

_____. and USACE. 2007b. *Memorandum for Director of Civil Works and USEPA Regional Administrators. Subject: U.S. Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers (Corps) Coordination on Jurisdictional Determinations (JDs) under Clean Water Act (CWA) Section 404 in Light of the SWANCC and Rapanos Supreme Court Decisions*. 5 June 2007.

_____. and USACE. 2008. *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States*. 2 December 2008.

USGS (US Geologic Survey). 2016. USGS National Hydrography Dataset, <ftp://rockyftp.cr.usgs.gov/vdelivery/Datasets/Staged/Hydrography/NHD/State/HighResolution/Shape/>. Website accessed 30 August 2016.

Van Citters, Karen, and Kristen Bisson. 2003. National Register of Historic Places Historic Context and Evaluation for Kirtland Air Force Base, Albuquerque, New Mexico. Van Citters: Historic Preservation, LLC, Albuquerque, New Mexico.

Wheelock. 2017. Personal communication from Katrina Wheelock (KAFB) to Martha Garcia (KAFB) regarding the current solid waste numbers. 20 July 2017.

(This page intentionally left blank)

Appendix A Interagency and Intergovernmental Coordination/Consultations

This Appendix contains the Points of Contact for the Scoping IICEP consultation and a sample letter provided to each group

(This page intentionally left blank)

PERSONS AND AGENCIES CONSULTED/ COORDINATED

Early Notification Points of Contact

Federal Agencies/Officials

Dr. Benjamin Tuggle
Regional Director US Fish & Wildlife Service
Southwest Regional Office
PO Box 1306
Albuquerque, NM 87103-1306

Mr. Bill Walker
Regional Director Bureau of Indian Affairs
Southwest Regional Office
1001 Indian School Road NW
Albuquerque, NM 87104

Ms. Danita Burns
District Manager Bureau of Land Management
New Mexico State Office
Albuquerque District Office
Pan American Building
100 Sun Avenue NE, Suite 330
Albuquerque, NM 87109-4676

Mr. Kelvin L. Solco
Regional Administrator
Federal Aviation Administration
Southwest Region
10101 Hillwood Parkway
Fort Worth, TX 76177-1524

Ms. Pearl Armijo
District Conservationist
Natural Resources Conservation Service
Los Lunas Service Center
2600 Palmilla Road
Los Lunas, NM 87031

Mr. George MacDonnell
Chief of Environmental Resources Section
US Army Corps of Engineers
4101 Jefferson Plaza NE
Albuquerque, NM 87109

Mr. Samuel Coleman, P.E.
Regional Administrator
US Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Ms. Peg Sorenson
Southwestern Region NEPA Coordinator
US Forest Service Ecosystem Analysis and
Planning, Watershed, and Air Management
333 Broadway Boulevard SE
Albuquerque, NM 87102-3407

Ms. Susan Lacy
Department of Energy/National Nuclear Security
Administration
Sandia Field Office
PO Box 5400
Albuquerque, NM 87187

Mr. John Weckerle
Department of Energy/National Nuclear Security
Administration
Office of General Counsel
PO Box 5400
Albuquerque, NM 87187

The Honorable Martin Heinrich
US Senate
400 Gold Avenue SW, Suite 1080
Albuquerque, NM 87102

The Honorable Tom Udall
US Senate
219 Central Avenue NW, Suite 210
Albuquerque, NM 87102

The Honorable Steve Pearce
US House of Representatives
3445 Lambros Loop NE
Los Lunas, NM 87301

The Honorable Michelle Lujan Grisham
US House of Representatives
400 Gold Avenue SW, Suite 680
Albuquerque, NM 87102

The Honorable Ben R. Lujan
US House of Representatives
1611 Calle Lorca, Suite A
Santa Fe, NM 87505

State Agencies/Officials

Dr. Jeff Pappas, PhD.
State Historic Preservation Officer and Director
New Mexico Historic Preservation Division
Department of Cultural Affairs
Bataan Memorial Building
407 Galisteo Street, Suite 236
Santa Fe, NM 87501

Mr. Aubrey Dunn
Commissioner of Public Lands
New Mexico State Land Office
310 Old Santa Fe Trail
Santa Fe, NM 87501

Mr. Matt Wunder
Chief Conservation Services
New Mexico Department of Game and Fish
PO Box 25112
Santa Fe, NM 87504

Mr. Clyde Ward
Assistant Commissioner for Commercial
Resources
New Mexico State Land Office
PO Box 1148
Santa Fe, NM 87504

Mr. Jennifer L. Hower
Office of General Counsel & Environmental Policy
New Mexico Environment Department
1190 St. Francis Drive, Suite N4050
Santa Fe, NM 87505

Mr. Jeff M. Witte
Director/Secretary
New Mexico Department of Agriculture
3190 S. Espina
Las Cruces, NM 88003

Mr. Ken McQueen
Secretary New Mexico Energy, Minerals and
Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

Local Agencies/Officials

Development Management/Department Director
Bernalillo County Planning Section
111 Union Square SE, Suite 100
Albuquerque, NM 87102

Department Director
City of Albuquerque Planning Department
PO Box 1293
Albuquerque, NM 87103

Board of Directors
Mid-Region Council of Governments
809 Copper Avenue NW
Albuquerque, NM 87102

Ms. Julie Morgas Baca
Bernalillo County Manager
Bernalillo County Manager's Office
One Civic Plaza NW, 10th Floor
Albuquerque, NM 87102

Ms. Rhiannon Samuel
Director of Communications
City of Albuquerque Office of the Mayor
One Civic Plaza NW, 11th Floor
Albuquerque, NM 87102

Bernalillo County Board of Commissioners
One Civic Plaza NW
10th Floor, Room 10111
Albuquerque, NM 87102

Albuquerque City Council
One Civic Plaza NW
9th Floor - Suite 9087
Albuquerque, NM 87102

Tribal Entities

Governor Kurt Riley
Pueblo of Acoma
PO Box 309
Acoma, NM 87034

Governor Eugene Herrera
Pueblo of Cochiti
PO Box 70
Cochiti Pueblo, NM 87072

Chairman Herman G. Honanie
Hopi Tribal Council
PO Box 123
Kykotsmovi, AZ 86039

Governor J. Robert Benevides
Pueblo of Isleta
PO Box 1290
Isleta Pueblo, NM 87022

Governor Joseph A. Toya
Pueblo of Jemez
PO Box 100
Jemez Pueblo, NM 87024

President Wainwright Velarde
Jicarilla Apache Nation
PO Box 507
Dulce, NM 87528

Governor Virgil A. Siow
Pueblo of Laguna
PO Box 194
Laguna Pueblo, NM 87026

President Danny H. Breuninger, Sr.
Mescalero Apache Tribe
PO Box 227
Mescalero, NM 88340

Governor Phillip A. Perez
Pueblo of Nambe
Route 1 Box 117-BB
Santa Fe, NM 87506

President Russell Begaye
Navajo Nation
PO Box 7440
Window Rock, AZ 86515

Governor Peter Garcia, Jr.
Ohkay Owingeh Pueblo
PO Box 1099
San Juan Pueblo, NM 87566

Governor Craig Quanchello
Pueblo of Picuris
PO Box 127
Peñasco, NM 87553

Governor Joseph M. Talachy
Pueblo of Pojoaque
78 Cities of Gold Road
Santa Fe, NM 87506

Governor Malcom Montoya
Pueblo of Sandia
481 Sandia Loop
Bernalillo, NM 87004

Governor Anthony Ortiz
Pueblo of San Felipe
PO Box 4339
San Felipe Pueblo, NM 87001

Governor James R. Mountain
Pueblo of San Ildefonso
02 Tunyo Po
Santa Fe, NM 87506

Governor Lawrence Montoya
Pueblo of Santa Ana
2 Dove Road
Santa Ana Pueblo, NM 87004

Governor J. Michael Chavarria
Pueblo of Santa Clara
PO Box 580
Española, NM 87532

Governor Brian Coriz
Pueblo of Santo Domingo
PO Box 99
Santo Domingo Pueblo, NM 87052

Governor Ruben Romero
Pueblo of Taos
PO Box 1846
Taos, NM 87571

Governor Mark Mitchell
Pueblo of Tesuque
Route 42 Box 360-T
Santa Fe, NM 87506

Chairman Ronnie Lupe
White Mountain Apache Tribe
PO Box 700
Whiteriver, AZ 85941

Governor Carlos Hisa
Ysleta del Sur Pueblo
117 S. Old Pueblo Road
PO Box 17579
El Paso, TX 79907

Governor Carl B. Schildt
Pueblo of Zia
135 Capitol Square Drive
Zia Pueblo, NM 87053-6013

Governor Val Panteah, Sr.
Pueblo of Zuni
PO Box 339
Zuni, NM 87327

Chairman E. Paul Torres
All Pueblo Council of Governors
2401 12th Street NW
Albuquerque, NM 87103

Executive Director Joshua Madalena
Five Sandoval Indian Pueblos, Inc.
4321-B Fulcrum Way NE
Rio Rancho, NM 87144

Executive Director Gilbert Vigil
Eight Northern Indian Pueblos Council
327 Eagle Drive
PO Box 969
Ohkay Owingeh, NM 87566

Speaker Pro Tem LoRenzo Bates
23rd Navajo Nation Council, Office of the Speaker
PO Box 3390
Window Rock, AZ 86515

Sample Interagency and Intergovernmental Coordination Letters

(This page intentionally left blank)



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 377TH AIR BASE WING (AFGSC)

4

5

6 Colonel Dawn A. Nickell
7 377ABW/CC
8 2000 Wyoming Blvd SE Suite E-3
9 Kirtland AFB NM 87117-5000

10

11

12 «Salutation» «First_Name» «Last_Name»

13 «Title»

14 «AgencyOrganization»

15 «Address_1»

16 «Address_2»

17 «City», «State» «Zip_Code»

18

19 Dear «Title» «Last_Name»

20

21 In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council
22 on Environmental Quality regulations, and the U.S. Air Force (USAF) NEPA regulations, the
23 USAF is preparing an Environmental Assessment (EA) to evaluate the replacement of 12 existing
24 HH-60G Combat Rescue Helicopters (CRH) with 14 new HH-60W CRH that are used by the 58
25 Special Operations Wing (SOW) at Kirtland Air Force Base (AFB), New Mexico. These
26 helicopters are used to train aircrews for special operations and Combat Search and Rescue
27 (CSAR) missions in multiple environments (e.g., mountains, desert, forests, etc.). The proposed
28 action contains eight dependent components required in support of the new HH-60W helicopters
29 that will be evaluated in the EA document. The dependent components are: installation of
30 helicopter restriping between Hangars 1001 and 1002 to provide flexibility in parking additional
31 helicopters and alleviating apron area congestion; installation of ground mooring points north of
32 Hangar 1002 for existing C-130J fixed-wing aircraft; demolition of Buildings 954 (7,343 square
33 feet), 960 (1,200 square feet), and a BBQ Pavilion (600 square feet) to accommodate construction
34 of an 11,000 square feet (5,500 square feet per level) addition to Building 957 for office/training
35 uses; construction of a new 36,164 square feet training facility to accommodate the HH-60W
36 helicopter flight simulators for aircrew training; construction of new personnel parking north and
37 east of existing Building 957 (see Attachment); and the widening of a pedestrian sidewalk
38 between the new flight simulator building and Building 948. Collectively, these eight dependent
39 components constitute the Proposed Action that will be evaluated in the EA document. The
40 USAF anticipates all parts of the Proposed Action be complete by Fiscal Year (FY) 2029, with
41 the first new HH-60W CRH arriving at the base in FY 2020/2021. The related facility
42 components of the Proposed Action will be finished by FY 2020/2021.

43

44 In year 2015, the 58 SOW at Kirtland AFB conducted 1,570 helicopter flights to the areas
45 in which it operates using existing HH-60G helicopters. The number of students, training
46 personnel, and flight operations will not change in response to the Proposed Action. The

47 helicopter flight approach and flight departure tracks to and from Kirtland AFB would also
48 remain unchanged.

49
50 The purpose of the Proposed Action is to improve the overall efficiency of the CRH
51 special operations and CSAR missions conducted by the 58 SOW. The need for the Proposed
52 Action is to address increased helicopter maintenance costs, resolve reliability deficiencies and
53 enhance mission capability, improve training of military personnel, as well as maintain tactical
54 superiority in operations of the 58 SOW that could be compromised by the continued use of the
55 existing HH-60G helicopters. Transitioning to new HH-60W CRH would keep the special
56 operations and CSAR training missions viable into the foreseeable future.

57
58 Kirtland AFB is considered the prime location for the CRH transition due to the fact that
59 search and rescue training is currently conducted by the 58 SOW. Keeping the new helicopters
60 (HH-60W) co-located with the existing training assets would maintain a training synergy for the
61 USAF. Separating the HH-60W from the existing training assets would greatly reduce
62 effectiveness and increase training costs. Further, the helicopter/aircraft maintenance personnel
63 and logistics lines are already in place at Kirtland AFB with the 58 SOW. Further, Kirtland AFB
64 is considered the prime location for the CRH transition due to the availability of existing
65 helicopter training landing zones in multiple areas (e.g., mountainous, desert, high density
66 altitude, forests, etc.). Kirtland AFB has established helicopter aerial refueling tracks, weapons
67 ranges, drop zones, low-level training routes, and installation entry and exit procedures. These
68 established areas provide needed training for USAF personnel, and would need to be re-
69 established elsewhere if the CRH transition does not occur at Kirtland AFB.

70
71 If you have additional information regarding impacts of the Proposed Action on the
72 natural environment or other environmental aspects of which we are unaware, we would
73 appreciate receiving such information for inclusion and consideration during the NEPA
74 compliance process. A copy of the Final Description of the Proposed Action and Alternatives for
75 the CRH Transition EA at Kirtland AFB is available at <http://www.kirtland.af.mil> under the
76 environmental issues tab. We look forward to and welcome your participation in this process.
77 Please respond within 30 days of receipt of this letter to ensure your concerns are adequately
78 addressed in the EA.

79
80 Please send your written responses to the NEPA Program Manager, 377 MSG/CEIEC,
81 2050 Wyoming Boulevard SE, Suite 116, Kirtland AFB, NM 87117 or via email to
82 KirtlandNEPA@us.af.mil.

83
84 Sincerely

85
86
87
88
89
90 Colonel Dawn A. Nickell, USAF
91 Vice Commander, 377th Air Base Wing

92
93 Attachment:



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 377TH AIR BASE WING (AFGSC)

Colonel Dawn A. Nickell
377ABW/CC
2000 Wyoming Blvd SE Suite E-3
Kirtland AFB NM 87117-5000

«Prefix»«First_»«Last»
«Title»
«Organization_Name»
«Address1», «Address2»
«City», «State» «Zip»

Dear «Prefix» «Last»

As set forth in the Kirtland Air Force Base (AFB) – New Mexico State Land Office Joint Land Use Study Memorandum of Understanding, and as required by the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations, and the U.S. Air Force (USAF) NEPA regulations, the USAF is preparing an Environmental Assessment (EA) to evaluate the replacement of 12 existing HH-60G Combat Rescue Helicopters (CRH) with 14 new HH-60W CRH that are used by the 58 Special Operations Wing (SOW) at Kirtland Air Force Base (AFB), New Mexico. These helicopters are used to train aircrews for special operations and Combat Search and Rescue (CSAR) missions in multiple environments (e.g., mountains, desert, forests, etc.). The proposed action contains eight dependent components required in support of the new HH-60W helicopters that will be evaluated in the EA document. The dependent components are: installation of helicopter restriping between Hangars 1001 and 1002 to provide flexibility in parking additional helicopters and alleviating apron area congestion; installation of ground mooring points north of Hangar 1002 for existing C-130J fixed-wing aircraft; demolition of Buildings 954 (7,343 square feet), 960 (1,200 square feet), and a BBQ Pavilion (600 square feet) to accommodate construction of an 11,000 square feet (5,500 square feet per level) addition to Building 957 for office/training uses; construction of a new 36,164 square feet training facility to accommodate the HH-60W helicopter flight simulators for aircrew training; construction of new personnel parking north and east of existing Building 957 (see Attachment); and the widening of a pedestrian sidewalk between the new flight simulator building and Building 948. Collectively, these eight dependent components constitute the Proposed Action that will be evaluated in the EA document. The USAF anticipates all parts of the Proposed Action be complete by Fiscal Year (FY) 2029, with the first new HH-60W CRH arriving at the base in FY 2020/2021. The related facility components of the Proposed Action will be finished by FY 2020/2021.

In year 2015, the 58 SOW at Kirtland AFB conducted 1,570 helicopter flights to the areas in which it operates using existing HH-60G helicopters. The number of students, training personnel,

and flight operations will not change in response to the Proposed Action. The helicopter flight approach and flight departure tracks to and from Kirtland AFB would also remain unchanged.

The purpose of the Proposed Action is to improve the overall efficiency of the CRH special operations and CSAR missions conducted by the 58 SOW. The need for the Proposed Action is to address increased helicopter maintenance costs, resolve reliability deficiencies and enhance mission capability, improve training of military personnel, as well as maintain tactical superiority in operations of the 58 SOW that could be compromised by the continued use of the existing HH-60G helicopters. Transitioning to new HH-60W CRH would keep the special operations and CSAR training missions viable into the foreseeable future.

Kirtland AFB is considered the prime location for the CRH transition due to the fact that search and rescue training is currently conducted by the 58 SOW. Keeping the new helicopters (HH-60W) co-located with the existing training assets would maintain a training synergy for the USAF. Separating the HH-60W from the existing training assets would greatly reduce effectiveness and increase training costs. Further, the helicopter/aircraft maintenance personnel and logistics lines are already in place at Kirtland AFB with the 58 SOW. Further, Kirtland AFB is considered the prime location for the CRH transition due to the availability of existing helicopter training landing zones in multiple areas (e.g., mountainous, desert, high density altitude, forests, etc.). Kirtland AFB has established helicopter aerial refueling tracks, weapons ranges, drop zones, low-level training routes, and installation entry and exit procedures. These established areas provide needed training for USAF personnel, and would need to be re-established elsewhere if the CRH transition does not occur at Kirtland AFB.

If you have additional information regarding impacts of the Proposed Action on the natural environment or other environmental aspects of which we are unaware, we would appreciate receiving such information for inclusion and consideration during the NEPA compliance process. A copy of the Final Description of the Proposed Action and Alternatives for the CRH Transition EA at Kirtland AFB is available at <http://www.kirtland.af.mil> under the environmental issues tab. We look forward to and welcome your participation in this process. Please respond within 30 days of receipt of this letter to ensure your concerns are adequately addressed in the EA.

Please send your written responses to the NEPA Program Manager, 377 MSG/CEIEC, 2050 Wyoming Boulevard SE, Suite 116, Kirtland AFB, NM 87117 or via email to KirtlandNEPA@us.af.mil.

Sincerely

Colonel Dawn A. Nickell, USAF
Vice Commander, 377th Air Base Wing

Attachment:



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 377TH AIR BASE WING (AFGSC)

Colonel Dawn A. Nickell
377ABW/CC
2000 Wyoming Blvd SE Suite E-3
Kirtland AFB NM 87117-5000

«Prefix» «First_» «Last»
«Title»
«Address1»
«Address2»
«City», «State» «Zip»

Dear «Prefix»«Last»

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations, and the U.S. Air Force (USAF) NEPA regulations, the USAF is preparing an Environmental Assessment (EA) to evaluate the replacement of 12 existing HH-60G Combat Rescue Helicopters (CRH) with 14 new HH-60W CRH that are used by the 58 Special Operations Wing (SOW) at Kirtland Air Force Base (AFB), New Mexico. These helicopters are used to train aircrews for special operations and Combat Search and Rescue (CSAR) missions in multiple environments (e.g., mountains, desert, forests, etc.). The proposed action contains eight dependent components required in support of the new HH-60W helicopters that will be evaluated in the EA document. The dependent components are: installation of helicopter restriping between Hangars 1001 and 1002 to provide flexibility in parking additional helicopters and alleviating apron area congestion; installation of ground mooring points north of Hangar 1002 for existing C-130J fixed-wing aircraft; demolition of Buildings 954 (7,343 square feet), 960 (1,200 square feet), and a BBQ Pavilion (600 square feet) to accommodate construction of an 11,000 square feet (5,500 square feet per level) addition to Building 957 for office/training uses; construction of a new 36,164 square feet training facility to accommodate the HH-60W helicopter flight simulators for aircrew training; construction of new personnel parking north and east of existing Building 957 (see Attachment); and the widening of a pedestrian sidewalk between the new flight simulator building and Building 948. Collectively, these eight dependent components constitute the Proposed Action that will be evaluated in the EA document. The USAF anticipates all parts of the Proposed Action be complete by Fiscal Year (FY) 2029, with the first new HH-60W CRH arriving at the base in FY 2020/2021. The related facility components of the Proposed Action will be finished by FY 2020/2021.

In year 2015, the 58 SOW at Kirtland AFB conducted 1,570 helicopter flights to the areas in which it operates using existing HH-60G helicopters. The number of students, training personnel, and flight operations will not change in response to the Proposed Action. The

helicopter flight approach and flight departure tracks to and from Kirtland AFB would also remain unchanged.

The purpose of the Proposed Action is to improve the overall efficiency of the CRH special operations and CSAR missions conducted by the 58 SOW. The need for the Proposed Action is to address increased helicopter maintenance costs, resolve reliability deficiencies and enhance mission capability, improve training of military personnel, as well as maintain tactical superiority in operations of the 58 SOW that could be compromised by the continued use of the existing HH-60G helicopters. Transitioning to new HH-60W CRH would keep the special operations and CSAR training missions viable into the foreseeable future.

Kirtland AFB is considered the prime location for the CRH transition due to the fact that search and rescue training is currently conducted by the 58 SOW. Keeping the new helicopters (HH-60W) co-located with the existing training assets would maintain a training synergy for the USAF. Separating the HH-60W from the existing training assets would greatly reduce effectiveness and increase training costs. Further, the helicopter/aircraft maintenance personnel and logistics lines are already in place at Kirtland AFB with the 58 SOW. Further, Kirtland AFB is considered the prime location for the CRH transition due to the availability of existing helicopter training landing zones in multiple areas (e.g., mountainous, desert, high density altitude, forests, etc.). Kirtland AFB has established helicopter aerial refueling tracks, weapons ranges, drop zones, low-level training routes, and installation entry and exit procedures. These established areas provide needed training for USAF personnel, and would need to be re-established elsewhere if the CRH transition does not occur at Kirtland AFB.

Pursuant to Section 106 of the National Historic Preservation Act (36 Code of Federal Regulations Part 800), the USAF would like to initiate consultation concerning the Proposed Action to allow you the opportunity to identify any comments, concerns, and/or suggestions you might have. A copy of the Final Description of the Proposed Action and Alternatives for the CRH Transition EA at Kirtland AFB is available at <http://www.kirtland.af.mil> under the environmental issues tab. As we move forward through this process, we welcome your participation and input.

Please contact my office at (505) 846-7377 if you would like to meet to discuss the Proposed Action and/or proceed with the Section 106 consultation.

Sincerely

Colonel Dawn A. Nickell, USAF
Vice Commander, 377th Air Base Wing

Attachment:



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 377TH AIR BASE WING (AFGSC)

Colonel Dawn A. Nickell
377ABW/CC
2000 Wyoming Blvd SE Suite E-3
Kirtland AFB NM 87117-5000

«PrefixSalutation»«First_Name»«Last_Name»
«AgencyOrganization»
«Address_1»
«City», «State» «Zip_Code»

Dear «PrefixSalutation» «Last_Name»

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations, and the U.S. Air Force (USAF) NEPA regulations, the USAF is preparing an Environmental Assessment (EA) to evaluate the replacement of 12 existing HH-60G Combat Rescue Helicopters (CRH) with 14 new HH-60W CRH that are used by the 58 Special Operations Wing (SOW) at Kirtland Air Force Base (AFB), New Mexico. These helicopters are used to train aircrews for special operations and Combat Search and Rescue (CSAR) missions in multiple environments (e.g., mountains, desert, forests, etc.). The proposed action contains eight dependent components required in support of the new HH-60W helicopters that will be evaluated in the EA document. The dependent components are: installation of helicopter restriping between Hangars 1001 and 1002 to provide flexibility in parking additional helicopters and alleviating apron area congestion; installation of ground mooring points north of Hangar 1002 for existing C-130J fixed-wing aircraft; demolition of Buildings 954 (7,343 square feet), 960 (1,200 square feet), and a BBQ Pavilion (600 square feet) to accommodate construction of an 11,000 square feet (5,500 square feet per level) addition to Building 957 for office/training uses; construction of a new 36,164 square foot training facility to accommodate the HH-60W helicopter flight simulators for aircrew training; construction of new personnel parking north and east of existing Building 957 (see Attachment); and the widening of a pedestrian sidewalk between the new flight simulator building and Building 948. Collectively, these eight dependent components constitute the Proposed Action that will be evaluated in the EA document. The USAF anticipates all parts of the Proposed Action be complete by Fiscal Year (FY) 2029, with the first new HH-60W CRH arriving at the base in FY 2020/2021. The related facility components of the Proposed Action will be finished by FY 2020/2021.

In year 2015, the 58 SOW at Kirtland AFB conducted 1,570 helicopter flights to the areas in which it operates using existing HH-60G helicopters. The number of students, training personnel, and flight operations will not change in response to the Proposed Action. The helicopter flight approach and flight departure tracks to and from Kirtland AFB would also remain unchanged.

The purpose of the Proposed Action is to improve the overall efficiency of the CRH special operations and CSAR missions conducted by the 58 SOW. The need for the Proposed Action is to address increased helicopter maintenance costs, resolve reliability deficiencies and enhance mission capability, improve training of military personnel, as well as maintain tactical superiority in operations of the 58 SOW that could be compromised by the continued use of the existing HH-60G helicopters. Transitioning to new HH-60W CRH would keep the special operations and CSAR training missions viable into the foreseeable future.

Kirtland AFB is considered the prime location for the CRH transition due to the fact that search and rescue training is currently conducted by the 58 SOW. Keeping the new helicopters (HH-60W) co-located with the existing training assets would maintain a training synergy for the USAF. Separating the HH-60W from the existing training assets would greatly reduce effectiveness and increase training costs. Further, the helicopter/aircraft maintenance personnel and logistics lines are already in place at Kirtland AFB with the 58 SOW. Further, Kirtland AFB is considered the prime location for the CRH transition due to the availability of existing helicopter training landing zones in multiple areas (e.g., mountainous, desert, high density altitude, forests, etc.). Kirtland AFB has established helicopter aerial refueling tracks, weapons ranges, drop zones, low-level training routes, and installation entry and exit procedures. These established areas provide needed training for USAF personnel, and would need to be re-established elsewhere if the CRH transition does not occur at Kirtland AFB.

Pursuant to Section 106 of the National Historic Preservation Act (36 Code of Federal Regulations Part 800) and Executive Order 13175 Consultation and Coordination With Indian Tribal Governments, the USAF would like to initiate government-to-government consultation to allow you, or your designee, the opportunity to identify any comments, concerns, and/or suggestions relevant to the NEPA compliance process concerning the Proposed Action. A copy of the Final Description of the Proposed Action and Alternatives for the CRH Transition EA at Kirtland AFB is available at <http://www.kirtland.af.mil> under the environmental issues tab. As we move forward through this process, we welcome your participation and input.

Please contact my office at (505) 846-7377 if you would like to meet to discuss the proposed project and/or proceed with the Section 106 consultation.

Sincerely

Colonel Dawn A. Nickell, USAF
Vice Commander, 377th Air Base Wing

Attachment:



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 377TH AIR BASE WING (AFGSC)

4

5

6 Colonel Dawn A. Nickell
7 377ABW/CC
8 2000 Wyoming Blvd SE Suite E-3
9 Kirtland AFB NM 87117-5000

10

11 «Prefix» «First_» «Last»

12 «Title»

13 «Organization_Name»

14 «Address1»

15 «Address2»

16 «City», «State» «Zip»

17

18 Dear «Prefix» «Last»

19

20 In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council
21 on Environmental Quality regulations, and the U.S. Air Force (USAF) NEPA regulations, the
22 USAF is preparing an Environmental Assessment (EA) to evaluate the replacement of 12 existing
23 HH-60G Combat Rescue Helicopters (CRH) with 14 new HH-60W CRH that are used by the 58
24 Special Operations Wing (SOW) at Kirtland Air Force Base (AFB), New Mexico. These
25 helicopters are used to train aircrews for special operations and Combat Search and Rescue
26 (CSAR) missions in multiple environments (e.g., mountains, desert, forests, etc.). The proposed
27 action contains eight dependent components required in support of the new HH-60W helicopters
28 that will be evaluated in the EA document. The dependent components are: installation of
29 helicopter restriping between Hangars 1001 and 1002 to provide flexibility in parking additional
30 helicopters and alleviating apron area congestion; installation of ground mooring points north of
31 Hangar 1002 for existing C-130J fixed-wing aircraft; demolition of Buildings 954 (7,343 square
32 feet), 960 (1,200 square feet), and a BBQ Pavilion (600 square feet) to accommodate construction
33 of an 11,000 square feet (5,500 square feet per level) addition to Building 957 for office/training
34 uses; construction of a new 36,164 square feet training facility to accommodate the HH-60W
35 helicopter flight simulators for aircrew training; construction of new personnel parking north and
36 east of existing Building 957 (see Attachment); and the widening of a pedestrian sidewalk
37 between the new flight simulator building and Building 948. Collectively, these eight dependent
38 components constitute the Proposed Action that will be evaluated in the EA document. The
39 USAF anticipates all parts of the Proposed Action be complete by Fiscal Year (FY) 2029, with
40 the first new HH-60W CRH arriving at the base in FY 2020/2021. The related facility
41 components of the Proposed Action will be finished by FY 2020/2021.

42

43 In year 2015, the 58 SOW at Kirtland AFB conducted 1,570 helicopter flights to the areas
44 in which it operates using existing HH-60G helicopters. The number of students, training
45 personnel, and flight operations will not change in response to the Proposed Action. The
46 helicopter flight approach and flight departure tracks to and from Kirtland AFB would also
47 remain unchanged.

48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92

The purpose of the Proposed Action is to improve the overall efficiency of the CRH special operations and CSAR missions conducted by the 58 SOW. The need for the Proposed Action is to address increased helicopter maintenance costs, resolve reliability deficiencies and enhance mission capability, improve training of military personnel, as well as maintain tactical superiority in operations of the 58 SOW that could be compromised by the continued use of the existing HH-60G helicopters. Transitioning to new HH-60W CRH would keep the special operations and CSAR training missions viable into the foreseeable future.

Kirtland AFB is considered the prime location for the CRH transition due to the fact that search and rescue training is currently conducted by the 58 SOW. Keeping the new helicopters (HH-60W) co-located with the existing training assets would maintain a training synergy for the USAF. Separating the HH-60W from the existing training assets would greatly reduce effectiveness and increase training costs. Further, the helicopter/aircraft maintenance personnel and logistics lines are already in place at Kirtland AFB with the 58 SOW. Further, Kirtland AFB is considered the prime location for the CRH transition due to the availability of existing helicopter training landing zones in multiple areas (e.g., mountainous, desert, high density altitude, forests, etc.). Kirtland AFB has established helicopter aerial refueling tracks, weapons ranges, drop zones, low-level training routes, and installation entry and exit procedures. These established areas provide needed training for USAF personnel, and would need to be re-established elsewhere if the CRH transition does not occur at Kirtland AFB.

If you have additional information regarding impacts of the Proposed Action on the natural environment or other environmental aspects of which we are unaware, we would appreciate receiving such information for inclusion and consideration during the NEPA compliance process. A copy of the Final Description of the Proposed Action and Alternatives for the CRH Transition EA at Kirtland AFB is available at <http://www.kirtland.af.mil> under the environmental issues tab. We look forward to and welcome your participation in this process. Please respond within 30 days of receipt of this letter to ensure your concerns are adequately addressed in the EA.

Please send your written responses to the NEPA Program Manager, 377 MSG/CEIEC, 2050 Wyoming Boulevard SE, Suite 116, Kirtland AFB, NM 87117 or via email to KirtlandNEPA@us.af.mil.

Sincerely

Colonel Dawn A. Nickell, USAF
Vice Commander, 377th Air Base Wing

Attachment:

Interagency and Intergovernmental Responses

(This page intentionally left blank)

GOVERNOR
Susana Martinez



DIRECTOR AND SECRETARY
TO THE COMMISSION
Alexandra Sandoval

DEPUTY DIRECTOR
Donald L. Jaramillo

STATE OF NEW MEXICO
DEPARTMENT OF GAME & FISH

One Wildlife Way, Santa Fe, NM 87507
Post Office Box 25112, Santa Fe, NM 87504
Tel: (505) 476-8000 | Fax: (505) 476-8123
For information call: (888) 248-6866

www.wildlife.state.nm.us

STATE GAME COMMISSION

PAUL M. KIENZLE III
Chairman
Albuquerque
BILL MONTOYA
Vice-Chairman
Alto
ROBERT ESPINOZA, SR.
Farmington
RALPH RAMOS
Las Cruces
BOB RICKLEFS
Cimarron
ELIZABETH A. RYAN
Roswell
THOMAS "DICK" SALOPEK
Las Cruces

22 February 2017

NEPA Program Manager
377 MSG/CEIEC
2050 Wyoming Blvd. SE, Suite 116
Kirtland AFB NM 87117

**Re: Kirtland AFB Helicopter Replacement Environmental Assessment Scoping;
NMDGF No. 17570**

Dear Sirs:

The Department of Game and Fish (Department) has reviewed your 9 February 2017 scoping letter regarding the above-referenced project.

The Department requests that the environmental assessment analyze: 1) whether or not bats occur in the buildings that will be demolished, and necessary conservation actions to eliminate bat mortality if they are present; and 2) whether or not burrowing owls (*Athene cunicularia*) and/or Gunnison's prairie dogs (*Cynomys gunnisoni*) are found where new building construction is planned, and necessary conservation actions to reduce or eliminate mortality if those species do occur.

We appreciate the opportunity to comment on this project. Should you have any questions regarding our comments, please contact Mark Watson, Terrestrial Habitat Specialist, at (505) 476-8115, or mark.watson@state.nm.us.

Sincerely,

Matt Wunder, Ph.D.
Chief, Ecological and Environmental Planning Division

CC: USFWS NMES Field Office



Herman G. Honanie
CHAIRMAN

Alfred Lomahquahu Jr.
VICE-CHAIRMAN

March 13, 2017

Colonel Dawn A. Nickell, Vice Commander
Department of the Air Force 377ABW/CC
2000 Wyoming Blvd. SE Suite E-3
Kirtland Air Force Base, New Mexico 87117-5000

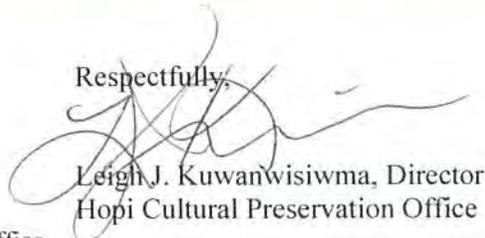
Dear Colonel Nickell,

This letter is in response to your correspondence dated February 9, 2017, regarding the United States Air Force preparing an environmental Assessment to evaluate the replacement of 12 existing HH-60G Combat Rescue Helicopters with 14 new HH-60W Combat Rescue Helicopters that are used at Kirtland Air Force Base. The Hopi Tribe claims cultural affiliation to earlier identifiable cultural groups in New Mexico. The Hopi Cultural Preservation Office supports the identification and avoidance of our ancestral sites, and we consider the prehistoric archaeological sites of our ancestors to be Traditional Cultural Properties. Therefore, we appreciate your solicitation of our input and your efforts to address our concerns.

The Hopi Cultural Preservation Office requests consultation on any proposal with the potential to adversely affect prehistoric cultural resources in New Mexico. We understand the dependent components of this undertaking involve ground disturbing activities. Therefore, to enable us to determine if this proposal may affect cultural resources significant to the Hopi Tribe, if the cultural resources survey of the area of potential effect identifies prehistoric sites that may be adversely effected by project activities please provide us with copies of the survey report and any proposed treatment plans for review and comment.

In addition, if any prehistoric cultural features or deposits are encountered during project activities, these activities must be discontinued in the immediate area of the remains, and the State Historic Preservation Office must be consulted to evaluate their nature and significance, and if any Native American human remains or funerary objects are discovered they must be reported as required by law. If you have any questions or need additional information, please contact Terry Morgart at tmorgart@hopi.nsn.us. Thank you for your consideration.

Respectfully,



Leigh J. Kuwanwisiwma, Director
Hopi Cultural Preservation Office

xc: New Mexico State Historic Preservation Office



Susana Martinez
Governor

STATE OF NEW MEXICO
DEPARTMENT OF CULTURAL AFFAIRS
HISTORIC PRESERVATION DIVISION

BATAAN MEMORIAL BUILDING
407 GALISTEO STREET, SUITE 236
SANTA FE, NEW MEXICO 87501
PHONE (505) 827-6320 FAX (505) 827-6338

March 20, 2017

Colonel Dawn A. Nickell
377ABW/CC
2000 Wyoming, Blvd. SE
Kirtland, AFB 87117

Re: Environmental Assessment: HH-60W upgrades

Dear Colonel Nickell,

On behalf of the New Mexico State Historic Preservation Officer (SHPO) I have completed a review of your letter notifying our office of an Environmental Assessment (EA) for the demolition, construction, and modifications needed for Kirtland Air Force Base to accommodate the conversion to new HH-60W helicopters. This letter provides SHPO comments on the undertaking's potential to affect historic properties as described in the Title 54 USC Section 306108 (aka Section 106 of the National Historic Preservation Act).

The review shows that the undertaking proposes to demolish buildings 954 and 960 and to make an addition to Building 957. It is the SHPO's opinion that the proposed demolitions and addition have the potential to adversely affect the historic properties eligible for listing in the National Register of Historic Places.

Kirtland AFB has documented many buildings on the base and consulted with the SHPO on their respective NRHP eligibility, as well as the potential for a KAFB Historic District. Although the aforementioned buildings may have been among those documented and evaluated for the NRHP, I was not able to find a record of consultation.

The SHPO requests that KAFB review your records and see if Buildings 954, 960 and 957 have been the subject of SHPO consultation and the results of that consultation. Once we know where we are in the Section 106 process, we will have a better idea how to advance the consultation.

If you have any questions or comments, please feel free to call me directly at 505-827-4225 or email me.

Sincerely,

Bob Estes Ph.D.
HPD Archaeologist
New Mexico Historic Preservation Division
407 Galisteo St., Suite 236
Santa Fe, New Mexico 87501

Cc:

David H. Reynolds
Kirtland AFB Cultural Resource and Natural Resource Program Manager
377 MSG/CEIEC
Phone: (505) 846-0226
DSN: 246-0226

(This page intentionally left blank)

**Appendix B Notice of Availability and Draft EA Comments
Obtained**

(This page intentionally left blank)

PERSONS AND AGENCIES CONSULTED/ COORDINATED

Notice of Availability Points of Contact

Federal Agencies/Officials

Dr. Benjamin Tuggle
Regional Director US Fish & Wildlife Service
Southwest Regional Office
PO Box 1306
Albuquerque, NM 87103-1306

Mr. Bill Walker
Regional Director Bureau of Indian Affairs
Southwest Regional Office
1001 Indian School Road NW
Albuquerque, NM 87104

Ms. Danita Burns
District Manager Bureau of Land Management
New Mexico State Office
Albuquerque District Office
Pan American Building
100 Sun Avenue NE, Suite 330
Albuquerque, NM 87109-4676

Mr. Kelvin L. Solco
Regional Administrator
Federal Aviation Administration
Southwest Region
10101 Hillwood Parkway
Fort Worth, TX 76177-1524

Ms. Pearl Armijo
District Conservationist
Natural Resources Conservation Service
Los Lunas Service Center
2600 Palmilla Road
Los Lunas, NM 87031

Mr. George MacDonnell
Chief of Environmental Resources Section
US Army Corps of Engineers
4101 Jefferson Plaza NE
Albuquerque, NM 87109

Mr. Samuel Coleman, P.E.
Regional Administrator
US Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Ms. Peg Sorenson
Southwestern Region NEPA Coordinator
US Forest Service Ecosystem Analysis and
Planning, Watershed, and Air Management
333 Broadway Boulevard SE
Albuquerque, NM 87102-3407

Ms. Susan Lacy
Department of Energy/National Nuclear Security
Administration
Sandia Field Office
PO Box 5400
Albuquerque, NM 87187

Mr. John Weckerle
Department of Energy/National Nuclear Security
Administration
Office of General Counsel
PO Box 5400
Albuquerque, NM 87187

The Honorable Martin Heinrich
US Senate
400 Gold Avenue SW, Suite 1080
Albuquerque, NM 87102

The Honorable Tom Udall
US Senate
219 Central Avenue NW, Suite 210
Albuquerque, NM 87102

The Honorable Steve Pearce
US House of Representatives
3445 Lambros Loop NE
Los Lunas, NM 87301

The Honorable Michelle Lujan Grisham
US House of Representatives
400 Gold Avenue SW, Suite 680
Albuquerque, NM 87102

The Honorable Ben R. Lujan
US House of Representatives
1611 Calle Lorca, Suite A
Santa Fe, NM 87505

Mr. Stephen Spencer
Regional Environmental Officer
US Department of the Interior
Office of Environmental Policy, Albuquerque
Region
1001 Indian School Road NW, Suite 348
Albuquerque, NM 87104

State Agencies/Officials

Dr. Jeff Pappas, PhD.
State Historic Preservation Officer and Director
New Mexico Historic Preservation Division
Department of Cultural Affairs
Bataan Memorial Building
407 Galisteo Street, Suite 236
Santa Fe, NM 87501

Mr. Aubrey Dunn
Commissioner of Public Lands
New Mexico State Land Office
310 Old Santa Fe Trail
Santa Fe, NM 87501

Mr. Matt Wunder
Chief Conservation Services
New Mexico Department of Game and Fish
PO Box 25112
Santa Fe, NM 87504

Mr. Clyde Ward
Assistant Commissioner for Commercial
Resources
New Mexico State Land Office
PO Box 1148
Santa Fe, NM 87504

Mr. Jennifer L. Hower
Office of General Counsel & Environmental Policy
New Mexico Environment Department
1190 St. Francis Drive, Suite N4050
Santa Fe, NM 87505

Mr. Jeff M. Witte
Director/Secretary
New Mexico Department of Agriculture
3190 S. Espina
Las Cruces, NM 88003

Mr. Ken McQueen
Secretary New Mexico Energy, Minerals and
Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

Local Agencies/Officials

Development Management/Department Director
Bernalillo County Planning Section
111 Union Square SE, Suite 100
Albuquerque, NM 87102

Department Director
City of Albuquerque Planning Department
PO Box 1293
Albuquerque, NM 87103

Board of Directors
Mid-Region Council of Governments
809 Copper Avenue NW
Albuquerque, NM 87102

Ms. Julie Morgas Baca
Bernalillo County Manager
Bernalillo County Manager's Office
One Civic Plaza NW, 10th Floor
Albuquerque, NM 87102

Ms. Rhiannon Samuel
Director of Communications
City of Albuquerque Office of the Mayor
One Civic Plaza NW, 11th Floor
Albuquerque, NM 87102

Bernalillo County Board of Commissioners
One Civic Plaza NW
10th Floor, Room 10111
Albuquerque, NM 87102

Albuquerque City Council
One Civic Plaza NW
9th Floor - Suite 9087
Albuquerque, NM 87102

Tribal Entities

Governor Kurt Riley
Pueblo of Acoma
PO Box 309
Acoma, NM 87034

Governor Eugene Herrera
Pueblo of Cochiti
PO Box 70
Cochiti Pueblo, NM 87072

Chairman Herman G. Honanie
Hopi Tribal Council
PO Box 123
Kykotsmovi, AZ 86039

Governor J. Robert Benevides
Pueblo of Isleta
PO Box 1290
Isleta Pueblo, NM 87022

Governor Joseph A. Toya
Pueblo of Jemez
PO Box 100
Jemez Pueblo, NM 87024

President Wainwright Velarde
Jicarilla Apache Nation
PO Box 507
Dulce, NM 87528

Governor Virgil A. Siow
Pueblo of Laguna
PO Box 194
Laguna Pueblo, NM 87026

President Danny H. Breuninger, Sr.
Mescalero Apache Tribe
PO Box 227
Mescalero, NM 88340

Governor Phillip A. Perez
Pueblo of Nambe
Route 1 Box 117-BB
Santa Fe, NM 87506

President Russell Begaye
Navajo Nation
PO Box 7440
Window Rock, AZ 86515

Governor Peter Garcia, Jr.
Ohkay Owingeh Pueblo
PO Box 1099
San Juan Pueblo, NM 87566

Governor Craig Quanchello
Pueblo of Picuris
PO Box 127
Peñasco, NM 87553

Governor Joseph M. Talachy
Pueblo of Pojoaque
78 Cities of Gold Road
Santa Fe, NM 87506

Governor Malcom Montoya
Pueblo of Sandia
481 Sandia Loop
Bernalillo, NM 87004

Governor Anthony Ortiz
Pueblo of San Felipe
PO Box 4339
San Felipe Pueblo, NM 87001

Governor James R. Mountain
Pueblo of San Ildefonso
02 Tunyo Po
Santa Fe, NM 87506

Governor Lawrence Montoya
Pueblo of Santa Ana
2 Dove Road
Santa Ana Pueblo, NM 87004

Governor J. Michael Chavarria
Pueblo of Santa Clara
PO Box 580
Española, NM 87532

Governor Brian Coriz
Pueblo of Santo Domingo
PO Box 99
Santo Domingo Pueblo, NM 87052

Governor Ruben Romero
Pueblo of Taos
PO Box 1846
Taos, NM 87571

Governor Mark Mitchell
Pueblo of Tesuque
Route 42 Box 360-T
Santa Fe, NM 87506

Chairman Ronnie Lupe
White Mountain Apache Tribe
PO Box 700
Whiteriver, AZ 85941

Governor Carlos Hisa
Ysleta del Sur Pueblo
117 S. Old Pueblo Road
PO Box 17579
El Paso, TX 79907

Governor Carl B. Schildt
Pueblo of Zia
135 Capitol Square Drive
Zia Pueblo, NM 87053-6013

Governor Val Panteah, Sr.
Pueblo of Zuni
PO Box 339
Zuni, NM 87327

Chairman E. Paul Torres
All Pueblo Council of Governors
2401 12th Street NW
Albuquerque, NM 87103

Executive Director Joshua Madalena
Five Sandoval Indian Pueblos, Inc.
4321-B Fulcrum Way NE
Rio Rancho, NM 87144

Executive Director Gilbert Vigil
Eight Northern Indian Pueblos Council
327 Eagle Drive
PO Box 969
Ohkay Owingeh, NM 87566

Speaker Pro Tem LoRenzo Bates
23rd Navajo Nation Council, Office of the Speaker
PO Box 3390
Window Rock, AZ 86515

Repositories

CNM Montoya Campus Library
J Building, Room 123
4700 Morris St NE
Albuquerque, NM 87111

San Padro Library
5600 Trumbull Ave SE
Albuquerque, NM 87108

Sample Notice of Availability Letters and Legal Advertisement

(This page intentionally left blank)

PUBLIC NOTICE

DRAFT ENVIRONMENTAL ASSESSMENT for the Combat Rescue Helicopter Transition at Kirtland Air Force Base

A Draft Environmental Assessment (EA) has been prepared to evaluate the potential impacts on environmental and human resources that would result from replacing the current fleet of 12 HH-60G helicopters with 14 HH-60W helicopters. Associated activities would include restriping of the concrete apron, installation of additional mooring points, construction of additional personnel parking areas, demolition of 2 existing buildings, construction of a 35,973-square foot simulator facility, and construction of an 11,000-square foot addition onto an existing building.

Copies of the Draft EA and the proposed Finding of No Significant Impact (FONSI) are available now at <http://www.kirtland.af.mil/Home/Environment> or the following locations:

CNMCC Montoya Campus	San Pedro Library
4700 Morris NE	5600 Trumbull Avenue SE
Albuquerque, NM 87102	Albuquerque AFB, NM 87108

The comment period is from **August 16, 2017** through **September 15, 2017**. All comments must be postmarked by September 15, 2017. Individuals wishing further information, or to contribute comments, should contact the NEPA Program Manager, 377 MSG/CEIEC, 2050 Wyoming Boulevard SE, Suite 116, Kirtland AFB, NM 87117 or send an email to KirtlandNEPA@us.af.mil.

(This page intentionally left blank)



DEPARTMENT OF THE AIR FORCE
377TH AIR BASE WING (AFGSC)



DATE

Colonel Richard W. Gibbs
377 ABW/CC
2000 Wyoming Blvd
Kirtland AFB NM 87117

«Prefix»«First_»«Last»
«Title»
«Organization_Name»
«Address1», «Address2»
«City», «State» «Zip»

Dear «Prefix» «Last»

The U.S. Air Force (USAF) has prepared a Draft Environmental Assessment (EA) to evaluate the replacement of 12 existing HH-60G Combat Rescue Helicopters (CRH) with 14 new HH-60W CRH that are used by the 58 Special Operations Wing (SOW) at Kirtland Air Force Base (AFB), New Mexico. These helicopters are used to train aircrews for special operations and Combat Search and Rescue (CSAR) missions in multiple environments (e.g., mountains, desert, forests, etc.). Neither the number of students trained, nor the helicopter flight approach and flight departure tracks to and from Kirtland AFB would be changed as a result of the Proposed Action.

The proposed action contains eight dependent components required in support of the new HH-60W helicopters that were evaluated in the EA document. The dependent components are: installation of helicopter restriping between Hangars 1001 and 1002; installation of ground mooring points north of Hangar 1002 for existing C-130J fixed-wing aircraft; demolition of Buildings 954, 960, and a BBQ pavilion to accommodate construction of an 11,000 square foot addition to Building 957 for office/training uses; construction of a new 35,973 square foot training facility to accommodate the HH-60W helicopter flight simulators for aircrew training; construction of new personnel parking lots north and east of existing Building 957; and the widening of a pedestrian sidewalk between the new flight simulator building and Building 948. Collectively, these eight dependent components constitute the Proposed Action that will be evaluated in the EA document.

The purpose of the Proposed Action is to improve the overall efficiency of the CRH special operations and CSAR missions conducted by the 58 SOW. The need for the Proposed Action is to address increased helicopter maintenance costs, resolve reliability deficiencies and enhance mission capability, improve training of military personnel, as well as maintain tactical superiority in operations of the 58 SOW that could be compromised by the continued use of the existing HH-60G helicopters. Transitioning to new HH-60W CRH would keep the special operations and CSAR training missions viable into the foreseeable future.

Kirtland AFB is considered the prime location for the CRH transition due to the fact that search and rescue training is currently conducted by the 58 SOW, and the availability of existing helicopter training landing zones in multiple areas (e.g., mountainous, desert, high density altitude, forests, etc.). Keeping the new helicopters (HH-60W) co-located with the existing training assets would maintain a training synergy for the USAF. Separating the HH-60W from the existing training assets would greatly reduce effectiveness and increase training costs. Further, the helicopter/aircraft maintenance personnel and logistics lines are already in place at Kirtland AFB with the 58 SOW. Kirtland AFB has established helicopter aerial refueling tracks, weapons ranges, drop zones, low-level training routes, and installation entry and exit procedures. These established areas provide needed training for USAF personnel, and would need to be re-established elsewhere if the CRH transition does not occur at Kirtland AFB.

This Draft EA is being prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code §4371 et. seq.), the Council on Environmental Quality regulations implementing NEPA (40 Code of Federal Regulations [CFR] Parts 1500–1508), and the USAF NEPA regulation (32 CFR Part 989). This Draft EA evaluates the potential impacts of the proposed action and alternatives, to include the No-Action alternative, on the human and natural environment. Additionally, Executive Order 12372, *Intergovernmental Review of Federal Programs*, requires federal agencies to solicit other federal agency participation in the NEPA process. Accordingly, I am requesting your participation in the review and comment process. Copies of the Draft EA and the proposed Finding of No Significant Impact (FONSI) are available at <http://www.kirtland.af.mil/Home/Environment>.

If, after review of the Draft EA and FONSI, you have additional information regarding impacts of the Proposed Action on the natural environment or other environmental aspects of which we are unaware, we would appreciate receiving such information for inclusion and consideration during the NEPA process. Please respond within 30 days of receipt of this letter to ensure your concerns are adequately addressed in the Draft EA.

Please send your written responses to the NEPA Program Manager, 377 MSG/CEIEC, 2050 Wyoming Boulevard SE, Suite 116, Kirtland AFB NM 87117, or via email to KirtlandNEPA@us.af.mil.

Sincerely

RICHARD W. GIBBS, Colonel, USAF
Commander, 377th Air Base Wing



DEPARTMENT OF THE AIR FORCE
377TH AIR BASE WING (AFGSC)



DATE

Colonel Richard W. Gibbs
377 ABW/CC
2000 Wyoming Blvd
Kirtland AFB NM 87117

«Prefix»«First_»«Last»
«Title»
«Organization_Name»
«Address1», «Address2»
«City», «State» «Zip»

Dear «Prefix» «Last»

As set forth in the Kirtland Air Force Base (AFB) – «Organization_Name» Joint Land Use Study Memorandum of Understanding and as required by the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations, and the U.S. Air Force (USAF) NEPA regulations, Kirtland Air Force Base (AFB) is providing notice of the preparation of a Draft Environmental Assessment (EA) to evaluate the replacement of 12 existing HH-60G Combat Rescue Helicopters (CRH) with 14 new HH-60W CRH that are used by the 58 Special Operations Wing (SOW) at Kirtland Air Force Base (AFB), New Mexico. These helicopters are used to train aircrews for special operations and Combat Search and Rescue (CSAR) missions in multiple environments (e.g., mountains, desert, forests, etc.). Neither the number of students trained, nor the helicopter flight approach and flight departure tracks to and from Kirtland AFB would be changed as a result of the Proposed Action.

The proposed action contains eight dependent components required in support of the new HH-60W helicopters that were evaluated in the EA document. The dependent components are: installation of helicopter restriping between Hangars 1001 and 1002; installation of ground mooring points north of Hangar 1002 for existing C-130J fixed-wing aircraft; demolition of Buildings 954, 960, and a BBQ pavilion to accommodate construction of an 11,000 square foot addition to Building 957 for office/training uses; construction of a new 35,973-square-foot training facility to accommodate the HH-60W helicopter flight simulators for aircrew training; construction of new personnel parking lots north and east of existing Building 957; and the widening of a pedestrian sidewalk between the new flight simulator building and Building 948. Collectively, these eight dependent components constitute the Proposed Action that will be evaluated in the EA document.

The purpose of the Proposed Action is to improve the overall efficiency of the CRH special operations and CSAR missions conducted by the 58 SOW. The need for the Proposed Action is to address increased helicopter maintenance costs, resolve reliability deficiencies and enhance mission capability, improve training of military personnel, as well as maintain tactical superiority in operations of the 58 SOW that could be compromised by the continued use of the existing

HH-60G helicopters. Transitioning to new HH-60W CRH would keep the special operations and CSAR training missions viable into the foreseeable future.

Kirtland AFB is considered the prime location for the CRH transition due to the fact that search and rescue training is currently conducted by the 58 SOW, and the availability of existing helicopter training landing zones in multiple areas (e.g., mountainous, desert, high density altitude, forests, etc.). Keeping the new helicopters (HH-60W) co-located with the existing training assets would maintain a training synergy for the USAF. Separating the HH-60W from the existing training assets would greatly reduce effectiveness and increase training costs. Further, the helicopter/aircraft maintenance personnel and logistics lines are already in place at Kirtland AFB with the 58 SOW. Kirtland AFB has established helicopter aerial refueling tracks, weapons ranges, drop zones, low-level training routes, and installation entry and exit procedures. These established areas provide needed training for USAF personnel, and would need to be re-established elsewhere if the CRH transition does not occur at Kirtland AFB.

This Draft EA is being prepared in accordance with NEPA (42 United States Code §4371 et. seq.), CEQ regulations implementing NEPA (40 Code of Federal Regulations [CFR] Parts 1500–1508), and the USAF NEPA regulation (32 CFR Part 989). This Draft EA evaluates the potential impacts of the proposed action and alternatives, to include the No-Action Alternative, on the human and the natural environment. Additionally, Executive Order 12372, *Intergovernmental Review of Federal Programs*, requires federal agencies to solicit other federal agency participation in the NEPA process. Accordingly, I am requesting your participation in the review and comment process. Copies of the Draft EA and the proposed Finding of No Significant Impact (FONSI) are available at <http://www.kirtland.af.mil/Home/Environment>.

If, after review of the Draft EA and FONSI, you have additional information regarding impacts of the Proposed Action on the natural environment or other environmental aspects of which we are unaware, we would appreciate receiving such information for inclusion and consideration during the NEPA process. Please respond within 30 days of receipt of this letter to ensure your concerns are adequately addressed in the EA.

Please send your written responses to the NEPA Program Manager, 377 MSG/CEIEC, 2050 Wyoming Boulevard SE, Suite 116, Kirtland AFB, NM 87117, or via email to KirtlandNEPA@us.af.mil.

Sincerely

RICHARD W. GIBBS, Colonel, USAF
Commander, 377th Air Base Wing



DEPARTMENT OF THE AIR FORCE
377TH AIR BASE WING (AFGSC)



DATE

Colonel Richard W. Gibbs
377 ABW/CC
2000 Wyoming Blvd
Kirtland AFB NM 87117

«Prefix»«First_»«Last»
«Title»
«Organization_Name»
«Address1», «Address2»
«City», «State» «Zip»

Dear «Prefix» «Last»

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations, and the U.S. Air Force (USAF) NEPA regulations, the U.S. Air Force (USAF) has prepared a Draft Environmental Assessment (EA) to evaluate the replacement of 12 existing HH-60G Combat Rescue Helicopters (CRH) with 14 new HH-60W CRH that are used by the 58 Special Operations Wing (SOW) at Kirtland Air Force Base (AFB), New Mexico. These helicopters are used to train aircrews for special operations and Combat Search and Rescue (CSAR) missions in multiple environments (e.g., mountains, desert, forests, etc.). Neither the number of students trained, nor the helicopter flight approach and flight departure tracks to and from Kirtland AFB would be changed as a result of the Proposed Action.

The proposed action contains eight dependent components required in support of the new HH-60W helicopters that were evaluated in the EA document. The dependent components are: installation of helicopter restriping between Hangars 1001 and 1002; installation of ground mooring points north of Hangar 1002 for existing C-130J fixed-wing aircraft; demolition of Buildings 954, 960, and a BBQ pavilion to accommodate construction of an 11,000 square foot addition to Building 957 for office/training uses; construction of a new 35,973 square foot training facility to accommodate the HH-60W helicopter flight simulators for aircrew training; construction of new personnel parking lots north and east of existing Building 957; and the widening of a pedestrian sidewalk between the new flight simulator building and Building 948. Collectively, these eight dependent components constitute the Proposed Action that will be evaluated in the EA document.

The purpose of the Proposed Action is to improve the overall efficiency of the CRH special operations and CSAR missions conducted by the 58 SOW. The need for the Proposed Action is to address increased helicopter maintenance costs, resolve reliability deficiencies and enhance mission capability, improve training of military personnel, as well as maintain tactical superiority in operations of the 58 SOW that could be compromised by the continued use of the existing HH-60G helicopters. Transitioning to new HH-60W CRH would keep the special operations and CSAR training missions viable into the foreseeable future.

Kirtland AFB is considered the prime location for the CRH transition due to the fact that search and rescue training is currently conducted by the 58 SOW, and the availability of existing helicopter training landing zones in multiple areas (e.g., mountainous, desert, high density altitude, forests, etc.). Keeping the new helicopters (HH-60W) co-located with the existing training assets would maintain a training synergy for the USAF. Separating the HH-60W from the existing training assets would greatly reduce effectiveness and increase training costs. Further, the helicopter/aircraft maintenance personnel and logistics lines are already in place at Kirtland AFB with the 58 SOW. Kirtland AFB has established helicopter aerial refueling tracks, weapons ranges, drop zones, low-level training routes, and installation entry and exit procedures. These established areas provide needed training for USAF personnel, and would need to be re-established elsewhere if the CRH transition does not occur at Kirtland AFB.

Pursuant to Section 106 of the National Historic Preservation Act (NHPA) and 36 CFR Part 800, Kirtland AFB determined that there are no National Register of Historic Places (NRHP) listed or eligible sites (“historic properties”) that have the potential to be impacted by activities associated with the Proposed Action or No-Action Alternatives. Please note that Building 954, slated for demolition, is nearing the 50-year age requirement and was recently re-evaluated. Based on this evaluation, Kirtland AFB concluded that Building 954 is not NHRP eligible and the Proposed Action will have no effect on historic properties. Pending Further consultation with your office regarding the eligibility of Building 954 to the NRHP submitted on 19 July 2017 treatment may be needed to resolve any potential adverse effects. The Historic Cultural Properties Inventory form for Building 954 is attached.

A majority of the proposed ground-disturbing activities occur in previously disturbed areas and there are no archaeological sites in the vicinity. All ground-disturbing activities also take into consideration the potential for the discovery of previously undiscovered cultural resources. Should an inadvertent discovery of human or cultural remains occur, all project activities shall stop, the Kirtland AFB Cultural Resources Program Manager shall be notified, and operational procedures outlined in the installation’s Integrated Cultural Resources Management Plan shall be followed. This would ensure no adverse impacts would occur on the newly discovered cultural resource. Copies of the Draft EA and the proposed Finding of No Significant Impact (FONSI) are available at <http://www.kirtland.af.mil/Home/Environment>.

If your agency has additional information regarding impacts to historic properties or other environmental aspects of which we are unaware, we would appreciate receiving that information for inclusion and consideration during the NEPA process. Please forward your written comments and/or information within 30 days of receipt of this letter to ensure your concerns are adequately addressed in the EA. Written responses should be sent to the NEPA Program Manager, 377 MSG/CEIEC, 2050 Wyoming Boulevard SE, Suite 116, Kirtland AFB NM 87117, or via email to KirtlandNEPA@us.af.mil.

Sincerely

RICHARD W. GIBBS, Colonel, USAF
Commander, 377th Air Base Wing

Attachment:
Historic Cultural Properties Inventory Form



DEPARTMENT OF THE AIR FORCE
377TH AIR BASE WING (AFGSC)



DATE

Colonel Richard W. Gibbs
377 ABW/CC
2000 Wyoming Blvd
Kirtland AFB NM 87117

«PrefixSalutation»«First_Name»«Last_Name»
«AgencyOrganization»
«Address_1»
«City», «State» «Zip_Code»

Dear «PrefixSalutation» «Last_Name»

The U.S. Air Force (USAF) has prepared a Draft Environmental Assessment (EA) for the replacement of 12 existing HH-60G Combat Rescue Helicopters (CRH) with 14 new HH-60W CRH that are assigned to the 58 Special Operations Wing (SOW) at Kirtland Air Force Base (AFB), New Mexico. These helicopters are used to train aircrews for special operations and Combat Search and Rescue (CSAR) missions in multiple environments (e.g., mountains, desert, forests, etc.). Neither the number of students trained, nor the helicopter flight approach and flight departure tracks to and from Kirtland AFB would be changed as a result of the Proposed Action.

The proposed action contains eight dependent components required in support of the new HH-60W helicopters that were evaluated in the EA document. The dependent components are: installation of helicopter restriping between Hangars 1001 and 1002; installation of ground mooring points north of Hangar 1002 for existing C-130J fixed-wing aircraft; demolition of Buildings 954, 960, and a BBQ pavilion to accommodate construction of an 11,000 square foot addition to Building 957 for office/training uses; construction of a new 35,973 square foot training facility to accommodate the HH-60W helicopter flight simulators for aircrew training; construction of new personnel parking lots north and east of existing Building 957; and the widening of a pedestrian sidewalk between the new flight simulator building and Building 948. Collectively, these eight dependent components constitute the Proposed Action that will be evaluated in the EA document.

The purpose of the Proposed Action is to improve the overall efficiency of the CRH special operations and CSAR missions conducted by the 58 SOW. The need for the Proposed Action is to address increased helicopter maintenance costs, resolve reliability deficiencies and enhance mission capability, improve training of military personnel, as well as maintain tactical superiority in operations of the 58 SOW that could be compromised by the continued use of the existing HH-60G helicopters. Transitioning to new HH-60W CRH would keep the special operations and CSAR training missions viable into the foreseeable future.

Kirtland AFB is considered the prime location for the CRH transition due to the fact that search and rescue training is currently conducted by the 58 SOW, and the availability of existing helicopter training landing zones in multiple areas (e.g., mountainous, desert, high density altitude, forests, etc.). Keeping the new helicopters (HH-60W) co-located with the existing training assets would maintain a training synergy for the USAF. Separating the HH-60W from the existing training assets would greatly reduce effectiveness and increase training costs. Further, the helicopter/aircraft maintenance personnel and logistics lines are already in place at Kirtland AFB with the 58 SOW. Kirtland AFB has established helicopter aerial refueling tracks, weapons ranges, drop zones, low-level training routes, and installation entry and exit procedures. These established areas provide needed training for USAF personnel, and would need to be re-established elsewhere if the CRH transition does not occur at Kirtland AFB.

This Draft EA is being prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code §4371 et. seq.), the Council on Environmental Quality regulations implementing NEPA (40 Code of Federal Regulations [CFR] Parts 1500–1508), and the USAF NEPA regulation (32 CFR Part 989). This Draft EA evaluates the potential impacts of the Proposed Action and alternatives, to include the No-Action Alternative, on the human and natural environment. Additionally, Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, requires federal agencies to solicit other federal agency participation in the NEPA process. Accordingly, I am requesting your participation in the review and comment process. Copies of the Draft EA and the proposed Finding of No Significant Impact (FONSI) are available at <http://www.kirtland.af.mil/Home/Environment> or by contacting the NEPA Program Manager for this EA, Ms. Martha E. Garcia, at martha.garcia.3@us.af.mil.

Pursuant to Section 106 of the National Historic Preservation Act (36 CFR Parts 800.2, 800.3, and 800.4) and EO 13175, the USAF would like to initiate government to government consultation concerning the proposed project to allow you the opportunity to identify any comments, concerns, and/or suggestions that you might have. Please contact my office at (505) 846-7377 if you would like to meet to discuss the proposed project and/or proceed with Section 106 consultation.

Sincerely

RICHARD W. GIBBS, Colonel, USAF
Commander, 377th Air Base Wing

Interagency and Intergovernmental Responses and Public Comments

(This page intentionally left blank)

Commenter	Organization	Dated	Comments	Response
Mora, Bernard	Pueblo of Tesuque	22-Aug-17	While the Proposed Project does not reflect any adverse impacts, we respectfully request that should any finds of human remains occur then reinterment within the immediate location occur at a depth of no less than 10 ft. with GPs coordinates registered for future reference.	Noted, and concur.
Cave, Dewey V.	Mid-Region Council of Governors	28-Aug-17	MRCOG does not anticipate any impacts, but KAFB should contact City of Albuquerque Planning Department, Bernalillo County Planning Department, and Isleta Pueblo.	These three entities were included in the Notice of Availability distribution.
Southerland, Christopher L.	FAA	29-Aug-17	Does the Proposed Project have an effect on the National Airspace System?	The Proposed Project does not result in any changes to the use of airspace.
Hayes, Chuck L.	New Mexico Department of Game and Fish	29-Aug-17	No Comments	N/a
Burns, Danita	US Department of the Interior, Bureau of Land Management.	30-Aug-17	No Comments	N/a
Dunn, Aubry	State of New Mexico Commissioner of Public Lands	30-Aug-17	The Project will not have any land use effects, but the USAF should address the effect of the overall mission footprint is having on wind energy development.	The Proposed Project does not result in any changes to the use of airspace. The comments provided are outside the scope of this EA.
Prewitt, Cheryl	US Forest Service	14-Sep-17	No Comments	N/a
Kubichan, Colette	General Public	15-Sep-17	The money should be spent on schools, students, and teachers. No need to grow your footprint, KAFB. I live with your legacy of spillage under my house. I hate the plume.	The comments provided are outside the scope of this EA.

(This page intentionally left blank)

Botto, Dan

From: GARCIA, MARTHA E CIV USAF AFGSC 377 MSG/CEIE <martha.garcia.3@us.af.mil>
Sent: Wednesday, August 23, 2017 8:59 AM
To: Botto, Dan
Cc: CLARK, MELISSA B GS-13 USAF AFGSC 377 MSG/CEIE; REYNOLDS, DAVID H GS-12 USAF AFGSC 377 MSG/CEIE; ADKINS, JOSHUA S GS-13 USAF AFMC AFCEC/CZN
Subject: FW: Govt to Govt Consultation on HH60G CRH

Dan,
Response from Tesuque Pueblo for the Final EA.
V/R
Martha E. Garcia
Kirtland AFB NEPA Program Manager
377 MSG/CEIE
Phone: 505-846-6446
DSN: 246-6446

-----Original Message-----

From: Bernard Mora [mailto:bmora@pueblooftesuque.org]
Sent: Tuesday, August 22, 2017 5:06 PM
To: GARCIA, MARTHA E CIV USAF AFGSC 377 MSG/CEIE <martha.garcia.3@us.af.mil>
Subject: [Non-DoD Source] Govt to Govt Consultation on HH60G CRH

Good evening Ms. Garcia,

The Pueblo of Tesuque is in receipt of the Consultation letter referencing the overall project(s) that will require changes to the current location such as structures and flight apron layouts. These projects as the draft EA specifies do not at this time reflect any adverse impacts that would cause the Pueblo to Tesuque to determine an in depth consultation, we do respectfully request that on all projects, should any finds of human remains occur then reinterment within the immediate location occur at a depth of no less than 10 ft with GPs coordinates registered for future reference.

Should you require additional information I can be reached at: 505-983-2667 ext. 6015 or at this email.

Thank you

Bernard Mora

Pueblo of Tesuque Cultural Preservation Department Specialist



Mid-Region Council of Governments

Jack Torres
Chair, Board of Directors
Mayor, Town of Bernalillo

Dewey V. Cave
Executive Director

August 28, 2017

MEMBER GOVERNMENTS

City of Albuquerque
Albuquerque Public Schools
AMAFCA
City of Belen
Bernalillo County
Town of Bernalillo
Village of Bosque Farms
CNM
Village of Corrales
Village of Cuba
Town of Edgewood
Village of Encino
ESCAFCA
Town of Estancia
Village of Jemez Springs
Laguna Pueblo
Village of Los Lunas
Los Lunas Schools
Village of Los Ranchos
MRGCD
City of Moriarty
Town of Mountainair
Town of Peralta
City of Rio Communities
City of Rio Rancho
Rio Rancho Public Schools
Sandoval County
Santa Ana Pueblo
SSCAFCA
Village of Tijeras
Torrance County
UNM
Valencia County
Village of Willard

Colonel Richard W. Gibbs
377 ABW/CC
2000 Wyoming Blvd
Kirtland AFB NM 87117

Re: Environmental Assessment Evaluating Combat Rescue
Helicopter Replacement

Dear Colonel Gibbs:

On behalf of the Mid-Region Council of Governments (MRCOG), I would like to give my support for your efforts to replace 12 existing HH-60G Combat Rescue Helicopters (CRH) with 14 new HH-60W CRH that are used by the 58 Special Operations Wing (SOW) at Kirtland Air Force Base (KAFB).

It is my understanding that the proposed action would not result in any changes in the number of students trained or to the helicopter approach and flight departure tracks to and from Kirtland AFB. At this time MRCOG does not anticipate major impacts. However, as part of the Joint Land Use Study (JLUS) implementation plan and subsequent memorandums of understanding (MOUs), the KAFB should consider notifying the City of Albuquerque Planning Department, the Bernalillo County Planning Department, and the Isleta Pueblo as to any potential impacts of this effort.

The mission of the Kirtland Air Force is very important in this region and to MRCOG communities. This proposal in no way conflicts with local or regional plans.

Please let me know if my staff or I can support you further.

Sincerely,

Dewey V. Cave
Executive Director

DC/MR



U.S. Department
of Transportation
**Federal Aviation
Administration**

Air Traffic Organization
Central Service Center

10101 Hillwood Parkway
Fort Worth, TX 76177

AUG 29 2017

Colonel Richard W. Gibbs
377 ABW/CC
2000 Wyoming Blvd
Kirtland AFB NM 87117

Dear Mr. Gibbs:

Thank you for your letter dated August 14, 2017, addressed to Mr. Kelvin Solco regarding the Draft Environmental Assessment (EA) to evaluate the replacement of 12 existing HH-60G Combat Rescue Helicopters (CRH) with 14 new HH-60W CRG that are used by the 58 Special Operations Wing (SOW) at Kirtland Air Force Base (AFB), New Mexico. We normally participate in, and comment on, other federal agency environmental documents only from the perspective of the Federal Aviation Administration's (FAA) areas of responsibility; that is, whether the proposal will have effects on aviation and the National Airspace System. We generally do not provide comments from an environmental standpoint.

From a regularity perspective, you may need to consider if notice to FAA is required for the effect of the proposed actions on airspace. We encourage you to coordinate with the FAA's Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) office so that we can review the alternatives to provide you with the possible impacts. For information on the requirements for notifying the FAA, instructions for completing the forms, or other information regarding the airspace notification process, please visit the OE/AAA web site at: <https://oeaaa.faa.gov/oeaaaEXT/portal.isp>.

You will need to determine if formal notice to the FAA is required for the effect of the proposal on airspace. The requirements for this notice may be found in Title 14 of the Code of Federal Regulations, Part 77, Objects Affecting the Navigable Airspace. If any part of the project exceeds notification criteria under FAR Part 77, notice to the FAA is required at least 30 days prior to the proposed construction date. More information may be obtained at the OE/AAA web site.

Sincerely

Christopher L. Southerland
Manager (A), Operations Support Group
ATO Central Service Center

GOVERNOR
Susana Martinez



DIRECTOR AND SECRETARY
TO THE COMMISSION
Alexandra Sandoval

DEPUTY DIRECTOR
Donald L. Jaramillo

STATE OF NEW MEXICO DEPARTMENT OF GAME & FISH

One Wildlife Way, Santa Fe, NM 87507
Post Office Box 25112, Santa Fe, NM 87504
Tel: (505) 476-8000 | Fax: (505) 476-8123
For information call: (888) 248-6866

www.wildlife.state.nm.us

STATE GAME COMMISSION

PAUL M. KIENZLE III
Chairman
Albuquerque

BILL MONTOYA
Vice-Chairman
Alto

ROBERT ESPINOZA, SR.
Farmington

RALPH RAMOS
Las Cruces

BOB RICKLEFS
Cimarron

ELIZABETH A. RYAN
Roswell

THOMAS "DICK" SALOPEK
Las Cruces

29 August 2017

NEPA Program Manager
377 MSG/CEIEC
2050 Wyoming Blvd., SE, Suite 116
Kirtland AFB NM 87117

Re: Combat Rescue Helicopter Transition Draft Environmental Assessment
NMDGF No. 18007

Dear Sir:

The Department of Game and Fish (Department) has reviewed the above-referenced project. We do not anticipate adverse effects to wildlife or habitats from implementation of your project.

We appreciate the opportunity to comment on this project. Should you have any questions regarding these comments, please contact Mark Watson, Habitat Specialist at (505) 476-8115 or mark.watson@state.nm.us.

Sincerely,

Chuck L. Hayes, Assistant Chief
Ecological and Environmental Planning Division

cc: USFWS NMES Field Office



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Albuquerque District Office
100 Sun Ave., N.E.
Pan American Bldg., Suite 330
Albuquerque, New Mexico 87109
www.blm.gov/nm



In Reply Refer to:
1795 (A0100)

August 30, 2017

Colonel Richard W. Gibbs
377 ABW/CC
2000 Wyoming Boulevard
Kirtland AFB NM 87117

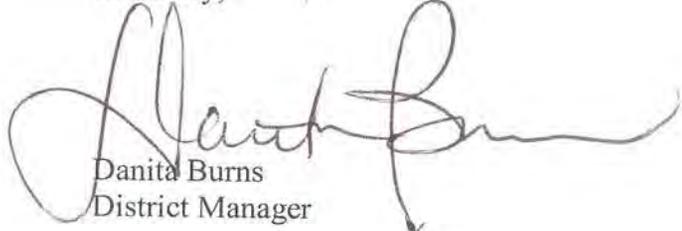
Attn: NEPA Program Manager

Dear Colonel Gibbs,

I received your letter regarding the Draft Environmental Assessment (EA) that the U.S. Air Force (USAF) has prepared. The Bureau of Land management (BLM) has reviewed the Draft EA and does not have any comments. Thank you for your time.

If you have, any questions please feel free to contact me at (505)-761-8951

Sincerely,



Danita Burns
District Manager



Aubrey Dunn
COMMISSIONER

State of New Mexico
Commissioner of Public Lands

310 OLD SANTA FE TRAIL
P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

COMMISSIONER'S OFFICE

Phone (505) 827-5760
Fax (505) 827-5766
www.nmstatelands.org

August 30, 2017

VIA EMAIL (KirtlandNEPA@us.af.mil) & U.S. MAIL

NEPA Program Manager
377 MSG/CEIEC
2050 Wyoming Blvd. SE, Suite 116
Kirtland AFB NM 87117

Re: Draft EA for Combat Rescue Helicopter Transition

Dear Sir/Madam:

I am writing in response to an August 14, 2017 letter from Colonel Richard W. Gibbs soliciting my comments on the Air Force's August 2017 Draft Environmental Assessment for the Combat Rescue Helicopter Transition. While the Draft EA indicates that the proposed action will not have any land use effects, I believe the Air Force should address the effect the overall mission footprint, particularly airspace, is having on wind energy development, which is becoming an increasingly critical industry for the State of New Mexico and the New Mexico State Land Office.

In a July 2013 Memorandum of Understanding between the New Mexico State Land Office and Kirtland Air Force Base, the parties agreed to take actions in accordance with a 2010 Kirtland Air Force Base Joint Land Use Study. The JLUS program encourages "cooperative land use planning between military installations and the surrounding communities so that future community growth and development are compatible with the training and operational missions of the installations, and to seek ways to reduce the operational impacts on adjacent land." In the MOU, the parties agreed to coordinate regarding wind energy development on state trust lands.

The map included in the Draft EA as Figure 2-2 (58 SOW Mission Footprint) shows the Air Force occupying training routes and special use airspace over large quantities of the State of New Mexico and hence large quantities of state trust lands.

NEPA Program Manager

KAFB

Re: Draft EA for Combat Rescue Helicopter Transition

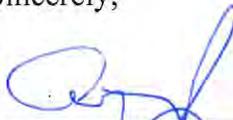
August 30, 2017

Page -2-

Relatedly, the Air Force has objected to applications for FAA permits for wind turbines on state trust lands that supposedly interfere with the use of that airspace. As a consequence, potential revenues accruing from the use of wind turbines on state trust lands could be severely diminished, to the detriment of New Mexico schoolchildren and other trust beneficiaries. In the particular instance of a wind energy project in Torrance County, the Air Force objection to a large part of the project could cost the State Land Office \$28 million or more in revenue over the life of a 40-year lease.

I believe the Air Force can and should do more to coordinate with the State Land Office to allow appropriate wind energy development to occur, for the benefit of New Mexico schoolchildren and other trust beneficiaries.

Sincerely,



Aubrey Dunn

Commissioner of Public Lands

Cc: Colonel Richard W. Gibbs
377 ABQ/CC
2000 Wyoming Blvd.
Kirtland AFB NM 87117

Botto, Dan

From: 377 MSG/CEIE NEPA Environmental <KirtlandNEPA@us.af.mil>
Sent: Thursday, September 14, 2017 5:28 PM
To: Botto, Dan; ADKINS, JOSHUA S GS-13 USAF AFMC AFCEC/CZN
Cc: BARE, MICHELLE P CTR USAF AFGSC 377 MSG/CEIE
Subject: FW: Draft EA for HH-60G Combat Rescue Helicopters
Signed By: GARCIA.MARTHA.ELIZABETH.1299421690

From: Prewitt, Cheryl -FS [mailto:cprewitt@fs.fed.us]
Sent: Thursday, September 14, 2017 2:33 PM
To: 377 MSG/CEIE NEPA Environmental <KirtlandNEPA@us.af.mil>
Cc: Prewitt, Cheryl -FS <cprewitt@fs.fed.us>
Subject: [Non-DoD Source] Draft EA for HH-60G Combat Rescue Helicopters

Good Afternoon,

I have reviewed the EA for the Combat Rescue Helicopter Transition at Kirtland Air Force Base.

The Forest Service has no concerns regarding this proposal.

However, I wanted to inform you that Peg Sorenson has retired. I am the new Environmental Coordinator for the Southwestern Region of the US Forest Service. Future correspondence of this nature should be addressed to me.

Sincerely,
Cheryl Prewitt



Cheryl Prewitt
Regional Environmental Coordinator
Forest Service
Southwestern Regional Office

p: 505-842-3454
cprewitt@fs.fed.us

333 Broadway Blvd. SE
Albuquerque, NM 87102
www.fs.fed.us



Caring for the land and serving people

This electronic message contains information generated by the USDA solely for the intended recipients. Any unauthorized interception of this message or the use or disclosure of the information it contains may violate the

law and subject the violator to civil or criminal penalties. If you believe you have received this message in error, please notify the sender and delete the email immediately.

Botto, Dan

From: 377 MSG/CEIE NEPA Environmental <KirtlandNEPA@us.af.mil>
Sent: Tuesday, September 19, 2017 9:28 AM
To: Botto, Dan; ADKINS, JOSHUA S GS-13 USAF AFMC AFCEC/CZN
Cc: CLARK, MELISSA B GS-13 USAF AFGSC 377 MSG/CEIE; CICCARELLI, CARL J GS-14 USAF AFGSC 377 ABW/JA
Subject: FW: [Non-DoD Source] EA for CRHTatKAFB

Dan and Josh,
This came in on Friday.
-MEG

From: Colette Kubichan [mailto:cogiku@gmail.com]
Sent: Friday, September 15, 2017 10:42 PM
To: 377 MSG/CEIE NEPA Environmental <KirtlandNEPA@us.af.mil>
Cc: Colette Kubichan <cogiku@gmail.com>
Subject: [Non-DoD Source] EA for CRHTatKAFB

The money should be spent on schools, students and teachers.

Why not TALK to our Global Citizens? Why does US Leadership think picking fights is an appropriate answer?

No need to grow your FootPrint KAFB. I live with your legacy of Spillage under my house. I hate the Plume. NO GO.

--

Colette Kubichan
505.699.9000

Appendix C Applicable Laws, Regulations, Policies, and Planning Criteria

When considering the affected environment, the various physical, biological, economic, and social environmental factors must be considered. In addition to the National Environmental Policy Act (NEPA), there are other environmental laws and Executive Orders (EOs) to be considered when preparing environmental analyses. These laws are summarized below.

NOTE: This is not a complete list of all applicable laws, regulations, policies, and planning criteria potentially applicable to documents, however, it does provide a general summary for use as a reference.

(This page intentionally left blank)

Compliance Area	Regulatory Requirements	Air Force Requirements, Policies, and Instructions
Air Quality	<ul style="list-style-type: none"> .. Clean Air Act (CAA) as amended, 42 US Code (U.S.C.) § 7401 et seq. .. EO 13514, Federal Leadership in Environmental, Energy, and Economic Performance 	<ul style="list-style-type: none"> .. AFI 32-7001, Environmental Management .. AFI 32-7040, Air Quality Compliance and Resources Management .. AFPD 32-70, Environmental Quality
Cultural/Historic Resources	<ul style="list-style-type: none"> .. National Historic Preservation Act (NHPA) as amended, 54 U.S.C. § 300101 et seq. .. 36 CFR Part 800, Protection of Historic and Cultural Properties 	<ul style="list-style-type: none"> .. AFI 32-7001, Environmental Management .. AFI 32-7065, Cultural Resources Management .. AFPD 32-70, Environmental Quality
Health and Safety	<ul style="list-style-type: none"> .. 14 CFR Part 25, Airworthiness Standards .. 29 CFR Part 1910, Occupational Safety and Health Standards .. 29 CFR Part 1926, Safety and Health Regulations for Construction .. EO 13045, Protection of Children from Environmental Health Risks and Safety Risks (Protection of Children) .. EO 12196, Occupational Safety and Health Programs for Federal Employees .. FAA Advisory Circular (AC) 20-115C, Airborne Software Assurance .. FAA AC 25.1309-1A, System Design and Analysis .. FAA System Safety Handbook .. Institute of Electrical and Electronics Engineers (IEEE) 1228-1994, IEEE Standard for Software Safety Plans .. Occupational Safety and Health Act (OSHAct) as amended, 29 U.S.C. § 651 et seq. Subpart Z .. Society of Automotive Engineers (SAE) ARP 4761, Guidelines and Methods for Conducting the Safety Assessment Process on Civil Airborne Systems and Equipment .. SAE ARP 4754, Certification Considerations for Highly-Integrated or Complex Aircraft Systems 	<ul style="list-style-type: none"> .. AFI 10-245_Air Force Global Strike Command Supplement (AFGSCSUP), 15 Sept 2016, Antiterrorism .. AFI 31-101_AFGSCSUP, 14 June 2016, Integrated Defense .. AFI 32-1054, Corrosion Control .. AFI 32-2001, Fire Emergency Services Program .. AFI 32-3001_AFGSCSUP, 20 Oct 2015, Explosive Ordnance Disposal (EOD) Program .. AFI 32-7001, Environmental Management .. AFI 63-101, Integrated Life Cycle Management .. AFI 91-202_AFGSCSUP, 19 June 2016, The USAF Mishap Prevention Program .. AFI 91-203, Air Force Consolidated Occupational Safety Instruction .. AFI 91-204_AFGSCSUP_1, 18 Aug 2014, Safety Investigations and Reports .. AFI 91-206, Participation in a Military or Civil Aircraft Accident Safety Investigation .. AFI 91-225, Aviation Safety Programs .. AFMAN 91-201_AFGSCSUP, 20 Oct 2011, Explosives Safety Standards .. Air Force Pamphlet (AFPAM) 90-803 Risk Management Guidelines and Tools .. AFPD 32-20, Fire Emergency Services

Compliance Area	Regulatory Requirements	Air Force Requirements, Policies, and Instructions
		<ul style="list-style-type: none"> .. AFPD 32-30, Explosive Ordnance Disposal .. AFPD 90-8, Environment, Safety and Occupational Health .. AFPD 91-2, Safety Programs .. DoD Instruction 6055.07, Accident Investigation, Reporting and Record Keeping .. MIL-STD-882E, DoD Standard Practice for System Safety
Land Use	<ul style="list-style-type: none"> .. NHPA as amended, 54 U.S.C. § 300101 et seq. .. Pollution Prevention Act, 42 U.S.C 13101-13109 .. 40 CFR Part 109, Criteria For State, Local And Regional Oil Removal Contingency Plans .. 40 CFR Part 117, Determination Of Reportable Quantities For Hazardous Substances .. 40 CFR Part 152, Pesticide Registration And Classification Procedures .. 40 CFR Part 257, Criteria for Classification of Solid Waste Disposal Facilities and Practices .. 10 U.S.C. 2577, Disposal of Recyclable Materials 	<ul style="list-style-type: none"> .. AFMAN 32-1084, Facility Requirements .. AFPD 32-90, Real Property Asset Management .. Air Force Handbook (AFH) 32-7084, Air Installation Compatible Use Zone (AICUZ) Program Manager's Guide .. AFPD 90-20, Encroachment Management Program .. AFI 32-7062, Comprehensive Planning .. AFI 32-7063, AICUZ Program .. AFI 32-7066, Environmental Baseline Surveys in Real Property Transactions .. AFI 32-9001_AFGSCSUP, 01 June 2000, Acquisition of Real Property .. AFI 32-9002, Use of Real Property Facilities .. AFI 32-9004_AFGSCSUP, 01 June 2010, Disposal of Real Property .. AFI 90-2001, Encroachment Management .. Unified Facilities Criteria (UFC) 2-100-01, Installation Master Planning .. UFC 3-260-01, Airfield and Heliport Planning and Design .. AFGSCI 32-1056, Airfield and Heliport Waiver Planning And Design

Compliance Area	Regulatory Requirements	Air Force Requirements, Policies, and Instructions
Natural Resources	<ul style="list-style-type: none"> .. 40 CFR Part 6 Appendix A, Protection of Floodplains .. 40 CFR Part 6 Appendix A, Protection of Wetlands .. 40 CFR Part 230, Protection of Wetlands .. 40 CFR Parts 320 – 330, Protection of Wetlands .. 50 CFR Part 200, Wildlife and Fisheries .. 50 CFR Part 402, Interagency Cooperation .. Clean Water Act (CWA), Section 404 13 U.S.C. §1344 et seq. .. Coastal Zone Management Act (CZMA), 16 U.S.C. § 1451 et seq. .. Endangered Species Act (ESA), 16 U.S.C. §1531 et seq. .. EO 11988, Floodplain Management .. EO 11990, Protection of Wetlands .. EO 13186, Responsibilities of Federal Agencies to Protect Migratory Birds 	<ul style="list-style-type: none"> .. AFI 32-7001, Environmental Management .. AFI 32-7064, Integrated Natural Resource Management Plan .. AFI 90-1701_KIRTLANDAFBSUP, 08 APR 2015, Energy Management .. AFPAM 91-212, Bird/Wildlife Aircraft Strike Hazard (BASH) Management Techniques .. AFPD 32-70, Environmental Quality
Noise	<ul style="list-style-type: none"> .. 29 CFR 1910.95, Occupational Noise Exposure .. Noise Control Act of 1974, 42 U.S.C. § 4901 et seq. 	<ul style="list-style-type: none"> .. AFH 32-7084, AICUZ Program Manager's Guide .. AFI 32-7001, Environmental Management .. AFI 32-7063, AICUZ Program .. AFI 32-7070, Air Force Noise Program .. AFPD 32-70, Environmental Quality .. DoD Instruction 4165.57, AICUZ
Water Quality	<ul style="list-style-type: none"> .. 33 CFR Parts 320-330, Discharges of Dredge and Fill Material into Waters of the US .. 40 CFR Part 130, Water Quality Planning and Management .. Safe Drinking Water Act (SDWA), 42 U.S.C. § 300f et seq. 	<ul style="list-style-type: none"> .. AFI 23-201, Fuels Management .. AFI 32-1067, Water and Fuel Systems .. AFI 32-7001, Environmental Management .. AFPD 32-70, Environmental Quality
Wastewater and Storm Water	<ul style="list-style-type: none"> .. 40 CFR Part 122.26, Storm Water Discharges .. 40 CFR Part 112, Oil Pollution Prevention; Non-Transportation-Related Onshore Facilities .. Energy Policy Act (EPAAct) of 2005, 42 U.S.C. § 15801 et seq. .. Energy Independence and Security Act (EISA) of 2007, 42 U.S.C. § 17001 et seq. .. Federal Water Pollution Control Act (Clean Water Act) as amended, 33 U.S.C. § 1251 et seq. 	<ul style="list-style-type: none"> .. AFI 23-201, Fuels Management .. AFI 32-1021, Planning and Programming Military Construction Projects .. AFI 32-1067, Water and Fuel Systems .. AFI 32-7001, Environmental Management .. AFPD 32-70, Environmental Quality .. Air Force Technical Order 42C-1-2, October 2003

Compliance Area	Regulatory Requirements	Air Force Requirements, Policies, and Instructions
	<ul style="list-style-type: none"> .. EO 13423, Strengthening Federal Environmental, Energy, and Transportation Management .. EO 13514, Federal Leadership in Environmental, Energy, and Economic Performance 	<ul style="list-style-type: none"> .. AFCEC Engineering Technical Letter 14-1: Construction and Operation and Maintenance Guidance for Storm Water Systems
<p>Hazardous Materials/Waste and Solid Waste</p>	<ul style="list-style-type: none"> .. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9601 et seq. .. Emergency Planning and Community Right to Know Act (EPCRA), 42 U.S.C. § 11004 et seq. .. Hazardous Materials Transportation Act (HMTA), 49 U.S.C. § 5101 et seq. .. 40CFR Part 280, Technical Standards And Corrective Action Requirements For Owners And Operators Of Underground Storage Tanks (UST) .. 40CFR Part 281, Approval Of State Underground Storage Tank Programs .. National Aerospace Standard (NAS) 411, Hazardous Materials Management Program .. NAS 411-1, Hazardous Materials Target List .. Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 et seq. .. Toxic Substances Control Act (TSCA), 15 U.S.C. § 2601 et seq. 	<ul style="list-style-type: none"> .. AFI 32-1021, Planning and Programming Military Construction Projects .. AFI 32-1054, Corrosion Control .. AFI 32-7001, Environmental Management .. AFI 32-7020, The Environmental Restoration Program (ERP) .. AFI 32-7042, Waste Management .. AFI 32-7044, Storage Tank Environmental Compliance .. AFI 32-7047, Environmental Compliance, Release and Inspection Reporting .. AFI 32-7086, Hazardous Materials Management .. AFPD 32-70, Environmental Quality
<p>Environmental Justice</p>	<ul style="list-style-type: none"> .. EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations .. EO 13045, Protection of Children from Environmental Health Risks and Safety Risks (Protection of Children) 	

Note: Listing is not intended to be comprehensive. Only regulations, policies and instructions most relevant to the CRH EA are shown.

When considering the affected environment, the various physical, biological, economic, and social environmental factors must be considered. In addition to the National Environmental Policy Act (NEPA), there are other environmental laws and Executive Orders (EOs) to be considered when preparing environmental analyses. These laws are summarized below.

NOTE: This is not a complete list of all applicable laws, regulations, policies, and planning criteria potentially applicable to documents, however, it does provide a general summary for use as a reference.

Noise

Federal, state, and local governments have established noise guidelines and regulations for the purpose of protecting citizens from potential hearing damage and from various other adverse physiological, psychological, and social effects associated with noise. The Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978, requires compliance with state and local noise laws and ordinances. The U.S. Department of Housing and Urban Development (HUD), in coordination with the Department of Defense (DOD) and the FAA, has established criteria for acceptable noise levels for aircraft operations relative to various types of land use.

The USAF, through AFI 32-7070, Air Force Noise Program, consolidates existing guidance related to weapon system noise found in multiple AFIs into one primary guidance document and provides more detailed direction. This AFI directs the use of noise models and metrics, provides information that can be used to manage and explain noise exposure to off-base populations, and analyzing the effects of noise on the natural and human environments when conducting environmental impact analysis. It supports compatible land use analysis, comprehensive planning, management of noise inquiries/complaints, and the USAF Environmental Impact Analysis Process program.

The U.S. Army, through AR 200-1, Environmental Protection and Enhancement, implements federal laws concerning environmental noise from U.S. Army activities. The USAF's Air Installation Compatible Use Zone (AICUZ) Program, (AFI 32-7063), provides guidance to air bases and local communities in planning land uses compatible with airfield operations. The AICUZ program describes existing aircraft noise and flight safety zones on and near USAF installations.

Air Quality

The Clean Air Act (CAA) of 1970, and Amendments of 1977 and 1990, recognizes that increases in air pollution result in danger to public health and welfare. To protect and enhance the quality of the Nation's air resources, the CAA authorizes the U.S. Environmental Protection Agency (USEPA) to set six National Ambient Air Quality Standards (NAAQS) that regulate carbon monoxide, lead, nitrogen dioxide, ozone, sulfur dioxide, and particulate matter pollution emissions. The CAA seeks to reduce or eliminate the creation of pollutants at their source, and designates this responsibility to state and local governments. States are directed to utilize financial and technical assistance and leadership from the Federal Government to develop implementation plans to achieve NAAQS. Geographic areas are officially designated by the USEPA as being in attainment or nonattainment for pollutants in relation to their compliance with NAAQS. Geographic regions established for air quality planning purposes are designated as Air Quality Control Regions (AQCRs). Pollutant concentration levels are measured at designated monitoring stations within the AQCR. An area with insufficient monitoring data is designated as unclassified. Section 309 of the CAA authorizes USEPA to review and comment on impact statements prepared by other agencies.

An agency should consider what effect an action might have on NAAQS due to short-term increases in air pollution during construction and long-term increases resulting from changes in traffic patterns. For actions in attainment areas, a federal agency could also be subject to USEPA's Prevention of Significant Deterioration (PSD) regulations. These regulations apply to new major stationary sources and modifications to such sources. Although few agency facilities will actually emit pollutants, increases in pollution can result from a change in traffic patterns or volume. Section 118 of the CAA waives federal immunity from complying with the CAA and states all federal agencies will comply with all federal- and state-approved requirements.

The General Conformity Rule requires that any federal action meet the requirements of a State Implementation Plan or Federal Implementation Plan. More specifically, CAA conformity is ensured when a federal action does not cause a new violation of the NAAQS; contribute to an increase in the frequency or severity of violations of NAAQS; or delay the timely attainment of any NAAQS, interim progress milestones, or other milestones toward achieving compliance with the NAAQS.

The General Conformity Rule applies only to actions in nonattainment or maintenance areas and considers both direct and indirect emissions. The rule applies only to federal actions that are considered “regionally significant” or where the total emissions from the action meet or exceed the de minimis thresholds presented in 40 Code of Federal Regulations (CFR) §93.153. If a federal action does not meet or exceed the de minimis thresholds and is not considered regionally significant, then a full Conformity Determination is not required.

On 13 May 2010, the USEPA issued the Greenhouse Gas (GHG) Tailoring Rule that sets thresholds for GHG emissions from large stationary sources. The new GHG emissions thresholds for large stationary sources define when permits under the New Source Review Prevention of PSD and Title V Operating Permit programs are required for new and existing industrial facilities. Beginning 2 January 2011, large industrial facilities that have CAA permits for non-GHG emissions must also include GHGs in these permits. Beginning 1 July 2011, all new construction or renovations that increase GHG emissions by 75,000 tons of carbon dioxide or equivalent per year or more will be required to obtain construction permits for GHG emissions. Operating permits will be needed by all sources that emit GHGs above 75,000 tons of carbon dioxide or equivalent per year beginning in July 2011.

Water Resources

The Clean Water Act (CWA) of 1977 is an amendment to the federal Water Pollution Control Act of 1972, is administered by USEPA, and sets the basic structure for regulating discharges of pollutants into United States’ waters. The CWA requires USEPA to establish water quality standards for specified contaminants in surface waters and forbids the discharge of pollutants from a point source into navigable waters without a National Pollutant Discharge Elimination System (NPDES) permit. NPDES permits are issued by USEPA or the appropriate state if it has assumed responsibility. Section 404 of the CWA establishes a federal program to regulate the discharge of dredge and fill material into waters of the United States. Section 404 permits are issued by the U.S. Army Corps of Engineers. Waters of the United States include interstate and intrastate lakes, rivers, streams, and wetlands that are used for commerce, recreation, industry, sources of fish, and other purposes. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters. Each agency should consider the impact on water quality from actions such as the discharge of dredge or fill material into U.S. waters from construction, or the discharge of pollutants as a result of facility occupation.

Section 303(d) of the CWA requires states and USEPA to identify waters not meeting state water quality standards and to develop Total Maximum Daily Loads (TMDLs). A TMDL is the maximum amount of a pollutant that a waterbody can receive and still be in compliance with state water quality standards. After determining TMDLs for impaired waters, states are required to identify all point and nonpoint sources of pollution in a watershed that are contributing to the impairment and to develop an implementation plan that will allocate reductions to each source to meet the state standards. The TMDL program is currently the Nation’s most comprehensive attempt to restore and improve water quality. The TMDL program does not explicitly require the protection of riparian areas. However, implementation of the TMDL plans typically calls for restoration of riparian areas as one of the required management measures for achieving reductions in nonpoint source pollutant loadings.

The Safe Drinking Water Act (SDWA) of 1974 establishes a federal program to monitor and increase the safety of all commercially and publicly supplied drinking water. Congress amended the SDWA in 1986, mandating dramatic changes in nationwide safeguards for drinking water and establishing new federal enforcement responsibility on the part of USEPA. The 1986 amendments to the SDWA require USEPA to establish Maximum Contaminant Levels (MCLs), Maximum Contaminant Level Goals (MCLGs), and Best Available Technology (BAT) treatment techniques for organic, inorganic, radioactive, and microbial

contaminants; and turbidity. MCLGs are maximum concentrations below which no negative human health effects are known to exist. The 1996 amendments set current federal MCLs, MCLGs, and BATs for organic, inorganic, microbiological, and radiological contaminants in public drinking water supplies. The Wild and Scenic Rivers Act of 1968 provides for a wild and scenic river system by recognizing the remarkable values of specific rivers of the Nation. These selected rivers and their immediate environment are preserved in a free-flowing condition, without dams or other construction. The policy not only protects the water quality of the selected rivers but also provides for the enjoyment of present and future generations. Any river in a free-flowing condition is eligible for inclusion, and can be authorized as such by an Act of Congress, an act of state legislature, or by the Secretary of the Interior upon the recommendation of the governor of the state(s) through which the river flows.

EO 13514, Federal Leadership in Environmental, Energy, and Economic Performance (5 October 2009), directed the USEPA to issue guidance on Section 438 of the Energy Independence and Security Act (EISA). The EISA establishes into law new storm water design requirements for federal construction projects that disturb a footprint of greater than 5,000 square feet of land. Under these requirements, predevelopment site hydrology must be maintained or restored to the maximum extent technically feasible with respect to temperature, rate, volume, and duration of flow. Predevelopment hydrology would be calculated and site design would incorporate storm water retention and reuse technologies to the maximum extent technically feasible. Post-construction analyses will be conducted to evaluate the effectiveness of the as-built storm water reduction features. These regulations are applicable to DOD Unified Facilities Criteria. Additional guidance is provided in the USEPA's *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act*.

EO 13514 also requires federal agencies to improve water efficiency and management by reducing potable water consumption intensity by 2 percent annually, or by 26 percent, by Fiscal Year (FY) 2020, relative to a FY 2007 baseline. Furthermore, federal agencies must also reduce agency industrial, landscaping, and agricultural water consumption by 2 percent annually, or 20 percent, by FY 2020, relative to a FY 2010 baseline.

Biological Resources

The Endangered Species Act (ESA) of 1973 establishes a federal program to conserve, protect, and restore threatened and endangered plants and animals and their habitats. The ESA specifically charges federal agencies with the responsibility of using their authority to conserve threatened and endangered species. All federal agencies must ensure any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction of critical habitat for these species, unless the agency has been granted an exemption. The Secretary of the Interior, using the best available scientific data, determines which species are officially endangered or threatened, and the U.S. Fish and Wildlife Service (USFWS) maintains the list. A list of federal endangered species can be obtained from the Endangered Species Division, USFWS (703-358-2171). States might also have their own lists of threatened and endangered species that can be obtained by calling the appropriate state Fish and Wildlife office. Some species also have laws specifically for their protection (e.g., Bald Eagle Protection Act).

The Migratory Bird Treaty Act (MBTA) of 1918, as amended, implements treaties and conventions between the United States, Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Unless otherwise permitted by regulations, the MBTA makes it unlawful to pursue, hunt, take, capture, or kill; attempt to take, capture, or kill; possess; offer to or sell, barter, purchase, or deliver; or cause to be shipped, exported, imported, transported, carried, or received any migratory bird, part, nest, egg, or product, manufactured or not. The MBTA also makes it unlawful to ship, transport, or carry from one state, territory, or district to another; or through a foreign country, any bird, part, nest, or egg that was captured, killed, taken, shipped, transported, or carried contrary to the laws from where it was obtained; and import from Canada any bird, part, nest, or egg obtained contrary to the laws of the province from which it was obtained. The U.S. Department of the Interior has authority to arrest, with or without a warrant, a person violating the MBTA.

The Sikes Act (16 United States Code [U.S.C.] §§670a-670o, 74 Stat. 1052), as amended, Public Law (P.L.) 86-797, approved 15 September 1960, provides for cooperation by the Departments of the Interior and Defense with state agencies in planning, development, and maintenance of fish and wildlife resources on military reservations throughout the United States. In November 1997, the Sikes Act was amended via the Sikes Act Improvement Amendment (P.L. 105-85, Division B, Title XXIX) to require the Secretary of Defense to carry out a program to provide for the conservation and rehabilitation of natural resources on military installations. To facilitate this program, the amendments require the Secretaries of the military departments to prepare and implement Integrated Natural Resources Management Plans (INRMPs) for each military installation in the United States unless the absence of significant natural resources on a particular installation makes preparation of a plan for the installation inappropriate. INRMPs must be reviewed by the USFWS and applicable states every 5 years. The National Defense Authorization Act of 2004 modified Section 4(a) (3) of the ESA to preclude the designation of critical habitat on DOD lands that are subject to an INRMP, if the Secretary of the Interior determines in writing that such a plan provides a benefit to the species for which critical habitat is proposed for designation. EO 11514, Protection and Enhancement of Environmental Quality (5 March 1970), states that the President, with assistance from the Council on Environmental Quality (CEQ), will lead a national effort to provide leadership in protecting and enhancing the environment for the purpose of sustaining and enriching human life. Federal agencies are directed to meet national environmental goals through their policies, programs, and plans. Agencies should also continually monitor and evaluate their activities to protect and enhance the quality of the environment. Consistent with NEPA, agencies are directed to share information about existing or potential environmental problems with all interested parties, including the public, in order to obtain their views.

EO 13186, Conservation of Migratory Birds (10 January 2001), creates a more comprehensive strategy for the conservation of migratory birds by the Federal Government. EO 13186 provides a specific framework for the Federal Government's compliance with its treaty obligations to Canada, Mexico, Russia, and Japan. EO 13186 provides broad guidelines on conservation responsibilities and requires the development of more detailed guidance in a Memorandum of Understanding (MOU). EO 13186 will be coordinated and implemented by the USFWS. The MOU will outline how federal agencies will promote conservation of migratory birds. EO 13186 requires the support of various conservation planning efforts already in progress; incorporation of bird conservation considerations into agency planning, including NEPA analyses; and reporting annually on the level of take of migratory birds.

The USAF, through AFI 32-7064, Integrated Natural Resources Management, addresses the management of natural resources on USAF properties to comply with federal law and applicable state and local standards. The AFI provides installations a framework for planning, implementing, and documenting natural resources management programs. The primary objective of USAF natural resources programs is to sustain, restore, and modernize natural infrastructure to ensure operational capability and no net loss in the capability of USAF lands to support the military mission of the installation. In accordance with the Sikes Act, the Integrated Natural Resources Management Plan (INRMP) is the principal tool for managing military installation natural resources. Each military installation in the United States under the jurisdiction of the Secretary of Defense must prepare and implement an INRMP unless a determination is made that the absence of significant natural resources makes preparation of such a plan inappropriate. INRMPs will be prepared to assist the installation commander with the conservation and rehabilitation of natural resources consistent with the use of the installation to ensure the readiness of the Armed Forces.

Cultural Resources

The American Indian Religious Freedom Act of 1978 and Amendments of 1994 recognize that freedom of religion for all people is an inherent right, and traditional American Indian religions are an indispensable and irreplaceable part of Indian life. It also recognized the lack of federal policy on this issue and made it the policy of the United States to protect and preserve the inherent right of religious freedom for Native Americans. The 1994 Amendments provide clear legal protection for the religious use of peyote cactus as a religious sacrament. Federal agencies are responsible for evaluating their actions and policies to determine if changes should be made to protect and preserve the religious cultural rights and practices of

Native Americans. These evaluations must be made in consultation with native traditional religious leaders.

The Archaeological Resource Protection Act (ARPA) of 1979 protects archaeological resources on public and American Indian lands. It provides felony-level penalties for the unauthorized excavation, removal, damage, alteration, or defacement of any archaeological resource, defined as material remains of past human life or activities which are at least 100 years old. Before archaeological resources are excavated or removed from public lands, the federal land manager must issue a permit detailing the time, scope, location, and specific purpose of the proposed work. ARPA also fosters the exchange of information about archaeological resources between governmental agencies, the professional archaeological community, and private individuals. ARPA is implemented by regulations found in 43 CFR Part 7. The National Historic Preservation Act (NHPA) of 1966 sets forth national policy to identify and preserve properties of state, local, and national significance. The NHPA establishes the Advisory Council on Historic Preservation (ACHP), State Historic Preservation Officers (SHPOs), and the National Register of Historic Places (NRHP). The ACHP advises the President, Congress, and federal agencies on historic preservation issues. Section 106 of the NHPA directs federal agencies to take into account effects of their undertakings (actions and authorizations) on properties included in or eligible for the NRHP. Section 110 sets inventory, nomination, protection, and preservation responsibilities for federally owned cultural properties. Section 106 of the act is implemented by regulations of the ACHP, 36 CFR Part 800. Agencies should coordinate studies and documents prepared under Section 106 with NEPA where appropriate. However, NEPA and NHPA are separate statutes and compliance with one does not constitute compliance with the other. For example, actions that qualify for a categorical exclusion under NEPA might still require Section 106 review under NHPA. It is the responsibility of the agency official to identify properties in the area of potential effects, and whether they are included or eligible for inclusion in the NRHP. Section 110 of the NHPA requires federal agencies to identify, evaluate, and nominate historic property under agency control to the NRHP.

T

he Native American Graves Protection and Repatriation Act of 1990 establishes rights of American Indian tribes to claim ownership of certain “cultural items,” defined as Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony, held or controlled by federal agencies. Cultural items discovered on federal or tribal lands are, in order of primacy, the property of lineal descendants, if these can be determined, and then the tribe owning the land where the items were discovered or the tribe with the closest cultural affiliation with the items. Discoveries of cultural items on federal or tribal land must be reported to the appropriate American Indian tribe and the federal agency with jurisdiction over the land. If the discovery is made as a result of a land use, activity in the area must stop and the items must be protected pending the outcome of consultation with the affiliated tribe.

EO 11593, Protection and Enhancement of the Cultural Environment (13 May 1971), directs the Federal Government to provide leadership in the preservation, restoration, and maintenance of the historic and cultural environment. Federal agencies are required to locate and evaluate all federal sites under their jurisdiction or control that might qualify for listing on the NRHP. Agencies must allow the ACHP to comment on the alteration, demolition, sale, or transfer of property that is likely to meet the criteria for listing as determined by the Secretary of the Interior in consultation with the SHPO. Agencies must also initiate procedures to maintain federally owned sites listed on the NRHP.

EO 13007, Indian Sacred Sites (24 May 1996), provides that agencies managing federal lands, to the extent practicable, permitted by law, and not inconsistent with agency functions, shall accommodate American Indian religious practitioners’ access to and ceremonial use of American Indian sacred sites, shall avoid adversely affecting the physical integrity of such sites, and shall maintain the confidentiality of such sites. Federal agencies are responsible for informing tribes of proposed actions that could restrict future access to or ceremonial use of, or adversely affect the physical integrity of, sacred sites.

EO 13175, Consultation and Coordination with Indian Tribal Governments (6 November 2000), was issued to provide for regular and meaningful consultation and collaboration with Native American tribal officials in the development of federal policies that have tribal implications, and to strengthen the United States’ government-to-government relationships with Native American tribes. EO 13175 recognizes the

following fundamental principles: Native American tribes exercise inherent sovereignty over their lands and members, the U.S. Government has a unique trust relationship with Native American tribes and deals with them on a government-to-government basis, and Native American tribes have the right to self-government and self-determination.

EO 13287, Preserve America (3 March 2003), orders federal agencies to take a leadership role in protection, enhancement, and contemporary use of historic properties owned by the Federal Government, and promote intergovernmental cooperation and partnerships for preservation and use of historic properties. EO 13287 established new accountability for agencies with respect to inventories and stewardship.

The USAF, through AFI 32-7064, Cultural Resources Management, outlines responsibilities, required actions, and processes for managing and protecting cultural resources on USAF property. The objectives of the USAF cultural resources management program are to meet or exceed DOD cultural resources measures of merit (Enclosure 5 in DODI 4715.16, Cultural Resources Management) and to support military readiness, installation program planning and sustainment, compliance with federal laws and regulations, stewardship of the USAF's important cultural resources for the benefit of current and future generations, and continual improvement of cultural resources management.

Socioeconomics and Environmental Justice

EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (11 February 1994), directs federal agencies to make achieving environmental justice part of their mission. Agencies must identify and address the adverse human health or environmental effects that its activities have on minority and low-income populations, and develop agencywide environmental justice strategies. The strategy must list "programs, policies, planning and public participation processes, enforcement, and/or rulemakings related to human health or the environment that should be revised to promote enforcement of all health and environmental statutes in areas with minority populations and low-income populations, ensure greater public participation, improve research and data collection relating to the health of and environment of minority populations and low-income populations, and identify differential patterns of consumption of natural resources among minority populations and low-income populations." A copy of the strategy and progress reports must be provided to the federal Working Group on Environmental Justice. Responsibility for compliance with EO 12898 is with each federal agency.

Hazardous Materials and Waste

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 authorizes USEPA to respond to spills and other releases of hazardous substances to the environment, and authorizes the National Oil and Hazardous Substances Pollution Contingency Plan. CERCLA also provides a federal "Superfund" to respond to emergencies immediately. Although the "Superfund" provides funds for cleanup of sites where potentially responsible parties cannot be identified, USEPA is authorized to recover funds through damages collected from responsible parties. This funding process places the economic burden for cleanup on polluters. Section 120(h) of CERCLA requires federal agencies to notify prospective buyers of contaminated federal properties about the type, quantity, and location of hazardous substances that would be present.

The Pollution Prevention Act of 1990 encourages manufacturers to avoid the generation of pollution by modifying equipment and processes; redesigning products; substituting raw materials; and making improvements in management techniques, training, and inventory control. Consistent with pollution prevention principles, EO 13423, Strengthening Federal Environmental, Energy, and Transportation Management (24 January 2007 [revoking EO 13148]), sets a goal for all federal agencies to promote environmental practices, including acquisition of biobased, environmentally preferable, energy-efficient, water-efficient, and recycled-content products; and use of paper of at least 30 percent post-consumer fiber content. In addition, EO 13423 sets a goal that requires federal agencies to ensure that they reduce the quantity of toxic and hazardous chemicals and materials acquired, used, or disposed of; increase diversion of solid waste, as appropriate; and maintain cost-effective waste prevention and recycling

programs at their facilities. Additionally, in Federal Register Volume 58 Number 18 (29 January 1993), CEQ provides guidance to federal agencies on how to “incorporate pollution prevention principles, techniques, and mechanisms into their planning and decisionmaking processes and to evaluate and report those efforts, as appropriate, in documents pursuant to NEPA.”

The Resource Conservation and Recovery Act (RCRA) of 1976 is an amendment to the Solid Waste Disposal Act. RCRA authorizes USEPA to provide for “cradle-to-grave” management of hazardous waste and sets a framework for the management of nonhazardous municipal solid waste. Under RCRA, hazardous waste is controlled from generation to disposal through tracking and permitting systems, and restrictions and controls on the placement of waste on or into the land. Under RCRA, a waste is defined as hazardous if it is ignitable, corrosive, reactive, toxic, or listed by USEPA as being hazardous. With the Hazardous and Solid Waste Amendments (HSWA) of 1984, Congress targeted stricter standards for waste disposal and encouraged pollution prevention by prohibiting the land disposal of particular wastes. The HSWA strengthens control of both hazardous and nonhazardous waste and emphasizes the prevention of pollution of groundwater.

The Superfund Amendments and Reauthorization Act (SARA) of 1986 mandates strong clean-up standards and authorizes USEPA to use a variety of incentives to encourage settlements. Title III of SARA authorizes the Emergency Planning and Community Right to Know Act, which requires facility operators with “hazardous substances” or “extremely hazardous substances” to prepare comprehensive emergency plans and to report accidental releases. If a federal agency acquires a contaminated site, it can be held liable for cleanup as the property owner/operator. A federal agency can also incur liability if it leases a property, as the courts have found lessees liable as “owners.” However, if the agency exercises due diligence by conducting a Phase I Environmental Site Assessment, it can claim the “innocent purchaser” defense under CERCLA. According to Title 42 U.S.C. §9601(35), the current owner/operator must show it undertook “all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice” before buying the property to use this defense.

The Toxic Substance Control Act (TSCA) of 1976 consists of four titles. Title I established requirements and authorities to identify and control toxic chemical hazards to human health and the environment. TSCA authorized USEPA to gather information on chemical risks, require companies to test chemicals for toxic effects, and regulate chemicals with unreasonable risk. TSCA also singled out polychlorinated biphenyls (PCBs) for regulation, and, as a result, PCBs are being phased out. PCBs are persistent when released into the environment and accumulate in the tissues of living organisms. They have been shown to cause adverse health effects on laboratory animals and could cause adverse health effects in humans. TSCA and its regulations govern the manufacture, processing, distribution, use, marking, storage, disposal, clean-up, and release reporting requirements for numerous chemicals like PCBs. TSCA Title II provides statutory framework for “Asbestos Hazard Emergency Response,” which applies only to schools. TSCA Title III, “Indoor Radon Abatement,” states indoor air in buildings of the United States should be as free of radon as the outside ambient air. Federal agencies are required to conduct studies on the extent of radon contamination in buildings they own. TSCA Title IV, “Lead Exposure Reduction,” directs federal agencies to “conduct a comprehensive program to promote safe, effective, and affordable monitoring, detection, and abatement of lead-based paint and other lead exposure hazards.” Further, any federal agency having jurisdiction over a property or facility must comply with all federal, state, interstate, and local requirements concerning lead-based paint.

Energy

The Energy Policy Act (EPA) of 2005, P.L. 109-58, amended portions of the National Energy Conservation Policy Act and established energy management goals for federal facilities and fleets. Section 109 of EPA directs that new federal buildings (commercial or residential) be designed 30 percent below American Society of Heating, Refrigerating, and Air-Conditioning Engineers standards or the International Energy Code. Section 109 also includes the application of sustainable design principles for new buildings and requires federal agencies to identify new buildings in their budget requests that meet or exceed the standards. Section 203 of EPA requires that all federal agencies’ renewable electricity consumption meet or exceed 3 percent from FY 2007 through FY 2009, with increases to at

least 5 percent in FY 2010 through FY 2012 and 7.5 percent in FY 2013 and thereafter. Section 203 also establishes a double credit bonus for federal agencies if renewable electricity is produced onsite at a federal facility, on federal lands, or on Native American lands. Section 204 of EPAct establishes a photovoltaic energy commercialization program for federal buildings.

EO 13514, Federal Leadership In Environmental, Energy, And Economic Performance (5 October 2009), directs federal agencies to improve water use efficiency and management; implement high performance sustainable federal building design, construction, operation and management; and advance regional and local integrated planning by identifying and analyzing impacts from energy usage and alternative energy sources. EO 13514 also directs federal agencies to prepare and implement a Strategic Sustainability Performance Plan to manage its GHG emissions, water use, pollution prevention, regional development and transportation planning, sustainable building design and promote sustainability in its acquisition of goods and services. Section 2(g) requires new construction, major renovation, or repair and alteration of buildings to comply with the Guiding Principles for federal Leadership in High Performance and Sustainable Buildings. The CEQ regulations at 40 CFR 1502.16(e) directs agencies to consider the energy requirements and conservation potential of various alternatives and mitigation measures. Section 503(b) of EO 13423, Strengthening Federal Environmental, Energy, and Transportation Management, instructs federal agencies to conduct their environmental, transportation, and energy-related activities under the law in support of their respective missions in an environmentally, economically, and fiscally sound, integrated, continuously improving, efficient, and sustainable manner.

EO 13423 sets goals in energy efficiency, acquisition, renewable energy, toxic chemical reduction, recycling, sustainable buildings, electronics stewardship, fleets, and water conservation. Sustainable design measures such as the use of “green” technology (e.g., photovoltaic panels, solar collection, heat recovery systems, wind turbines, green roofs, and habitat-oriented storm water management) would be incorporated where practicable.

Appendix D Air Pollutant Emissions Calculations

(This page intentionally left blank)

**AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)**

(This page intentionally left blank)

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, Air Quality Compliance And Resource Management; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: KAFB

County(s): Bernalillo

Regulatory Area(s): Albuquerque, NM

b. Action Title: Combat Rescue Helicopter Transition

c. Project Number/s (if applicable):

d. Projected Action Start Date: 7 / 2017

e. Action Description:

The USAF is proposing to transition aging HH-60G helicopters with new HH-60W helicopters (also known as CRH) currently assigned to the 58 SOW at KAFB. The current aircraft fleet of 11 HH-60G PTAI and one BAI assigned to the 58 SOW would be transitioned to 11 HH-60W PTAI and three BAI helicopters. The aircraft fleet would remain the same except for minor overlap to accommodate additional training requirements and additional helicopters during the CRH transition, but is expected to be no more than one or two helicopters at any one time. The Proposed Action would allow the 58 SOW to continue its current mission of providing undergraduate, graduate, and refresher aircrew training for special operations and personnel rescue. It is anticipated the 58 SOW's current mission requirements would continue into the foreseeable future, and the HH-60Ws are needed for those future activities, as the existing HH-60Gs are expected to be phased out by fiscal year 2029. Under the Proposed Action, 58 SOW activities would not change as no new flight operations and no additional student throughput are planned or anticipated at this time. The flight approach and flight departure tracks to and from KAFB would also remain unchanged. Therefore, operational emissions are not quantitatively considered in the EA.

The Proposed Action contains eight dependent components required in support of the new HH-60W helicopters that will be evaluated in the EA document, some of which are not reasonably considered to produce a substantial amount of air emissions. The dependent components are:

- Helicopter restriping between Hangars 1001 and 1002 to provide flexibility to park additional helicopters and alleviate apron area congestion. Currently, up to eight helicopters can be parked between the hangars, and space is needed for up to four additional helicopters. The restriping would not require modifications to the concrete apron area. This component would occur in Fiscal Year 2019 and require one month to complete.
- Additional mooring points north of Hangar 1002 for C-130J aircraft, which would allow one C-130J aircraft to be tied down during weather-related events (e.g., high winds) and free up space in Hangar 1002 to park helicopters inside for protection. Currently, during high wind events, C-130J aircraft are parked inside Hangar 1002 for protection because there are not enough available mooring points to tie down all aircraft outside the hangar. At this time, it is expected that five mooring points are needed for one C-130J aircraft and would result in minor disturbance to the concrete apron area. This component would occur in Fiscal Year 2019 and require one month to complete.
- Construction of an 11,000-square foot (5,500 square feet per level) addition to Building 957 for office/training uses to the east side. The addition would consolidate office/training uses from Buildings 937, 948, 953, and 954. Removal of 30 personnel parking spaces on the east side of Building 957, per Antiterrorism/Force Protection (AT/FP) standards, to accommodate the two-level addition is required.

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

These parking spaces would be replaced by 40 new personnel parking spaces located. This component would occur in Fiscal Year 2020 and require eight months to complete.

- Demolition of Buildings 954 (7,343 square feet), 960 (1,200 square feet), and a BBQ Pavilion (600 square feet) to accommodate construction of a new 35,973 square feet training facility to accommodate the HH-60W helicopter flight simulators for aircrew training. The new building would be adjacent to the east side of Building 948. The new building would be constructed in two phases as detailed below. The CRH Simulator Facility would be constructed on an existing flat parking area adjacent to Building 954, while the ADAL CRH Simulator Facility would require the demolition of existing Building 954, Building 960, and a barbecue pavilion. The CRH Simulator Facility includes the construction of a new 9,709 square foot building on an existing parking lot. The new building would include one helicopter simulator facility bay, simulator support rooms, a communications room, multi-purpose meeting rooms, a mechanical/ electrical room, and restrooms. This component would occur in Fiscal Year 2017 and require 12 months to complete. The ADAL CRH Simulator Facility includes the construction of a new 26,455 square foot building and the demolition of existing Building 954, Building 960, and a barbecue pavilion. This second new building would include two additional helicopter simulator facility bays, simulator support rooms, a communications room, multi-purpose meeting rooms, a mechanical/ electrical room, and restrooms. Note the CRH Simulator Facility building is shown in tan in the center of the image, while the ADAL CRH Simulator Facility building is shown in light grey on the right side of the image. This component would occur in Fiscal Year 2020 and require 18 months to complete.

- Construction of 60 personnel parking spaces lost from the CRH Simulator Facility. The recapitalized 60 personnel parking spaces would displace an existing static aircraft display north of Building 957. The four static aircraft would be relocated. This component would occur in Fiscal Year 2018 and require two months to complete.

- Relocation of learning center capabilities in Building 954 to the ADAL CRH Simulator Facility. This component would occur in Fiscal Year 2020 and require one month to complete.

- Widening of an existing pedestrian sidewalk from 5 feet wide to 30 feet wide between existing Building 948 and new HH-60W helicopter flight simulator facility. This component would occur in Fiscal Year 2018 and require two months to complete.

f. Point of Contact:

Name: Paul Sanford
Title: Contractor
Organization: AECOM
Email: paul.sanford@aecom.com
Phone Number: 813.675.6843

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the “worst-case” and “steady state” (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: applicable
 not applicable

Conformity Analysis Summary:

2017

Pollutant	Action Emissions (ton/year [yr])	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Albuquerque, NM			
VOC	0.300		

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

Pollutant	Action Emissions (ton/year [yr])	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOx	1.966		
CO	1.666	100	No
SOx	0.003		
PM 10	0.504		
PM 2.5	0.102		
Pb	0.000		
NH3	0.001		
CO2e	333.9		

2018

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Albuquerque, NM			
VOC	1.330		
NOx	1.399		
CO	1.274	100	No
SOx	0.002		
PM 10	0.109		
PM 2.5	0.075		
Pb	0.000		
NH3	0.001		
CO2e	244.3		

2019

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Albuquerque, NM			
VOC	0.283		
NOx	1.778		
CO	1.654	100	No
SOx	0.004		
PM 10	0.395		
PM 2.5	0.086		
Pb	0.000		
NH3	0.001		
CO2e	349.5		

2020

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Albuquerque, NM			
VOC	0.678		
NOx	4.234		
CO	4.011	100	No
SOx	0.009		
PM 10	0.721		
PM 2.5	0.206		

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

Pb	0.000		
NH3	0.003		
CO2e	833.9		

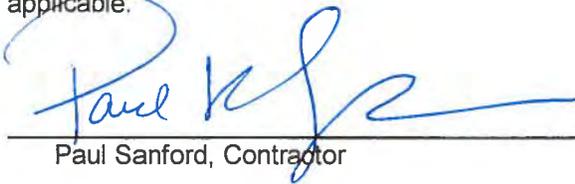
2021

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Albuquerque, NM			
VOC	0.089		
NOx	0.545		
CO	0.538	100	No
SOx	0.001		
PM 10	0.027		
PM 2.5	0.027		
Pb	0.000		
NH3	0.000		
CO2e	107.8		

2022 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Albuquerque, NM			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.



 Paul Sanford, Contractor



 DATE

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

(This page intentionally left blank)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

1. General Information

- Action Location

Base: KAFB

County(s): Bernalillo

Regulatory Area(s): Albuquerque, NM

- **Action Title:** Combat Rescue Helicopter Transition

- **Project Number/s (if applicable):**

- **Projected Action Start Date:** 7 / 2017

- Action Purpose and Need:

The purpose of the Proposed Action is to improve the overall efficiency of the CRH and the special operations and search and rescue missions conducted by the 58 SOW. The aging HH-60Gs are critical assets for the 58 SOW. The HH-60Gs are used to conduct search and rescue operations, medical evacuations, disaster response, and humanitarian assistance throughout the country and across the world. The aging HH-60Gs first entered service over 30 years ago, and are nearing the end of their life cycle. Delivery of the new HH-60Ws would allow the 58 SOW at KAFB to continue providing undergraduate, graduate, and refresher aircrew training for special operations and personnel rescue.

The Proposed Action is needed to address increased helicopter maintenance costs, resolve reliability deficiencies and enhance mission capability, improve training of military personnel, as well as maintain tactical superiority in operations of the 58 SOW that could be compromised by the continued use of the existing HH-60G helicopters. It is anticipated the activities of the 58 SOW would remain unchanged for the foreseeable future. The new HH-60Ws are needed for those future activities, as the existing HH-60Gs are expected to be phased out by fiscal year 2029.

KAFB is considered the prime location for the CRH transition due to the fact that search and rescue training is currently conducted by the 58 SOW. Keeping new Sikorsky helicopters (HH-60W) co-located with the existing training assets (i.e., Bell Huey helicopter, C-130 fixed-wing transport, and Bell Boeing Osprey tilt-rotor transport) would maintain a training synergy for the USAF. Separating the HH-60W from the existing training assets would greatly reduce effectiveness and increase training costs. Further, the helicopter/aircraft maintenance personnel and logistics lines are already in place at KAFB with the 58 SOW. Additionally, KAFB is considered the prime location for the CRH transition due to the availability of existing helicopter training landing zones in multiple environments (e.g., mountains, desert, forests, etc.). KAFB has established helicopter aerial refueling tracks, weapons ranges, drop zones, low-level training routes, and installation entry and exit procedures. These established areas provide needed training for USAF personnel, and would need to be re-established elsewhere if the CRH transition does not occur at KAFB.

- Action Description:

The USAF is proposing to transition aging HH-60G helicopters with new HH-60W helicopters (also known as CRH) currently assigned to the 58 SOW at KAFB. The current aircraft fleet of 11 HH-60G PTAI and one BAI assigned to the 58 SOW would be transitioned to 11 HH-60W PTAI and three BAI helicopters. The aircraft fleet would remain the same except for minor overlap to accommodate additional training requirements and additional helicopters during the CRH transition, but is expected to be no more than one or two helicopters at any one time. The Proposed Action would allow the 58 SOW to continue its current mission of providing undergraduate, graduate, and refresher aircrew training for special operations and personnel rescue. It is anticipated the 58 SOW's current mission requirements would continue into the foreseeable future, and the HH-60Ws are needed for those future activities, as the existing HH-60Gs are expected to be phased out by fiscal year 2029. Under the Proposed Action, 58 SOW activities would not change as no new flight operations and no additional student throughput are

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

planned or anticipated at this time. The flight approach and flight departure tracks to and from KAFB would also remain unchanged. Therefore, operational emissions are not quantitatively considered in the EA.

The Proposed Action contains eight dependent components required in support of the new HH-60W helicopters that will be evaluated in the EA document, some of which are not reasonably considered to produce a substantial amount of air emissions. The dependent components are:

- Helicopter restriping between Hangars 1001 and 1002 to provide flexibility to park additional helicopters and alleviate apron area congestion. Currently, up to eight helicopters can be parked between the hangars, and space is needed for up to four additional helicopters. The restriping would not require modifications to the concrete apron area. This component would occur in Fiscal Year 2019 and require one month to complete.

- Additional mooring points north of Hangar 1002 for C-130J aircraft, which would allow one C-130J aircraft to be tied down during weather-related events (e.g., high winds) and free up space in Hangar 1002 to park helicopters inside for protection. Currently, during high wind events, C-130J aircraft are parked inside Hangar 1002 for protection because there are not enough available mooring points to tie down all aircraft outside the hangar. At this time, it is expected that five mooring points are needed for one C-130J aircraft and would result in minor disturbance to the concrete apron area. This component would occur in Fiscal Year 2019 and require one month to complete.

- Construction of an 11,000-square foot (5,500 square feet per level) addition to Building 957 for office/training uses to the east side. The addition would consolidate office/training uses from Buildings 937, 948, 953, and 954. Removal of 30 personnel parking spaces on the east side of Building 957, per Antiterrorism/Force Protection (AT/FP) standards, to accommodate the two-level addition is required. These parking spaces would be replaced by 40 new personnel parking spaces located. This component would occur in Fiscal Year 2020 and require eight months to complete.

- Demolition of Buildings 954 (7,343 square feet), 960 (1,200 square feet), and a BBQ Pavilion (600 square feet) to accommodate construction of a new 36,164 square feet training facility to accommodate the HH-60W helicopter flight simulators for aircrew training. The new building would be adjacent to the east side of Building 948. The new building would be constructed in two phases as detailed below. The CRH Simulator Facility would be constructed on an existing flat parking area adjacent to Building 954, while the ADAL CRH Simulator Facility would require the demolition of existing Building 954, Building 960, and a barbecue pavilion. The CRH Simulator Facility includes the construction of a new 9,709 square foot building on an existing parking lot. The new building would include one helicopter simulator facility bay, simulator support rooms, a communications room, multi-purpose meeting rooms, a mechanical/ electrical room, and restrooms. This component would occur in Fiscal Year 2017 and require 12 months to complete. The ADAL CRH Simulator Facility includes the construction of a new 26,455 square foot building and the demolition of existing Building 954, Building 960, and a barbecue pavilion. This second new building would include two additional helicopter simulator facility bays, simulator support rooms, a communications room, multi-purpose meeting rooms, a mechanical/ electrical room, and restrooms. Note the CRH Simulator Facility building is shown in tan in the center of the image, while the ADAL CRH Simulator Facility building is shown in light grey on the right side of the image. This component would occur in Fiscal Year 2020 and require 18 months to complete.

- Construction of 60 personnel parking spaces lost from the CRH Simulator Facility. The recapitalized 60 personnel parking spaces would displace an existing static aircraft display north of Building 957. The four static aircraft would be relocated. This component would occur in Fiscal Year 2018 and require two months to complete.

- Relocation of learning center capabilities in Building 954 to the ADAL CRH Simulator Facility. This component would occur in Fiscal Year 2020 and require one month to complete.

- Widening of an existing pedestrian sidewalk from 5 feet wide to 30 feet wide between existing Building 948 and new HH-60W helicopter flight simulator facility. This component would occur in Fiscal Year 2018 and require two months to complete.

- Point of Contact

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

Name: Paul Sanford
Title: Contractor
Organization: AECOM
Email: paul.sanford@aecom.com
Phone Number: 813.675.6843

- Activity List:

	Activity Type	Activity Title
2.	Construction / Demolition	Restripe Helicopter Parking
3.	Construction / Demolition	Building 957 Addition
4.	Construction / Demolition	Construct CRH Simulator Facility Phase I
5.	Construction / Demolition	Construct CRH Simulator Facility Phase II
6.	Construction / Demolition	Recapitalize 60 Parking Spaces

2. Construction / Demolition

2.1 General Information & Timeline Assumptions

- Activity Location

County: Bernalillo
Regulatory Area(s): Albuquerque, NM

- Activity Title: Restripe Helicopter Parking

- Activity Description:

• Helicopter restriping between Hangars 1001 and 1002 to provide flexibility to park additional helicopters and alleviate apron area congestion. Currently, up to eight helicopters can be parked between the hangars, and space is needed for up to four additional helicopters. The restriping would not require modifications to the concrete apron area. This component would occur in Fiscal Year 2019 and require one month to complete. ASSUME 96000 SF OF SPACE FOR CALCULATION PURPOSES

- Activity Start Date

Start Month: 10
Start Month: 2018

- Activity End Date

Indefinite: False
End Month: 10
End Month: 2018

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	1.113600
SO _x	0.000000
NO _x	0.000000
CO	0.000000
PM 10	0.000000

Pollutant	Total Emissions (TONs)
PM 2.5	0.000000
Pb	0.000000
NH ₃	0.000000
CO _{2e}	0.0

2.1 Architectural Coatings Phase

2.1.1 Architectural Coatings Phase Timeline Assumptions

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Phase Start Date

Start Month: 10
Start Quarter: 1
Start Year: 2018

- Phase Duration

Number of Month: 1
Number of Days: 0

2.1.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information

Building Category:
Total Square Footage (ft²):96000
Number of Units: N/A

- Architectural Coatings Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

2.1.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	Pb	NH ₃	CO _{2e}
LDGV	000.604	000.007	000.679	005.119	000.013	000.012		000.033	00365.157
LDGT	000.784	000.010	001.171	008.128	000.015	000.013		000.034	00488.008
HDGV	001.315	000.015	003.118	025.189	000.035	000.031		000.045	00760.452
LDDV	000.249	000.003	000.329	003.517	000.007	000.006		000.008	00371.991
LDDT	000.550	000.005	000.880	007.137	000.008	000.008		000.008	00579.910
HDDV	000.934	000.014	009.704	002.987	000.373	000.344		000.031	01586.560
MC	002.847	000.008	000.870	014.993	000.028	000.025		000.051	00396.071

2.1.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase

$$VMT_{WT} = (1 * WT * PA) / 800$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

1: Conversion Factor man days to trips (1 trip / 1 man * day)

WT: Average Worker Round Trip Commute (mile)

PA: Paint Area (ft²)

800: Conversion Factor square feet to man days (1 ft² / 1 man * day)

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

EF_{POL}: Emission Factor for Pollutant (grams/mile)
 VM: Worker Trips On Road Vehicle Mixture (%)
 2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

$$VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0$$

VOC_{AC}: Architectural Coating VOC Emissions (TONs)
 BA: Area of Building (ft²)
 2.0: Conversion Factor total area to coated area (2.0 ft² coated area / total area)
 0.0116: Emission Factor (lb/ft²)
 2000: Conversion Factor pounds to tons

3. Construction / Demolition

3.1 General Information & Timeline Assumptions

- Activity Location

County: Bernalillo
Regulatory Area(s): Albuquerque, NM

- Activity Title: Building 957 Addition

- Activity Description:

- Construction of an 11,000-square foot (5,500 square feet per level) addition to Building 957 for office/training uses to the east side. The addition would consolidate office/training uses from Buildings 937, 948, 953, and 954. Removal of 30 personnel parking spaces on the east side of Building 957, per Antiterrorism/Force Protection (AT/FP) standards, to accommodate the two-level addition is required. These parking spaces would be replaced by 40 new personnel parking spaces located. This component would occur in Fiscal Year 2020 and require eight months to complete.

- Activity Start Date

Start Month: 10
Start Month: 2019

- Activity End Date

Indefinite: False
End Month: 5
End Month: 2020

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.516912
SO _x	0.006571
NO _x	3.289922
CO	2.977469
PM 10	0.982092

Pollutant	Total Emissions (TONs)
PM 2.5	0.156827
Pb	0.000000
NH ₃	0.001885
CO _{2e}	644.4

3.1 Site Grading Phase

3.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

Start Month: 10
Start Quarter: 1
Start Year: 2019

- Phase Duration

Number of Month: 8
Number of Days: 0

3.1.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft²): 10368
Amount of Material to be Hauled On-Site (yd³): 0
Amount of Material to be Hauled Off-Site (yd³): 1152

- Site Grading Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	6
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	6
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

3.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Graders Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0982	0.0014	0.6490	0.5786	0.0316	0.0316	0.0088	132.96
Other Construction Equipment Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0595	0.0012	0.3971	0.3522	0.0158	0.0158	0.0053	122.63
Rubber Tired Dozers Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.2226	0.0024	1.6948	0.8387	0.0682	0.0682	0.0200	239.58

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

Tractors/Loaders/Backhoes Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0471	0.0007	0.3018	0.3630	0.0159	0.0159	0.0042	66.904

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	Pb	NH ₃	CO _{2e}
LDGV	000.340	000.002	000.276	003.604	000.008	000.007		000.024	00328.206
LDGT	000.416	000.003	000.480	005.057	000.010	000.009		000.025	00423.247
HDGV	000.764	000.005	001.218	016.264	000.023	000.020		000.044	00760.998
LDDV	000.119	000.003	000.146	002.473	000.004	000.004		000.008	00318.976
LDDT	000.281	000.004	000.446	004.521	000.007	000.006		000.008	00458.185
HDDV	000.618	000.013	006.194	002.048	000.195	000.179		000.030	01519.413
MC	002.745	000.003	000.847	013.480	000.027	000.024		000.054	00396.763

3.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (20 * ACRE * WD) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)
 20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
 ACRE: Total acres (acres)
 WD: Number of Total Work Days (days)
 2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)
 NE: Number of Equipment
 WD: Number of Total Work Days (days)
 H: Hours Worked per Day (hours)
 EF_{POL}: Emission Factor for Pollutant (lb/hour)
 2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
 HA_{OnSite}: Amount of Material to be Hauled On-Site (yd³)
 HA_{OffSite}: Amount of Material to be Hauled Off-Site (yd³)
 HC: Average Hauling Truck Capacity (yd³)
 (1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)
 HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
 VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
 0.002205: Conversion Factor grams to pounds
 EF_{POL}: Emission Factor for Pollutant (grams/mile)
 VM: Vehicle Exhaust On Road Vehicle Mixture (%)
 2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
 WD: Number of Total Work Days (days)
 WT: Average Worker Round Trip Commute (mile)
 1.25: Conversion Factor Number of Construction Equipment to Number of Works
 NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
 VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
 0.002205: Conversion Factor grams to pounds
 EF_{POL}: Emission Factor for Pollutant (grams/mile)
 VM: Worker Trips On Road Vehicle Mixture (%)
 2000: Conversion Factor pounds to tons

3.2 Building Construction Phase

3.2.1 Building Construction Phase Timeline Assumptions

- Phase Start Date

Start Month: 10
Start Quarter: 1
Start Year: 2019

- Phase Duration

Number of Month: 8
Number of Days: 0

3.2.2 Building Construction Phase Assumptions

- General Building Construction Information

Building Category: Office or Industrial
Area of Building (ft²): 11000
Height of Building (ft): 15
Number of Units: N/A

- Building Construction Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	4
Forklifts Composite	2	6
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

3.2.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Cranes Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0953	0.0013	0.7235	0.3981	0.0286	0.0286	0.0086	128.84
Forklifts Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0344	0.0006	0.1923	0.2166	0.0085	0.0085	0.0031	54.473
Tractors/Loaders/Backhoes Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0471	0.0007	0.3018	0.3630	0.0159	0.0159	0.0042	66.904

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	Pb	NH ₃	CO _{2e}
LDGV	000.340	000.002	000.276	003.604	000.008	000.007		000.024	00328.206
LDGT	000.416	000.003	000.480	005.057	000.010	000.009		000.025	00423.247
HDGV	000.764	000.005	001.218	016.264	000.023	000.020		000.044	00760.998
LDDV	000.119	000.003	000.146	002.473	000.004	000.004		000.008	00318.976
LDDT	000.281	000.004	000.446	004.521	000.007	000.006		000.008	00458.185
HDDV	000.618	000.013	006.194	002.048	000.195	000.179		000.030	01519.413
MC	002.745	000.003	000.847	013.480	000.027	000.024		000.054	00396.763

3.2.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONS)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

EF_{POL}: Emission Factor for Pollutant (lb/hour)

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

BA: Area of Building (ft²)
BH: Height of Building (ft)
(0.42 / 1000): Conversion Factor ft³ to trips (0.42 trip / 1000 ft³)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase

$$VMT_{VT} = BA * BH * (0.38 / 1000) * HT$$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft²)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft³ to trips (0.38 trip / 1000 ft³)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

3.3 Paving Phase

3.3.1 Paving Phase Timeline Assumptions

- Phase Start Date

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

Start Month: 10
Start Quarter: 1
Start Year: 2019

- Phase Duration

Number of Month: 8
Number of Days: 0

3.3.2 Paving Phase Assumptions

- General Paving Information

Paving Area (ft²): 13824

- Paving Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cement and Mortar Mixers Composite	4	6
Pavers Composite	1	7
Rollers Composite	1	7
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

3.3.3 Paving Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Graders Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0982	0.0014	0.6490	0.5786	0.0316	0.0316	0.0088	132.96
Other Construction Equipment Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0595	0.0012	0.3971	0.3522	0.0158	0.0158	0.0053	122.63
Rubber Tired Dozers Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.2226	0.0024	1.6948	0.8387	0.0682	0.0682	0.0200	239.58
Tractors/Loaders/Backhoes Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0471	0.0007	0.3018	0.3630	0.0159	0.0159	0.0042	66.904

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	Pb	NH ₃	CO _{2e}
LDGV	000.340	000.002	000.276	003.604	000.008	000.007		000.024	00328.206
LDGT	000.416	000.003	000.480	005.057	000.010	000.009		000.025	00423.247
HDGV	000.764	000.005	001.218	016.264	000.023	000.020		000.044	00760.998
LDDV	000.119	000.003	000.146	002.473	000.004	000.004		000.008	00318.976
LDDT	000.281	000.004	000.446	004.521	000.007	000.006		000.008	00458.185
HDDV	000.618	000.013	006.194	002.048	000.195	000.179		000.030	01519.413
MC	002.745	000.003	000.847	013.480	000.027	000.024		000.054	00396.763

3.3.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

EF_{POL}: Emission Factor for Pollutant (lb/hour)

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

PA: Paving Area (ft²)

0.25: Thickness of Paving Area (ft)

(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

0.002205: Conversion Factor grams to pounds
 EF_{POL}: Emission Factor for Pollutant (grams/mile)
 VM: Worker Trips On Road Vehicle Mixture (%)
 2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

$$VOC_P = (2.62 * PA) / 43560$$

VOC_P: Paving VOC Emissions (TONs)
 2.62: Emission Factor (lb/acre)
 PA: Paving Area (ft²)
 43560: Conversion Factor square feet to acre (43560 ft² / acre)² / acre)

4. Construction / Demolition

4.1 General Information & Timeline Assumptions

- Activity Location

County: Bernalillo
Regulatory Area(s): Albuquerque, NM

- Activity Title: Construct CRH Simluator Facility Phase I

- Activity Description:

• Construction of a new 36,164 square feet training facility to accommodate the HH-60W helicopter flight simulators for aircrew training. The CRH Simulator Facility includes the construction of a new 9,709 square foot building on an existing parking lot. The new building would include one helicopter simulator facility bay, simulator support rooms, a communications room, multi-purpose meeting rooms, a mechanical/ electrical room, and restrooms. This component would occur in Fiscal Year 2017 and require 12 months to complete.

- Activity Start Date

Start Month: 7
Start Month: 2017

- Activity End Date

Indefinite: False
End Month: 6
End Month: 2018

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.193357
SO _x	0.002484
NO _x	1.272833
CO	1.093078
PM 10	0.061323

Pollutant	Total Emissions (TONs)
PM 2.5	0.061186
Pb	0.000000
NH ₃	0.000928
CO _{2e}	241.0

4.1 Building Construction Phase

4.1.1 Building Construction Phase Timeline Assumptions

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Phase Start Date

Start Month: 7
 Start Quarter: 1
 Start Year: 2017

- Phase Duration

Number of Month: 12
 Number of Days: 0

4.1.2 Building Construction Phase Assumptions

- General Building Construction Information

Building Category: Office or Industrial
 Area of Building (ft²): 9709
 Height of Building (ft): 30
 Number of Units: N/A

- Building Construction Default Settings

Default Settings Used: Yes
 Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	4
Forklifts Composite	2	6
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

4.1.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Cranes Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.1073	0.0013	0.8624	0.4152	0.0352	0.0352	0.0096	128.87

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

Forklifts Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0399	0.0006	0.2492	0.2181	0.0118	0.0118	0.0036	54.485
Tractors/Loaders/Backhoes Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0558	0.0007	0.3680	0.3666	0.0221	0.0221	0.0050	66.923

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	Pb	NH ₃	CO _{2e}
LDGV	000.419	000.002	000.378	004.048	000.010	000.009		000.026	00345.360
LDGT	000.526	000.003	000.646	005.964	000.011	000.010		000.028	00448.969
HdGV	000.933	000.005	001.575	019.006	000.027	000.024		000.044	00766.963
LDDV	000.142	000.003	000.179	002.567	000.004	000.004		000.008	00339.958
LDDT	000.361	000.004	000.578	005.223	000.007	000.007		000.008	00502.302
HDDV	000.728	000.014	007.442	002.370	000.258	000.237		000.030	01548.680
MC	002.773	000.003	000.853	013.874	000.027	000.024		000.053	00396.538

4.1.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

EF_{POL}: Emission Factor for Pollutant (lb/hour)

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

BA: Area of Building (ft²)

BH: Height of Building (ft)

(0.42 / 1000): Conversion Factor ft³ to trips (0.42 trip / 1000 ft³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)
 VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase

$$VMT_{VT} = BA * BH * (0.38 / 1000) * HT$$

VMT_{VT} : Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft²)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft³ to trips (0.38 trip / 1000 ft³)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)
 VMT_{VT} : Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

5. Construction / Demolition

5.1 General Information & Timeline Assumptions

- Activity Location

County: Bernalillo
Regulatory Area(s): Albuquerque, NM

- Activity Title: Construct CRH Simulator Facility Phase II

- Activity Description:

Demolition of Buildings 954 (7,343 square feet), 960 (1,200 square feet), and a BBQ Pavilion (600 square feet) to accommodate the ADAL CRH Simulator Facility which includes the construction of a new 26,455 square foot building. This second new building would include two additional helicopter simulator facility bays, simulator support rooms, a communications room, multi-purpose meeting rooms, a mechanical/ electrical room, and restrooms. Note the CRH Simulator Facility building is shown in tan in the center of the image, while the ADAL CRH Simulator Facility building is shown in light grey on the right side of the image. This component would occur in Fiscal Year 2020 and require 18 months to complete.

- Activity Start Date

Start Month: 8
Start Month: 2017

- Activity End Date

Indefinite: False
End Month: 3
End Month: 2021

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.737427
SO _x	0.008851
NO _x	4.574325
CO	4.472937
PM 10	0.295867

Pollutant	Total Emissions (TONs)
PM 2.5	0.237920
Pb	0.000000
NH ₃	0.003289
CO _{2e}	859.0

5.1 Demolition Phase

5.1.1 Demolition Phase Timeline Assumptions

- Phase Start Date

Start Month: 8
 Start Quarter: 1
 Start Year: 2017

- Phase Duration

Number of Month: 12
 Number of Days: 0

5.1.2 Demolition Phase Assumptions

- General Demolition Information

Area of Building to be demolished (ft²): 9143
 Height of Building to be demolished (ft): 30

- Default Settings Used: Yes

- Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Concrete/Industrial Saws Composite	1	8
Rubber Tired Dozers Composite	1	1
Tractors/Loaders/Backhoes Composite	2	6

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)
 Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

5.1.3 Demolition Phase Emission Factor(s)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Construction Exhaust Emission Factors (lb/hour) (default)

Concrete/Industrial Saws Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0678	0.0006	0.4267	0.3892	0.0297	0.0297	0.0061	58.616
Rubber Tired Dozers Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.2464	0.0024	1.9508	0.9300	0.0796	0.0796	0.0222	239.64
Tractors/Loaders/Backhoes Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0558	0.0007	0.3680	0.3666	0.0221	0.0221	0.0050	66.923

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	Pb	NH ₃	CO _{2e}
LDGV	000.419	000.002	000.378	004.048	000.010	000.009		000.026	00345.360
LDGT	000.526	000.003	000.646	005.964	000.011	000.010		000.028	00448.969
HDGV	000.933	000.005	001.575	019.006	000.027	000.024		000.044	00766.963
LDDV	000.142	000.003	000.179	002.567	000.004	000.004		000.008	00339.958
LDDT	000.361	000.004	000.578	005.223	000.007	000.007		000.008	00502.302
HDDV	000.728	000.014	007.442	002.370	000.258	000.237		000.030	01548.680
MC	002.773	000.003	000.853	013.874	000.027	000.024		000.053	00396.538

5.1.4 Demolition Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (0.00042 * BA * BH) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)
 0.00042: Emission Factor (lb/ft³)
 BA: Area of Building to be demolished (ft²)
 BH: Height of Building to be demolished (ft)
 2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)
 NE: Number of Equipment
 WD: Number of Total Work Days (days)
 H: Hours Worked per Day (hours)
 EF_{POL}: Emission Factor for Pollutant (lb/hour)
 2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = BA * BH * (1 / 27) * 0.25 * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
 BA: Area of Building being demolish (ft²)
 BH: Height of Building being demolish (ft)
 (1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)
 0.25: Volume reduction factor (material reduced by 75% to account for air space)
 HC: Average Hauling Truck Capacity (yd³)
 (1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)
 HT: Average Hauling Truck Round Trip Commute (mile/trip)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)
 VMT_{VE} : Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)
 VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

5.2 Building Construction Phase

5.2.1 Building Construction Phase Timeline Assumptions

- Phase Start Date

Start Month: 10
Start Quarter: 1
Start Year: 2019

- Phase Duration

Number of Month: 18
Number of Days: 0

5.2.2 Building Construction Phase Assumptions

- General Building Construction Information

Building Category: Commercial or Retail
Area of Building (ft²): 26455
Height of Building (ft): 50
Number of Units: N/A

- Building Construction Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	6
Forklifts Composite	2	6
Generator Sets Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8
Welders Composite	3	8

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HdGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HdGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HdGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

5.2.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Cranes Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0953	0.0013	0.7235	0.3981	0.0286	0.0286	0.0086	128.84
Forklifts Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0344	0.0006	0.1923	0.2166	0.0085	0.0085	0.0031	54.473
Generator Sets Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0430	0.0006	0.3483	0.2755	0.0168	0.0168	0.0038	61.089
Tractors/Loaders/Backhoes Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0471	0.0007	0.3018	0.3630	0.0159	0.0159	0.0042	66.904
Welders Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0343	0.0003	0.1832	0.1842	0.0116	0.0116	0.0031	25.680

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	Pb	NH ₃	CO _{2e}
LDGV	000.340	000.002	000.276	003.604	000.008	000.007		000.024	00328.206
LDGT	000.416	000.003	000.480	005.057	000.010	000.009		000.025	00423.247
HdGV	000.764	000.005	001.218	016.264	000.023	000.020		000.044	00760.998

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	Pb	NH ₃	CO _{2e}
LDDV	000.119	000.003	000.146	002.473	000.004	000.004		000.008	00318.976
LDDT	000.281	000.004	000.446	004.521	000.007	000.006		000.008	00458.185
HDDV	000.618	000.013	006.194	002.048	000.195	000.179		000.030	01519.413
MC	002.745	000.003	000.847	013.480	000.027	000.024		000.054	00396.763

5.2.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

EF_{POL}: Emission Factor for Pollutant (lb/hour)

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = BA * BH * (0.32 / 1000) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

BA: Area of Building (ft²)

BH: Height of Building (ft)

(0.32 / 1000): Conversion Factor ft³ to trips (0.32 trip / 1000 ft³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Vender Trips Emissions per Phase

$$VMT_{VT} = BA * BH * (0.05 / 1000) * HT$$

- VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
- BA: Area of Building (ft²)
- BH: Height of Building (ft)
- (0.05 / 1000): Conversion Factor ft³ to trips (0.05 trip / 1000 ft³)
- HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$$

- V_{POL}: Vehicle Emissions (TONs)
- VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
- 0.002205: Conversion Factor grams to pounds
- EF_{POL}: Emission Factor for Pollutant (grams/mile)
- VM: Worker Trips On Road Vehicle Mixture (%)
- 2000: Conversion Factor pounds to tons

6. Construction / Demolition

6.1 General Information & Timeline Assumptions

- Activity Location

- County:** Bernalillo
- Regulatory Area(s):** Albuquerque, NM

- Activity Title: Recapitalize 60 Parking Spaces

- Activity Description:

- Construction of 60 personnel parking spaces lost from the CRH Simulator Facility. The recapitalized 60 personnel parking spaces would displace an existing static aircraft display north of Building 957. This component would occur in Fiscal Year 2018 and require two months to complete.

- Activity Start Date

- Start Month:** 10
- Start Month:** 2017

- Activity End Date

- Indefinite:** False
- End Month:** 11
- End Month:** 2017

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.117597
SO _x	0.001262
NO _x	0.785271
CO	0.599559
PM 10	0.417624

Pollutant	Total Emissions (TONs)
PM 2.5	0.039376
Pb	0.000000
NH ₃	0.000430
CO _{2e}	125.0

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

6.1 Site Grading Phase

6.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

Start Month: 10
 Start Quarter: 1
 Start Year: 2017

- Phase Duration

Number of Month: 2
 Number of Days: 0

6.1.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft²): 19008
 Amount of Material to be Hauled On-Site (yd³): 0
 Amount of Material to be Hauled Off-Site (yd³): 2112

- Site Grading Default Settings

Default Settings Used: Yes
 Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	6
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	6
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)
 Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

6.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Graders Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.1120	0.0014	0.8007	0.5843	0.0396	0.0396	0.0101	132.99
Other Construction Equipment Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0674	0.0012	0.5044	0.3568	0.0206	0.0206	0.0060	122.69
Rubber Tired Dozers Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.2464	0.0024	1.9508	0.9300	0.0796	0.0796	0.0222	239.64
Tractors/Loaders/Backhoes Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0558	0.0007	0.3680	0.3666	0.0221	0.0221	0.0050	66.923

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	Pb	NH ₃	CO _{2e}
LDGV	000.419	000.002	000.378	004.048	000.010	000.009		000.026	00345.360
LDGT	000.526	000.003	000.646	005.964	000.011	000.010		000.028	00448.969
HdGV	000.933	000.005	001.575	019.006	000.027	000.024		000.044	00766.963
LDDV	000.142	000.003	000.179	002.567	000.004	000.004		000.008	00339.958
LDDT	000.361	000.004	000.578	005.223	000.007	000.007		000.008	00502.302
HDDV	000.728	000.014	007.442	002.370	000.258	000.237		000.030	01548.680
MC	002.773	000.003	000.853	013.874	000.027	000.024		000.053	00396.538

6.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (20 * ACRE * WD) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)
 20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
 ACRE: Total acres (acres)
 WD: Number of Total Work Days (days)
 2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)
 NE: Number of Equipment
 WD: Number of Total Work Days (days)
 H: Hours Worked per Day (hours)
 EF_{POL}: Emission Factor for Pollutant (lb/hour)
 2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
 HA_{OnSite}: Amount of Material to be Hauled On-Site (yd³)
 HA_{OffSite}: Amount of Material to be Hauled Off-Site (yd³)
 HC: Average Hauling Truck Capacity (yd³)
 (1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)
 VMT_{VE} : Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)
 VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

6.2 Paving Phase

6.2.1 Paving Phase Timeline Assumptions

- Phase Start Date

Start Month: 10
Start Quarter: 1
Start Year: 2017

- Phase Duration

Number of Month: 2
Number of Days: 0

6.2.2 Paving Phase Assumptions

- General Paving Information

Paving Area (ft²): 19008

- Paving Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cement and Mortar Mixers Composite	4	6
Pavers Composite	1	7
Rollers Composite	1	7
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

6.2.3 Paving Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Graders Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.1120	0.0014	0.8007	0.5843	0.0396	0.0396	0.0101	132.99
Other Construction Equipment Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0674	0.0012	0.5044	0.3568	0.0206	0.0206	0.0060	122.69
Rubber Tired Dozers Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.2464	0.0024	1.9508	0.9300	0.0796	0.0796	0.0222	239.64
Tractors/Loaders/Backhoes Composite								
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CH ₄	CO _{2e}
Emission Factors	0.0558	0.0007	0.3680	0.3666	0.0221	0.0221	0.0050	66.923

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	Pb	NH ₃	CO _{2e}
LDGV	000.419	000.002	000.378	004.048	000.010	000.009		000.026	00345.360
LDGT	000.526	000.003	000.646	005.964	000.011	000.010		000.028	00448.969
HDGV	000.933	000.005	001.575	019.006	000.027	000.024		000.044	00766.963
LDDV	000.142	000.003	000.179	002.567	000.004	000.004		000.008	00339.958
LDDT	000.361	000.004	000.578	005.223	000.007	000.007		000.008	00502.302
HDDV	000.728	000.014	007.442	002.370	000.258	000.237		000.030	01548.680
MC	002.773	000.003	000.853	013.874	000.027	000.024		000.053	00396.538

6.2.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
PA: Paving Area (ft²)
0.25: Thickness of Paving Area (ft)
(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)
HC: Average Hauling Truck Capacity (yd³)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

$$VOC_P = (2.62 * PA) / 43560$$

VOC_P: Paving VOC Emissions (TONs)
2.62: Emission Factor (lb/acre)
PA: Paving Area (ft²)
43560: Conversion Factor square feet to acre (43560 ft² / acre)² / acre)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

(This page intentionally left blank)

Appendix E Building 954 SHPO Coordination

(This page intentionally left blank)



DEPARTMENT OF THE AIR FORCE
377TH AIR BASE WING (AFGSC)



David H. Reynolds
377 MSG/CEIC
2050 Wyoming Blvd. SE
Kirtland AFB NM 87117-5600

Log 106107

RECEIVED
7/21/17

12 July 2017

Jeff Pappas, Ph.D.
State Historic Preservation Officer and Director
Department of Cultural Affairs, Historic Preservation Division
Bataan Memorial Building
407 Galisteo Street, Suite 236
Santa Fe NM 87501

RE: Environmental Assessment: Combat Rescue Helicopter Transition; Building 954 Historic Property Survey

Dear Dr. Pappas,

In February 2017, Kirtland Air Force Base (KAFB) sent the New Mexico State Historic Preservation Office (SHPO) a letter regarding an environmental assessment of the demolition, construction, and modifications needed for KAFB to accommodate the conversion to a replacement Combat Rescue Helicopter (Undertaking). On March 20, 2017, pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, you provided comments on the potential of this Undertaking to affect historic properties. You noted the Undertaking would involve demolition of Buildings 954 and 960 and construction of an addition to Building 957, which has the potential to adversely affect historic properties eligible for listing in the National Register of Historic Places (NRHP). KAFB conducted additional studies to determine the NRHP eligibility of the three buildings to facilitate your review.

Building 957 was constructed in 1997 and Building 960 is a modular building constructed in the 1980s. Neither of these modern buildings has exceptional historical significance that would make them eligible for listing in the NRHP, and KAFB conducted no additional survey of these buildings.

Building 954 was constructed in 1972 and is nearing the 50-year threshold for typical consideration for NRHP listing. An evaluation of the NRHP eligibility of Building 954 in 2003 recommended it be considered ineligible. Because that evaluation is now dated, KAFB conducted a historic building survey to inventory Building 954 and reevaluate its NRHP eligibility.

Building 954 is located at 1971 Eileen Street within the 900 area of KAFB. It was originally constructed as an Arts and Crafts Center or Recreation Workshop and was later converted to a training center and flight simulator facility. Albuquerque architect and former Air Force Captain Dale L. Crawford designed the building, which is utilitarian in style with design elements of the Contemporary or Contractor Modern style. The one-story building has an I-shaped plan featuring east and west wings that are large, rectangular, metal prefabricated warehouse-type buildings

with low-pitched gable roofs, connected by a one-story, concrete masonry unit central wing with a flat roof. The central wing serves as the primary entrance to the building and is the only part of the building that exhibits non-utilitarian design elements, including one-light, narrow, fixed windows and vertically oriented composite paneling that contrasts with and emphasizes the horizontality of a cantilevered roof overhang and the massing of the building.

Building 954 was evaluated within the *National Register of Historic Places Historic Context and Evaluation for Kirtland Air Force Base, Albuquerque, New Mexico* prepared for KAFB in 2003. The building is not associated with any themes identified by that historic context. Although Building 954 is within the 900 area of KAFB, it is about 0.25 mile west of the buildings that contribute to the NRHP-eligible 34th Air Division Historic District. The building also was constructed about 20 years after the district's contributing buildings were constructed and it is not associated with Cold War air defense. Therefore, Building 954 does not contribute to the significance of the district. Other buildings in the 900 area have been determined to be NRHP eligible due to their historical association with electromagnetic pulse testing during the 1970s and 1980s and with Cold War training. Building 954 was constructed as a recreation building and has no association with electromagnetic pulse testing. Although the building was later converted to a training center and flight simulator facility, it was not converted until 1987 near the end of the Cold War and does not have the physical character-defining features of the NRHP-eligible flight simulator bays, including interior high-bay spaces and multiple large bay doors. Therefore, the building does not appear to be significant under NRHP Criterion A.

Building 954 is not significant under NRHP Criterion C as an important example of a type, period, or method of construction, is not the work of a master, and does not possess high artistic values. The building is an example of a simple, utilitarian building constructed in the early 1970s. Although the building possesses some character-defining features of the Contemporary or Contractor Modern style and its exterior has not been substantially altered since it was constructed, it is an unexceptional example. Albuquerque architect Dale L. Crawford, who designed Building 954, designed numerous buildings in Albuquerque and other towns and cities in New Mexico, and the utilitarian Building 954 is unlikely to represent his master work.

Research did not identify any significant associations with the lives of persons important to history and the building does not appear to have the potential to yield important historical information. Therefore, Building 954 does not appear to be NRHP eligible under Criteria B or D.

Although Building 954 retains historical integrity of location, design, setting, materials, feeling, workmanship, and association, the building is not 50 years old and does not possess exceptional importance that would make it eligible for listing in the NRHP under Criteria Consideration G. The Historic Cultural Properties Inventory form for Building 954 is attached.

KAFB concludes Building 954 is not NRHP eligible and the Undertaking will have no effect on historic properties. KAFB requests your concurrence with that determination or your comments. If you have any questions, please contact me at (505) 846-0226 or david.reynolds.37@us.af.mil.

Regards,


David Reynolds
Cultural Resource Program Manager, USAF

Concur with recommendation of
eligibility and/or effects as proposed



Attachment: Updated Historic Cultural Properties Inventory Form
New Mexico State Historic Preservation Office

HCPI # 43269

NMCRIS # 138457

Project Name: KAFB Building 954 Historic Building Survey

Survey Date: 07/06/2017

NAME OF PROPERTY

Historic Name: Arts & Crafts Center (Recreation Workshop)

Current Name: KAFB Building 954: Consolidated Learning Center – CLC 58 TRS



Photograph 1. Front (South) Elevation of KAFB Building 954 (view northwest)

HISTORIC CULTURAL PROPERTIES INVENTORY (HCPI) BASE FORM

HCPI # 43269

1. IDENTIFICATION

HCPI # 43269 NMCRIS # 138457 Project Name: KAFB Building 954 Historic Building Survey Survey Date: 07/06/2017	Agency Number: KAFB No. 954 Other Number: <input checked="" type="checkbox"/> Update
NAME OF PROPERTY Historic Name: Arts & Crafts Center (Recreation Workshop) Current Name: KAFB Building 954: Consolidated Learning Center – CLC 58 TRS	OWNER and Contact Information Kirtland AFB Dave Reynolds, CR/NEPA Coordinator (505) 846-0226 david.reynolds.37@us.af.mil
SURVEYOR and Contact Information: Kirsten Johnson 7720 N. 16th Street, Suite 100 Phoenix, AZ 85020 (602) 861-7413 kirsten.johnson@aecom.com	
PROPERTY TYPE Category: Building Subcategory:	
LAND STATUS Land Status: Federal Specify Other:	

2. LOCATION

Street Address: 1971 Eileen Street City/Community: Kirtland AFB, Albuquerque County: Bernalillo If no street address, describe how to locate the property	UTM Coordinates UTM E: 354674 N: 3880143 Zone: 13 USGS Quad Name: Albuquerque East USGS Quad Code: 35106-A5 Assessor Parcel # Local Reference #
--	---

3. SETTING

Category: Military	Subcategory: Air Force Base
---------------------------	------------------------------------

4. PROPERTY DESCRIPTION

HISTORIC FUNCTION: Recreation CURRENT FUNCTION: Education	CURRENT CONDITION: intact DESCRIPTION:
CONSTRUCTION DATE: 1972 Known or Estimated: Known Source: Kirtland AFB Real Property List <input checked="" type="checkbox"/> continuation	ARCHITECT/BUILDER Dale L. Crawford
BRIEF DESCRIPTION OF PROPERTY Building 954 was constructed in 1972 as an Arts and Crafts Center in the 900 area of KAFB. In 1987, the building was converted to a training center and flight simulator facility. The building has an I-shaped plan featuring east and west wings and a central connecting wing. The east and west wings are large, rectangular, warehouse type buildings constructed of structural steel and metal siding with low-pitched gable roofs clad with V-crimp metal. The central wing has a lower roofline than the east and west wings and is constructed of concrete block and has a flat roof with eaves.	
<input checked="" type="checkbox"/> continuation	

HISTORIC CULTURAL PROPERTIES INVENTORY (HCPI) DETAIL FORM

HCPI # 43269 Address of Property: 1971 Eileen Street, Kirtland AFB, Albuquerque, New Mexico	NMCRIS # 138457
---	------------------------

6. ARCHITECTURAL AND CONSTRUCTION DETAILS:

A. Visible Construction Materials:

<input type="checkbox"/> Adobe <input type="checkbox"/> Brick <input type="checkbox"/> Composition Board <input checked="" type="checkbox"/> Concrete: Block <input type="checkbox"/> Concrete: Cast Stone <input type="checkbox"/> Concrete: Poured <input type="checkbox"/> Concrete: Pre-cast <input type="checkbox"/> Curtain Wall <input type="checkbox"/> Earth Plaster <input type="checkbox"/> Other, describe:	<input type="checkbox"/> Metal: Corrugated <input type="checkbox"/> Masonry: Simulated <input checked="" type="checkbox"/> Metal: Structural Siding <input type="checkbox"/> Metal: V-Crimp <input type="checkbox"/> Stone: Random Ashlar <input type="checkbox"/> Stone: Random Coursed <input type="checkbox"/> Stone: River Rock <input type="checkbox"/> Stone: Rock Faced <input type="checkbox"/> Stone: Tabular	<input type="checkbox"/> Stucco <input type="checkbox"/> Tile: Clay <input type="checkbox"/> Vinyl or Aluminum Siding <input type="checkbox"/> Wood: Board & Batten <input type="checkbox"/> Wood: Horizontal Siding <input type="checkbox"/> Wood: Jacal <input type="checkbox"/> Wood: Log <input type="checkbox"/> Wood: Shingle <input type="checkbox"/> Wood: Tongue and Groove
--	--	--

B. Number of Stories:

<input type="checkbox"/> N/A <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 1 ½ <input type="checkbox"/> 2 <input type="checkbox"/> 2 ½ <input type="checkbox"/> Other, describe:

C. Foundation:

<input type="checkbox"/> N/A <input type="checkbox"/> Not visible <input type="checkbox"/> None <input checked="" type="checkbox"/> At Grade <input type="checkbox"/> Raised
Materials: <input checked="" type="checkbox"/> Concrete: Poured <input type="checkbox"/> CMU <input type="checkbox"/> Stone <input type="checkbox"/> Other, describe:
Notes:

D. Roof:

<input type="checkbox"/> N/A Features: <input checked="" type="checkbox"/> Eave <input type="checkbox"/> Parapet
Shape: <input type="checkbox"/> Barrel <input type="checkbox"/> Butterfly <input checked="" type="checkbox"/> Flat <input type="checkbox"/> Cross Gable <input checked="" type="checkbox"/> Gable <input type="checkbox"/> Hipped <input type="checkbox"/> Pyramidal <input type="checkbox"/> Shed <input type="checkbox"/> Other, describe:
Pitch: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> Steep
Materials: <input type="checkbox"/> Asphalt <input type="checkbox"/> Metal: Corrugated <input type="checkbox"/> Tile: Metal <input checked="" type="checkbox"/> Composition Roll <input type="checkbox"/> Metal: Pressed <input type="checkbox"/> Tile: Terra Cotta <input type="checkbox"/> Composition Shingle <input type="checkbox"/> Metal: Standing Seam <input type="checkbox"/> Wood: Shingle <input type="checkbox"/> Earth <input checked="" type="checkbox"/> Metal: V-Crimp <input type="checkbox"/> Other, describe:

E. Chimneys:

<input checked="" type="checkbox"/> N/A Number Interior: Number Exterior:
Construction Material: <input type="checkbox"/> Brick <input type="checkbox"/> Adobe <input type="checkbox"/> Stone <input type="checkbox"/> Stucco <input type="checkbox"/> Terra Cotta Tile <input type="checkbox"/> Metal Flue <input type="checkbox"/> Other, describe

F. Porches:

<input checked="" type="checkbox"/> N/A
Type: <input type="checkbox"/> Entry <input type="checkbox"/> Incised <input type="checkbox"/> Partial Width <input type="checkbox"/> Full-Width <input type="checkbox"/> Wrap <input type="checkbox"/> With a Gazebo
Other Details, describe

HCPI # 43269 Address of Property: 1971 Eileen Street, Kirtland AFB, Albuquerque, New Mexico	NMCRIS # 138457
---	------------------------

G. Doorways:

<input type="checkbox"/> N/A	Number of Doorways: 5 (1 front entry; 1 vehicle-sized roll-up door; 2 metal double-entries and 1 metal single-entry on rear [north] elevation.)
Type:	<input type="checkbox"/> One-leaf <input checked="" type="checkbox"/> Two-leaf
Style:	<input type="checkbox"/> Diagonal Plank <input type="checkbox"/> Dutch <input type="checkbox"/> French <input type="checkbox"/> Plain <input type="checkbox"/> Panel <input type="checkbox"/> Vertical Plank <input checked="" type="checkbox"/> Other, describe: double-entry plate glass doors with bronze anodized aluminum frames
Components:	Panels/Lights-Number and configuration <input type="checkbox"/> Sidelights - number and configuration <input checked="" type="checkbox"/> Transom
Material:	<input checked="" type="checkbox"/> Aluminum <input type="checkbox"/> Fiberglass <input type="checkbox"/> Metal <input type="checkbox"/> Steel <input type="checkbox"/> Vinyl <input type="checkbox"/> Wood <input type="checkbox"/> Other, describe
Depth of Reveal: not determined	
Notes:	

H. Window Openings:

<input type="checkbox"/> N/A	Number of Window Openings: 4		
Operation:	Material:	Glazing:	
<input type="checkbox"/> Awning <input type="checkbox"/> Casement <input type="checkbox"/> Double or Single-hung <input checked="" type="checkbox"/> Fixed <input type="checkbox"/> Hopper <input type="checkbox"/> Louver <input type="checkbox"/> Pivot <input type="checkbox"/> Sliding	<input checked="" type="checkbox"/> Anodized Aluminum <input type="checkbox"/> Bare Aluminum <input type="checkbox"/> Steel <input type="checkbox"/> Wood <input type="checkbox"/> Other, describe:	<input type="checkbox"/> 1/1 <input type="checkbox"/> 2/2 <input type="checkbox"/> 3/1 <input type="checkbox"/> 4/4 <input type="checkbox"/> 6/6 <input type="checkbox"/> 9/9 <input checked="" type="checkbox"/> Other, configuration describe: 1 pane vertical (narrow)	<input type="checkbox"/> 2 Pane Horizontal <input type="checkbox"/> 2 Pane Vertical <input type="checkbox"/> 3 Pane Vertical <input type="checkbox"/> 4 Pane Vertical <input type="checkbox"/> Combination, describe <input type="checkbox"/> Grouped, describe <input type="checkbox"/> Curtain Wall <input type="checkbox"/> Glass Block <input type="checkbox"/> Palladian Motif <input type="checkbox"/> Picture Window <input type="checkbox"/> Store front or display <input type="checkbox"/> Other, describe:
Depth of Reveal: not determined			
Notes: bronzed anodized aluminum			

I. Other Significant Features

Describe: I-shaped plan featuring east and west wings connected by central wing. (see continuation sheet)
--

7. Associated Properties

Discuss: none
Are associated properties eligible for listing? N/A

8. Documents Available and Their Locations

Discuss: Revised as-built drawings (1973); floor plans and drawings of interior alterations (1981, 1994, 2001); 2003 NRHP evaluation form – all on file at KAFB.

9. Attachments

Please indicate which items are attached:
<input checked="" type="checkbox"/> Site Plan (required)
<input checked="" type="checkbox"/> Photos (required)
<input checked="" type="checkbox"/> Map or aerial photo (required)
<input checked="" type="checkbox"/> Continuation sheet (Word document), if necessary
<input type="checkbox"/> Additional detail forms for associated properties, if applicable

Historic Cultural Properties Inventory (HCPI) Continuation Sheets

Historic Preservation Division, New Mexico Department of Cultural Affairs

For HPD Office use only:		
HCPI No. _____	District No. _____	
1. Name of property: (historic and/or current name for property) KAFB No. 954 Arts and Crafts Center / Consolidated Learning Center – CLC 58 TRS	2. Location: 1971 Eileen Street Kirtland Air Force Base Albuquerque, New Mexico	3. Local Reference Number: 954
		4. County: Bernalillo
		5. Date of Survey: July 6, 2017

Architectural Description

Building 954 is located at 1971 Eileen Street within the 900 Area of Kirtland Air Force Base (KAFB) in Albuquerque, Bernalillo County, New Mexico. The building faces south and has an I-shaped plan featuring east and west wings and a central connecting wing (Photograph 1). The building has an at-grade concrete foundation. The east and west wings are large, rectangular, warehouse-type buildings constructed of structural steel with metal siding (Photographs 2 and 3). Both buildings have low-pitched gable roofs clad with V-crimp metal. The west wing has a side-gable roof and the front (south) and rear (north) sides of the building measure 62 feet, 2 inches and the west and east sides measure 50 feet. The east wing is the same size as the west wing, but is rotated, so that gable ends and shorter, 50-foot sides of the building face to the front (south) and rear (north), and the longer 62-foot, 2-inch sides face east and west. The central wing has a lower roofline than the east and west wings. It is constructed of concrete block and has a flat roof with eaves (Photograph 4).

Neither the east or west wing have any architectural features on the front (south) elevation (see Photographs 1, 2, and 3). The central wing serves as the primary entrance to the building and is the only part of the building that exhibits non-utilitarian design (see Photograph 4). The front entrance is a set of double, plate glass doors and a transom light with bronze anodized aluminum frames. There are two fixed narrow vertical windows with bronzed anodized aluminum frames on each side of the door opening. The exterior walls in the spaces between the door and window openings are clad with composite paneling with a three-dimensional pattern designed to simulate a vertical view of random-sized stacked stone. The doors and windows are shaded by a cantilevered roof overhang with a wood soffit with square composite panels on the fascia board and aluminum flashing (Photographs 5 and 6).

The west elevation of the building is the west elevation of the west wing, which has no architectural features (see Photograph 2). The east elevation of the building is the east elevation of the east wing, which has a vehicle bay with a metal roll-up door and a metal utility cabinet (see Photograph 3). Neither the roll-up door nor the utility cabinet is depicted on the 1973 revised as-built drawings, so they likely are not original features of the building. The back or north elevation of the east wing has a double entry metal door and the back or north elevation of the west wing has a single-entry metal door (Photographs 7 and 8). The exterior wall surface on the back or north elevation of the central wing is exposed structural concrete block (Photograph 9). The roof, which has painted anodized aluminum flashing, is accessed by a metal wall-mounted ladder. There also is a double-entry metal door on the back of the central wing with a louvered vent in the bottom half of the door. Two large air conditioning units with duct work that extends into the east and west wings are mounted on concrete pads behind the central and west wings (Photograph 10). Concrete walkways and driveways provide access to the building's door openings. Landscaping includes a few trees and landscaping rock.

Construction plans on file at KAFB indicate that the fire alarms system was replaced in the building in 1981 and the HVAC was replaced in 1994. In 2011 the building was damaged by weather and repairs included the removal and installation of carpet; wall repair, including the installation of new gypsum board, texturing, and repainting; removal and replacement of pipe insulation; and the installation of new ceiling tiles.

History of Building 954

Building 954 was constructed in 1972. Revised as-built drawings on file at KAFB that are dated November 1973 indicate that the building was designed by Albuquerque architect Dale L. Crawford and constructed by the Air Force Engineering Squadron. Crawford was born in Raton, New Mexico and graduated with a

HCPI Continuation Sheet – Page 2

Bachelor of Science in Architectural Engineering from the University of New Mexico in 1956. Crawford's post-graduate education included studies at the University of Colorado in 1952 and the Air Force Institute of Technology at Wright-Patterson Air Force Base in Ohio in 1957. He also was a Captain in the U.S. Air Force from 1956 to 1959. Mr. Crawford became a licensed architect in Louisiana in 1962 and in New Mexico in 1965. He worked as a draftsman for three firms between 1956 and 1963 before he began working as an architect for Francis Stanley & Associates in 1964 and Stanley, Oravec & Crawford from 1965 to 1966. From 1966 to 1971 he was a partner in Crawford & Oravec, the Principal Architect of Dale L. Crawford, Architect from 1971 to 1973, and the president of Dale Crawford & Associates from 1973 to 1997. Crawford won National Department of Defense Design Awards in the 1970s and 1980s. His architectural projects include clubhouses, buildings at colleges and universities, community centers, schools, libraries, municipal and office buildings, religious buildings, restaurants, private residences, and zoological and aquarium projects (University of New Mexico 2007).

Building 954 was originally constructed as an Arts and Crafts Center or Recreation Workshop. The revised as-built drawings indicate the west wing included a large ceramic room with smaller connecting rooms housing a firing room, clay storage, and glazing room, as well as a photo shop with a darkroom, a general purpose room, and a lapidary room for stone and gem engraving, cutting, or polishing. The central wing included a mechanical room, a general office, and restrooms, and the east wing included a wood shop with adjoining finishing and tool storage rooms and a rod and gun shop with adjoining bluing and buffing rooms and janitor's closet.

In 1987, the building was converted to a training center and flight simulator facility. Drawings completed for a replacement refrigeration unit within the building in 1994 indicate the building's floor plan had been modified to accommodate the training function of the building. In the west wing, the interior walls in the firing room, clay storage room, photo shop and darkroom, and north half of the ceramic room had been removed, creating one large space that served as a computer base training room. A new interior wall created a desk and service area in the south half of the former ceramic room. The former glazing room was converted to an office, the general purpose room and lapidary room became classified computer rooms. The floorplans of the central and east wings remained essentially unchanged, but the functions of most of the rooms were altered. In the central wing, the former general office became a student lounge. In the east wing, the wood shop became a part task training area and the former finishing and tool storage rooms were converted to offices. The former rod and gun shop became the ground training area, the former buffing room was converted to a testing area, and the former bluing room became a storage area. At the time of the weather damage repairs in 2011, the floor plan remained unchanged.

Evaluation

Building 954 was evaluated within the *National Register of Historic Places Historic Context and Evaluation for Kirtland Air Force Base, Albuquerque, New Mexico* that was prepared for KAFB in 2003 (Van Citters and Bisson 2003).

The building is within the 900 Area of KAFB. Five buildings (Buildings 909-913) in the 900 Area were previously determined to be contributors to the 34th Air Division Historic District, which was determined eligible for listing in the National Register of Historic Places (NRHP) under Criterion A. The buildings were constructed in the early 1950s for Cold War air defense and served as the headquarters of the 34th Air Division (Defense) that directed air defense radar alert and interception for New Mexico, Arizona, west Texas, and most of Colorado and Utah and were part of a national Cold War effort by the USAF to protect American skies from invasion by Soviet bombers (Van Citters and Bisson 2003:204; Weitze 2001). The 900 Area also served as a Research and Development (R&D) site for Electromagnetic Pulse (EMP) testing during the 1970s and 1980s, and Building 914, a Nuclear Engineering Testing Building constructed in 1971, was previously determined NRHP-eligible under Criterion A and Criterion Consideration G for its association with EMP testing. Two other buildings in the 900 area associated with the 1550th Aircrew Training and Test Wing (now known as the 58th Special Operations Wing) also were previously determined to be NRHP-eligible under Criterion A and Criterion Consideration G. Both buildings were constructed as flight simulator bays for helicopter rescue and recovery training. Building 955 was constructed in 1977 and Building 956

HCPI Continuation Sheet – Page 3

was constructed in 1981. The buildings are significant for their role in Cold War training. Other buildings within the 900 area that were previously inventoried and evaluated as ineligible for listing in the NRHP in 2003 include dormitories, a mess hall, classroom and flight simulator buildings, a recreational bowling center, shops, and warehouses. In 2003, Building 954 was recorded and evaluated as ineligible because it lacked association with the Cold War and did not meet the requirements for NRHP Criterion Consideration G.

Building 954 is not associated with any historic themes identified by the 2003 KAFB historic context and does not appear to be significant under NRHP Criterion A. The building was constructed as an Arts and Crafts Center/Recreation Workshop in 1972 and continued to be used in that capacity until 1987 when it was converted to a training center and flight simulator facility. Although Building 954 is within the 900 area of KAFB, it is about 0.25 mile west of the contributing buildings previously identified within the 34th Air Division Historic District and was constructed twenty years later, well after the district's period of significance. The building also is not associated with EMP testing, and although it was later converted to a training center and flight simulator facility, it was converted near the end of the Cold War and does not have the physical character-defining features that the eligible flight simulator bays (Buildings 955 and 956) possess, including interior high-bay spaces and multiple large bay doors.

The building is not significant under NRHP Criterion B for any associations with the lives of persons important to history. Research did not identify any association of the building with significant achievements of any specific individual or military division.

Building 954 is not significant under NRHP Criterion C as an important example of a type, period, or method of construction, is not the work of a master, and does not possess high artistic values. The building is an example of a simple, utilitarian building with Contemporary or Contractor Modern features constructed in the early 1970s (New Mexico Historic Preservation Division 2013). The I-shaped building has a rectilinear plan with a combination of low-pitched and flat roofs and a low, horizontal emphasis. The east and west wings of the building are prefabricated metal warehouse-type structures. The central wing, which connects the east and west wings and is constructed of concrete block, includes the primary entrance to the building and is the only portion of the building that possesses any architectural detailing. The narrow, vertical windows and the composite paneling between the windows and front door with a vertical stacked stone pattern contrast with and emphasize the horizontality of the building's plan and the horizontal cantilevered roof overhang with square composite panels. Although the building possesses some character-defining features of the Contemporary or Contractor Modern style and its exterior has not been substantially altered since it was constructed, it is an unexceptional example. Albuquerque architect Dale L. Crawford designed Building 954. He attended the Air Force Institute of Technology at Wright-Patterson Air Force Base in Ohio and was a Captain in the U.S. Air Force from 1956 to 1959. Crawford designed numerous buildings in Albuquerque and other towns and cities in New Mexico, and the utilitarian Building 954 is unlikely to represent his master work.

The building is not a significant source (or likely source) of important information regarding history under NRHP Criterion D. The building does not appear to have any likelihood of yielding important information about historic construction materials or technologies.

Building 954 was constructed in 1972 and is less than 50 years old. It does not appear to meet NRHP Criteria A, B, C, or D. It does not possess exceptional importance and is not eligible under NRHP Criteria Consideration G.

Integrity

Location is the place where the historic property was constructed or the place where the historic event took place. The location of Building 954 has remained the same, and it has not been moved since its construction. The integrity of the property's location remains intact.

Design is the combination of elements that create the form, plan, space, and style of a property. The building continues to reflect its historical function as a military support facility and the exterior of the building has not been substantially altered since its construction. The integrity of the property's design remains intact.

HCPI Continuation Sheet – Page 4

Setting is the physical environment of a historic property. The setting of the property has not changed significantly since the building was constructed in 1972. The integrity of the property's setting remains intact.

Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern of configuration to form a historic property. As stated previously, the exterior of the building has not been substantially altered since construction and the building retains integrity of materials.

Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. Although the building is a utilitarian building with design elements of the Contemporary or Contractor Modern styles, the building materials and design are indicative of the skills of the architect and his knowledge of popular contemporary trends in the early 1970s. The building retains integrity of workmanship.

Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. The property continues to convey the character of a military support building constructed in 1972 and retains integrity of feeling.

Association is the direct link between an important historic event or person and a historic property. The property is an example of a utilitarian military support building with Contemporary or Contractor Modern design characteristics constructed on the KAFB in the early 1970s. The building continues to convey this historical association and retains integrity of association.

In conclusion, although Building 954 retains all seven aspects of historic integrity, it does not possess sufficient significance under NRHP criteria and is not eligible for listing in the NRHP.

References

New Mexico Historic Preservation Division

2013 *Architectural Classification: Style and Type*. Draft Release 1.0. Historic Preservation Division, Department of Cultural Affairs, State of New Mexico, Santa Fe, New Mexico.

University of New Mexico

2007 Inventory of the Dale L. Crawford Drawings and Plans, 1962-1994. Center for Southwest Research, University Libraries, University of New Mexico, Albuquerque, New Mexico. Electronic document, <https://rmoa.unm.edu/docviewer.php?docId=nmuswacrawforddrawings.xml>, accessed July 10, 2017.

Van Citters, Karen, and Kristen Bisson

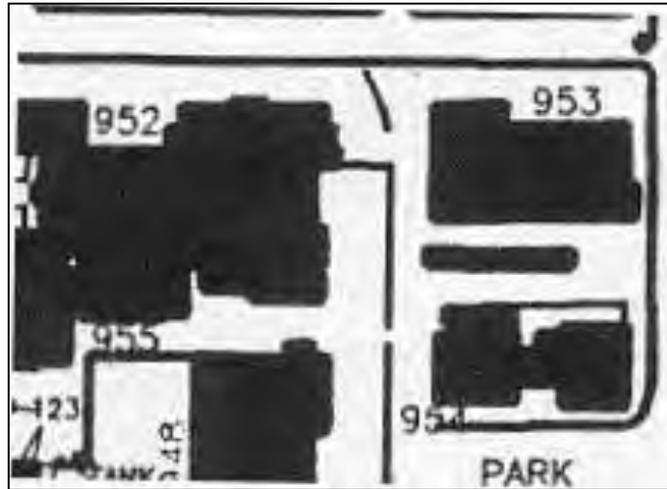
2003 National Register of Historic Places Historic Context and Evaluation for Kirtland Air Force Base, Albuquerque, New Mexico. Van Citters: Historic Preservation, LLC, Albuquerque, New Mexico.

Weitze, Karen

1997 *Guided Missiles at Holloman Air Force Base: Test Programs of the United States Air Force in Southern New Mexico, 1947-1970*. Holloman Air Force Base, Alamogordo, New Mexico.

HCPI Continuation Sheet – Page 5

Site Plan



Plan View of KAFB Building 954 Location

Aerial Photographs



KAFB Building 954

HCPI Continuation Sheet – Page 6

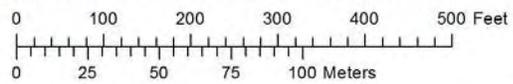
P:\Projects\Kirtland Air Force Base\60494739_Kirtland Air Force Base\4_CADD_GIS\GIS\mxd\Cultural\Building_954_1.mxd RDS 7/11/2017 2:12:36 PM



Aerial Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

 Building 954



HCPI Continuation Sheet – Page 7

Photographs



Photograph 2. West and South (Front) Elevations of West Wing (view northeast)



Photograph 3. South (Front) and East Elevations of East Wing (view northwest)



Photograph 4. South (Front) Elevation of Central Wing (view north)



Photograph 5. Detail View of Central Wing (view northwest)



Photograph 6. Detail View of Central Wing (view northeast)



Photograph 7. East and North (Rear) Elevations of East Wing (view southwest)



Photograph 8. West and North (Rear) Elevations of West and East Wings (view southeast)



Photograph 9. North (Rear) Elevation of Central Wing (view south)



Photograph 10. Air Conditioning Units on Rear Elevation (view southwest)