Draft

Environmental Assessment

for Forging Sabre Biennial Exercises at
Mountain Home Air Force Base, Idaho

February
2021

ABBREVIATIONS AND ACRONYMS

°F	degrees Fahrenheit
AASF	Army Aviation Support Facility
ACAM	Air Conformity Applicability Model
ACM	asbestos-containing material
AFB	Air Force Base
AFI	Air Force Instruction
AFMAN	Air Force Manual
AFOSH	Air Force Occupational Safety and Health
AGL	above ground level
APE	Area of Potential Effect
ARNG	Army National Guard
ATC	Air Traffic Control
ATCAA	Air Traffic Control Assigned Airspace
BMP	best management practice
CAA	Clean Air Act
CDNL	C-weighted day night sound level
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
COA	Certificate of Authorization
CO_2e	carbon dioxide equivalent
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DESR	Defense Explosive Safety Regulation
DNL	day-night sound pressure level
DoD	Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EO	Executive Order
ERP	Environmental Restoration Program
ESA	Endangered Species Act
ESQD	Explosives Safety Quantity Distance
EUA	Exclusive Use Area
FAA	Federal Aviation Administration
FS	Fighter Squadron
FW	Fighter Wing
GHG	greenhouse gas
HE	high-explosive
HIMARS	High Mobility Artillery Rocket System
IDAPA	Idaho Administrative Procedures Act
IDARNG	Idaho Army National Guard
IDEQ	Idaho Department of Environmental Quality
IDFG	Idaho Department of Fish and Game
IRP	Installation Restoration Program
JBR	Juniper Butte Range
JUL	Joint Use Land
LBP	lead-based paint
L_{dnmr}	onset-rate adjusted day-night average sound level
LEPA	Slickspot peppergrass *(Lepidium papilliferum)*
L_{eq}	equivalent sound level

L_{max}	maximum sound level
LOWAT	low altitude
MBTA	Migratory Bird Treaty Act
MHAFB	Mountain Home Air Force Base
MHRC	Mountain Home Range Complex
MMRP	Military Munitions Response Program
MOA	Military Operations Area
MRTT	Multi-Role Tanker Transport
NAAQS	National Ambient Air Quality Standards
NAS	National Airspace System
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NOTAM	Notice to Airmen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
OCTC	Orchard Combat Training Center
ODC	Office of Defense Cooperation
OSHA	Occupation Safety and Health Administration
PA	Programmatic Agreement
Pb	lead
PCB	polychlorinated biphenyls
PL	Public Law
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PM_{10}	particulate matter less than 10 microns in diameter
PPE	personal protective equipment
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
ROI	region of influence
RSAF	Republic of Singapore Air Force
SAF	Singapore Armed Forces
SCR	Saylor Creek Range
SEL	sound exposure level
SHPO	State Historic Preservation Officer
SO_2	sulfur dioxide
SONMP	Statewide Operational Noise Management Plan
STORM	STrike ObserveR Mission
SUA	Special Use Airspace
SWMU	solid waste management unit
SWPPP	Stormwater Pollution Prevention Plan
TFR	Temporary Flight Restriction
tpy	tons per year
UAS	unmanned aircraft system
U.S.	United States
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USC	U.S. Code
USDI BLM	U.S. Department of the Interior Bureau of Land Management
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UTTR	Utah Test and Training Range
VOC	volatile organic compound

Cover Sheet

Draft
Environmental Assessment for Forging Sabre Biennial Exercises at Mountain Home Air Force Base, Idaho

Responsible Agencies: U.S. Air Force (USAF); Air Combat Command; 366th Fighter Wing.

Affected Location: Mountain Home Air Force Base (MHAFB), Idaho.

Report Designation: Draft Environmental Assessment (DEA).

Abstract: This EA was prepared in compliance with USAF's Environmental Impact Analysis Process for the proposed Forging Sabre biennial exercises ("exercises") at MHAFB. Under this proposal, the Republic of Singapore Armed Forces would conduct integrated air and land exercises, with support from U.S. Armed Forces including the 366th Fighter Wing at MHAFB, for two weeks beginning in 2021 and occurring every other year thereafter. Preparation for the exercises would include installment of temporary facilities and modifications to an existing facility on MHAFB, a temporary increase in personnel, and coordination with the Federal Aviation Administration to establish a special operations temporary flight restriction for unmanned aircraft systems utilizing approved airspace. Exercise training would consist of aircraft and ground operations at MHAFB and the Mountain Home Range Complex, the Orchard Combat Training Center, and the Utah Test and Training Range at Hill Air Force Base in Utah. Additionally, an aerial refueling tanker would be temporarily stationed at Boise Airport/Gowen Field and would conduct take-off and landing operations consistent with transient military operations that presently occur at the airport. The Mountain Home Range Complex would support air and ground training with inert munitions expenditures. Expenditures of live munitions would occur at the Utah Test and Training Range and Orchard Combat Training Center. The proposed training exercise would be consistent with the type, conduct, and level of operations for each installation and training ranges as addressed in existing National Environmental Policy Act documentation. The exercises would provide training for effective combat readiness of an important partner nation, fulfilling the need to train as a team to perform in a multinational force structure. Written comments and inquiries regarding this document should be directed to 366 FW/PA by email at 366FW.PA.Public.Affairs@us.af.mil, or by postal mail at: 366 FW/PA, re: Forging Sabre EA, 366 Gunfighter Avenue, Suite 2014, Mountain Home AFB, ID 83648.

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Comments on this document are requested. Letters or other written comments provided may be published in the Final EA. Any personal information provided will be used only to identify a statement during public review or to fulfill requests for copies of the EA or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the EA. Names of private citizens making comments and their personal home addresses and telephone numbers will not be published in the EA.

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DRAFT

ENVIRONMENTAL ASSESSMENT

FOR

FORGING SABRE BIENNIAL EXERCISES AT MOUNTAIN HOME AIR FORCE BASE, IDAHO

AIR COMBAT COMMAND

FEBRUARY 2021

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1. Purpose of and Need for the Proposed Action

1.1 Introduction

This Environmental Assessment (EA) supports the U.S. Air Force's (USAF's) *Environmental Impact Analysis Process* (EIAP) for the proposed Forging Sabre biennial exercises from Mountain Home Air Force Base (MHAFB). The EA analyzes the potential for significant environmental impacts associated with the Proposed Action and alternatives, including the No Action Alternative. The environmental documentation process associated with preparing the EA is carried out in compliance with the National Environmental Policy Act (NEPA); regulations implementing NEPA (Title 40 Code of Federal Regulations [CFR] §§ 1500–1508; the September 14, 2020, version of the Council on Environmental Quality (CEQ) NEPA regulations is being used, 85 FR 43304-43376); and the USAF implementing regulation for NEPA, the EIAP at 32 CFR § 989, as amended.

1.2 Background

The U.S. State Department identifies Singapore as one of the U.S.'s strongest bilateral partners in Southeast Asia and this relationship plays an indispensable role in supporting the region's security and economic framework (U.S. Department of State 2021). For more than a quarter of a century, the U.S. has cooperated with Singapore on the full range of security issues including border and maritime security, military preparedness, counter proliferation, cybersecurity, and counterterrorism. Singapore was the first Southeast Asian country to join the Global Coalition against terrorism, and the Singapore Armed Forces have deployed imagery analysis teams, aerial refueling tankers, and medical teams to support antiterrorism campaigns in the Middle East. Additionally, access, basing, and overflight privileges granted to the U.S. by Singapore advance U.S. government and allied efforts to bolster a free and open Indo-Pacific region. Likewise, access, basing, and training privileges granted to Singapore by the U.S. help to maintain a continued strong partnership in the Pacific region while also helping the Republic of Singapore project airpower into the next generation.

Under the Peace Carvin V program, the USAF has established a long-term partnership with the Republic of Singapore government and hosts Republic of Singapore Air Force (RSAF; a branch of the Singapore Armed Forces [SAF]) aircrews and assets as part of 428th Fighter Squadron (FS). The 428th FS is the U.S. flagged flying squadron dedicated to the training of RSAF aircrews on the F-15SG, the country's newest fighter aircraft. Through this long-standing partnership, the Republic of Singapore has operated advanced fighter jet detachments and trained in the continental U.S. for the past 26 years. Currently, more than 1,000 Singaporean military personnel participate in training, exercises, and professional military education in the U.S. in places such as Mountain Home AFB, Idaho, where Singaporean F-16, AH64-D, and F-15SG pilots train alongside their U.S. counterparts.

MHAFB is home to the 366th Fighter Wing (FW), which has a history that stretches back more than 75 years to the United States' entry into World War II. The training missions at MHAFB have transitioned many times over the decades as USAF adapted to evolving combat requirements. These transitions span from the World War II long-range, heavy bomber missions (B-24s, B-29s, and B-47s), to the Cold War-era modern fighters (F-16s and F-15Cs) and bombers (B-1Bs), to the subsequent air refueling squadron missions (KC-135s), and to the

current F-15E/F-15SG squadrons training for pilot proficiency and close air support. The mission of the 366 FW is to prepare mission-ready Gunfighters to fight and win today's war and the next (MHAFB 2020a).

The 366 FW is comprised of three fighter squadrons: the 389th FS, 391st FS, and 428th FS (MHAFB 2020a). In 2007, RSAF signed a Letter of Offer and Acceptance with the U.S. government to establish a 20-plus year Continental United States presence to train on and operate their F-15SG aircraft at MHAFB. Per this agreement, the 428th FS would remain under the operational control of the USAF while in the U.S., as described and analyzed in the 2007 *Environmental Assessment for Republic of Singapore Air Force F-15SG Beddown, Mountain Home AFB* and the 2018 *Environmental Assessment for Beddown of Additional Republic of Singapore Air Force (RSAF) F-15SGs at Mountain Home Air Force Base, Idaho* (MHAFB 2007a, MHAFB 2018).

As part of the effort to train RSAF aircrews, SAF has requested to conduct biennial exercises, known as Forging Sabre, from MHAFB. Forging Sabre is intended to be a SAF integrated strike exercise involving a suite of military assets from RSAF and the Singapore Army. Forging Sabre would take place at MHAFB on the main installation and at the Mountain Home Range Complex (MHRC), to include Saylor Creek Range (SCR) and the Juniper Butte Range (JBR). Forging Sabre would also utilize other military or joint-use civil-military locations for the exercises, to include the Orchard Combat Training Center (OCTC) Range Complex, the Utah Test and Training Range (UTTR), and the Boise Airport. This EA describes all actions being proposed in preparation for, and to be conducted as part of, the Forging Sabre biennial exercises beginning in Fall of 2021 and occurring, thereafter, every other year. The air and ground operations proposed for exercises at MHRC, OCTC, and UTTR would be a continuation of the existing types, conduct, and operational tempos of current and ongoing training currently occurring at those ranges. Approximately 13 take-off and landing operations would also be conducted by an aerial refueling tanker temporarily stationed at Boise Airport/Gowen Field (hereafter, Boise Airport), consistent with transient military operations that presently occur at the airport as managed and approved by the Federal Aviation Administration (FAA). See **Section 1.6** for NEPA and other planning documents incorporated into this EA analysis by reference, and **Section 1.7** for details on the scope of this document.

1.3 Project Location Description

MHAFB is located in southwestern Idaho approximately 40 miles southeast of Boise and 8 miles southwest of Mountain Home (**Figure 1-1**). The installation occupies 6,844 acres of land and includes the Small Arms Range, Rattlesnake Radar Station, Middle Marker and C.J. Strike Dam Recreation Annex, and the MHRC.

The MHRC is an airspace range complex that is managed by the 366 FW and comprises over 9,026 square nautical miles of airspace and multiple ground-based training ranges (366 FW 2017). The MHRC supports air-to-air training, inert air-to-ground bombing and gunnery training, and Electronic Combat training activities. Aircraft based at MHAFB conduct over 90 percent of their flight training in the MHRC. Additionally, other aircraft from Air Combat Command, Air National Guard, sister services, and foreign allies regularly train in the MHRC. The MHRC airspace is composed of the Owyhee (North and South), Jarbidge (North and South), and

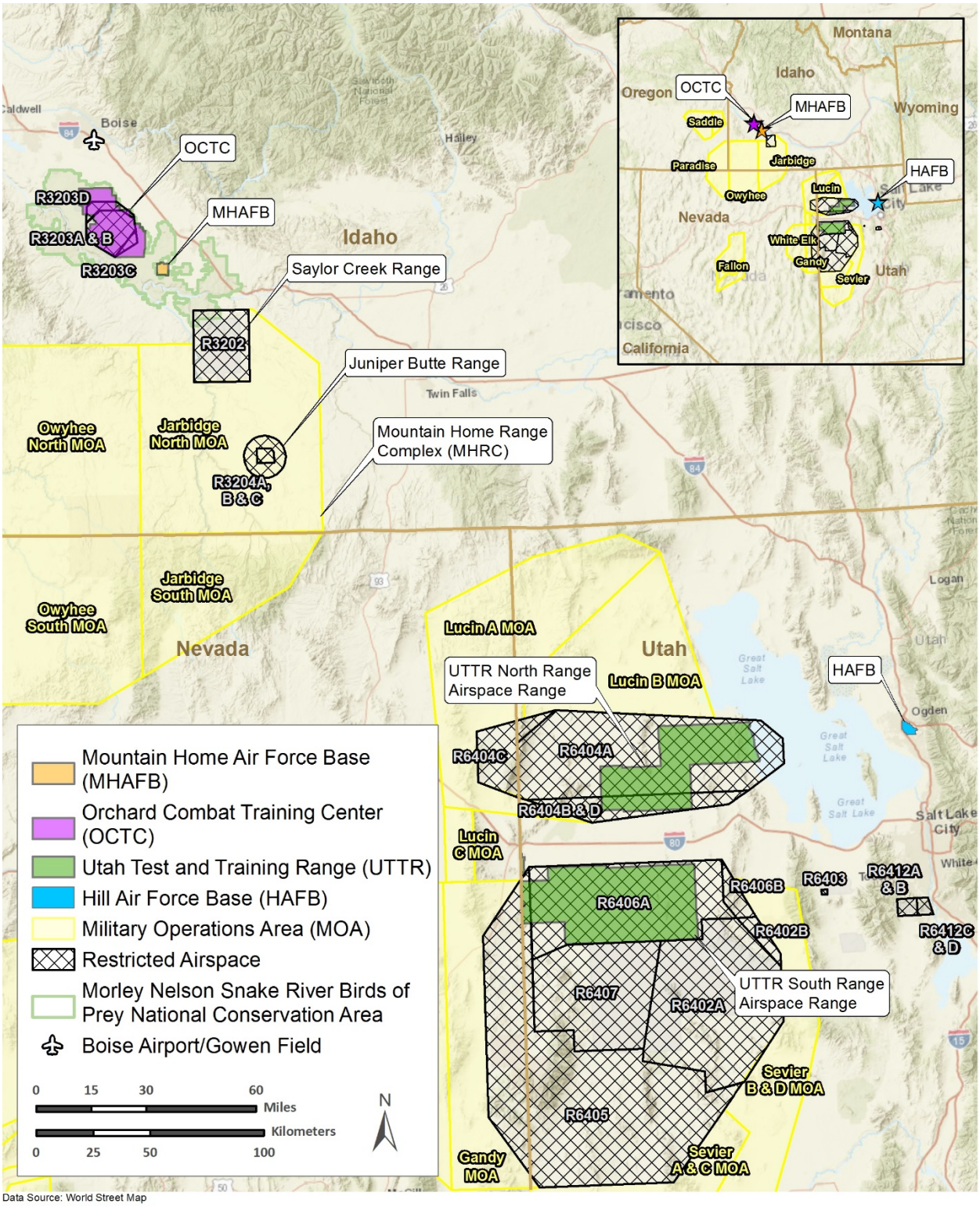
Paradise (North and South) Military Operations Areas (MOAs), and associated Air Traffic Control Assigned Airspace (ATCAA) (**Figure 1-1**).

MHAFB also controls the Saylor Creek restricted areas (R-3202), and the JBR restricted areas (R-3204 A, R-3204 B, and R-3204 C) and the underlying air-to-ground gunnery ranges. **Appendix C** lists the altitude ranges and operational details for each of these special use airspaces (SUAs). The SCR air-to-ground gunnery range encompasses 109,466 acres in Owyhee County, Idaho, approximately 25 miles southeast of MHAFB (366 FW 2017). An Exclusive Use Area (EUA) comprising 12,840 fenced acres at the center of the SCR is reserved for the exclusive use of USAF as a designated impact area. The remaining acreage surrounding the EUA is Joint Use Land (JUL), which is managed by USAF, the U.S. Department of the Interior Bureau of Land Management (USDI BLM), and the State of Idaho. Management and use of the exclusive use lands are the responsibility of USAF, including land rehabilitation, fire suppression, and ordnance clean-up. USDI BLM provides grazing management in the JUL on federal lands, and USAF leases State of Idaho lands that the state manages for grazing.

The JBR air-to-ground gunnery range is located approximately 25 miles southeast of SCR in Owyhee County. JBR encompasses 12,112 acres, with the central 662 acres fenced for an impact area and the surrounding 11,450 acres leased to support grazing.

OCTC has been utilized by the Idaho National Guard and other Department of Defense (DoD) Active and Reserve Forces for military training operations since 1953. The OCTC encompasses approximately 143,307 acres of predominantly USDI BLM-administered land and is located in southwestern Idaho, approximately 20 miles northwest of MHAFB, entirely within the boundaries of the Morley Nelson Snake River Birds of Prey National Conservation Area (**Figure 1-1**) (IDARNG 2018). The OCTC includes ground training ranges where heavy and light maneuvers and live (including high-explosive [HE]) and inert weapons firing activities are conducted. Idaho Army National Guard (IDARNG) SUA overlying the OCTC includes restricted areas R-3203 A, R-3203 B, R-3203 C, and R-3203 D (see **Appendix C**). The OCTC Cantonment Area (referred to as “Camp Orchard”) encompasses approximately 672 acres and is located approximately 4,500 feet east of the northeastern border of OCTC on land managed by the Idaho Department of Lands. The OCTC Cantonment Area is the area of the installation where the barracks compound, various administrative and headquarters facilities, instructional facilities, PX (post exchange and base store), dining hall, chapel, maintenance facilities, motor pool, and railhead are located.

The UTTR is a DoD Major Range and Test Facility Base located in northwest Utah which lies north and south of Interstate 80 (**Figure 1-1**). The 1,490-square mile range includes 12,574 square nautical miles of SUA and 2.3 million acres of sparsely populated, DoD-owned land located in the West Desert approximately 100 miles west of the installation (HAFB 2018a). Hill AFB has installation support responsibility for UTTR, which provides an ideal location for operational test and evaluation for weapons requiring a large safety footprint. UTTR is used in a training capacity for air-to-air-combat, air-to-ground inert or practice bombing and gunnery training by DoD aircrews. UTTR provides a large training area of realistic terrain for world-class testing and training scenarios to ensure the war fighter is prepared to deploy at a moments' notice to succeed in any conflict with decisive air and space power (HAFB 2016). SUA associated with UTTR North includes the Lucin MOAs (A and B) and restricted areas R-6404 A,



Data Source: World Street Map

Figure 1-1. MHAFB, MHRC, OCTC, and UTTR Locations and Associated Airspace

R-6404 B, R-6404 C, and R-6404 D; SUA associated with UTTR South include the Sevier MOAs (A&C and B&D), the Gandy MOA, and restricted areas R-6402 A, R-6402 B, R-6405, R-6406 A, R-6406 B, and R-6407; Lucin MOA C is the SUA that connects UTTR North to UTTR South. UTTR also includes and overlies three air-to-ground gunnery and bombing ranges – Dugway Proving Ground, Hill Air Force Range, and Wendover Air Force Range, and multiple drop zones and landing zones that support live (including HE) and simulated training exercises.

Boise Airport is a joint use civil-military airport with Class C airspace located south of downtown Boise, Idaho. Gowen Field is a National Guard installation located on the south side of the airfield and is the only joint military installation in Idaho. Boise Airport would not be used to host military training activities during the exercises but would support the temporary deployment and airfield operations (take-offs and landings) of one Multi-Role Tanker Transport (MRTT) to the military airspaces for training. An MRTT is an aerial refueling and transport tanker aircraft that is based on the civilian Airbus A330. The aircraft would be used to transport troops and equipment to Boise prior to the proposed exercises. During the exercises, the MRTT would provide aerial refueling support for aircraft operating in the MHRC.

1.4 Purpose of and Need for the Proposed Action

Background. Following World War II, the U.S. government established a policy of providing training to military personnel from countries allied and partnered with the United States and such training continues today. Changes in international requirements and reductions in U.S. military budgets have established a need for the military forces of many nations to work together to meet specific threats. This combined military capability permits substantial reductions in each nation's military force while also creating the larger force necessary to respond to international requirements.

This philosophy establishes a need for military personnel of different nations to achieve a common high standard of training and proficiency and to forge the strongest possible team. Supporting foreign partner training shows continued U.S. commitment to support foreign allies' and partners' requirements in a combined operational environment.

Purpose. The purpose of the Proposed Action is to enhance the SAF training mission through integrated biennial exercises to maintain maximum readiness for SAF personnel, with support from U.S. Armed Forces. Integrated exercises allow RSAF F-15SGs to train with other SAF military assets and show continued U.S. commitment to support foreign allies' and partners' training requirements in a combined operational environment.

Need. The Proposed Action is needed because the Republic of Singapore has limited airspace and range space to support a large-scale air and ground force training exercise. This action would also continue the building of U.S. relationships, integration, and interoperability with SAF. The Proposed Action would provide training for effective combat readiness of an important partner nation, fulfilling the need to train as a team to perform in a multinational force structure.

1.5 NEPA and Other Compliance Requirements

NEPA is a federal statute requiring the identification and analysis of potential environmental impacts associated with proposed federal actions before those actions are taken. NEPA helps

decision makers make well-informed decisions based on an understanding of the potential environmental consequences. NEPA established the CEQ to oversee Federal agency NEPA implementation and develop and recommend national policies that promote the improvement of environmental quality. The process for implementing NEPA is outlined in 40 CFR §§ 1500–1508, *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*.

CEQ regulations specify that an EA be prepared to provide evidence and analysis for determining whether to prepare a Finding of No Significant Impact or an Environmental Impact Statement (EIS). The EA aids in an agency's compliance with NEPA when an EIS is unnecessary and facilitates preparation of an EIS when one is required.

Air Force Policy Directive 32-70, *Environmental Considerations in Air Force Programs and Activities*, states that USAF will comply with applicable federal, state, and local environmental laws and regulations, including NEPA. USAF's implementing regulation for NEPA is the EIAP, 32 CFR § 989.

In compliance with NEPA, USAF has determined preparation of an EA is the appropriate level of the EIAP for the Proposed Action described in **Section 2.1**. This EA determines whether the Proposed Action would result in significant impacts, and guides USAF in implementing the Proposed Action in a manner consistent with USAF standards for environmental stewardship should the Proposed Action be approved for implementation.

USAF is required to manage floodplains and wetlands in accordance with Air Force Manual 32-7003, *Environmental Conservation*, which includes the USAF guidance for compliance with Executive Order (EO) 11988, *Floodplain Management*, and with EO 11990, *Protection of Wetlands*. USAF has not identified any floodplains or wetlands that have the potential to be disturbed by the Proposed Action described in **Section 2.1**.

1.6 Documents Incorporated by Reference

In accordance with the 2020 CEQ revised guidelines for implementing NEPA (40 CFR §§ 1500–1508), specifically 40 CFR § 1501.12, *Incorporation by Reference*, and with the intent of reducing the size of this document, paperwork, and project delays, this EA incorporates by reference relevant plans, studies, and material from existing NEPA and other planning documents. **Table 1-1** provides a list of all documents incorporated by reference for the locations proposed to support the Forging Sabre biennial exercises. Online availability of each document incorporated by reference is indicated in **Table 1-1**. To ensure these documents are readily accessible by the public, MHAFB also provides copies of these documents on the MHAFB Environmental Website at: https://www.mountainhome.af.mil/Home/Environmental-News.

Table 1-1. Documents Incorporated by Reference

Agency	Date	Document Title and Online Availability
MHAFB and MHRC		
USAF	2018	EA for Beddown of Additional RSAF F-15SGs at MHAFB (MHAFB 2018) *Available online at:* https://www.mountainhome.af.mil/Portals/102/Documents/environmental/20180614_MHAFB%20RSAF%20Beddown%20Final%20EA.PDF?ver=2018-08-03-143707-663
USAF	2017	EA for Operational Changes and Range Improvements in the MHRC (366 FW 2017) *Available online at:* https://www.mountainhome.af.mil/Portals/102/Documents/environmental/MHRC%20Final%20EA_Revised_FONSI_reduced.pdf?ver=2017-08-14-175651-037
USAF	2015	EA for the Proposed Temporary Relocation of the 366th Fighter Wing (MHAFB 2015a) *Available online at*: https://www.mountainhome.af.mil/Home/Environmental-News/
USAF	2007	EA for Beddown of RSAF F-15SGs at MHAFB (MHAFB 2007a) *Available online at*: https://www.mountainhome.af.mil/Home/Environmental-News/
OCTC		
Idaho Army National Guard and Bureau of Land Management	2020	EA Approval of the OCTC Real Property Master Plan, Modernization and Infrastructure Improvements, and Optimized Annual Throughput of Brigade Combat Team Training Gowen Field, Cantonment Area and OCTC (IDARNG and USDI BLM 2020) *Available online at:* https://eplanning.blm.gov/public_projects/nepa/123509/20017958/250023953/05122020_IDARNG_OCTC_RPMP_Training_FEA_Reduced.pdf
Hill AFB and UTTR		
USAF	2013	USAF F-35A Operational Basing EIS (USAF 2013a) *Available online at*: https://www.afrc-f35a-beddown.com/content/documents/AFRC%20F-35A%20Final%20EIS/Final%20EIS,%20Volume%20I,%20Chapters%201-5,%20Main%20Text/AFRC%20F-35A%20Final%20EIS%20Volume%20I%20Chapters%201%20to%205.pdf and https://apps.dtic.mil/dtic/tr/fulltext/u2/a595411.pdf and https://apps.dtic.mil/dtic/tr/fulltext/u2/a595407.pdf
USAF	2011	EIS for Proposed White Elk Military Operations Area (USAF 2011) *Available online at*: https://ntrl.ntis.gov/NTRL/dashboard/searchResults/titleDetail/ADA640064.xhtml
USAF	2008	Operations and Environmental Conditions at the Utah Test and Training Range as of December 31, 2007 (USAF 2008) *Available online at:* https://www.mountainhome.af.mil/Home/Environmental-News/

Agency	Date	Document Title and Online Availability
USAF	1997	Final Range Management Plan and EA for the Hill Air Force Range and Wendover Air Force Range of the Utah Test and Training Range (HAFB 1997) *Available online at*: https://www.mountainhome.af.mil/Home/Environmental-News/
Boise Airport		
Boise Airport	2019	2019 Boise Airport Master Plan Update *Available online at*: https://www.iflyboise.com/media/1588/boi-mpu_full-report_final-sm.pdf
Boise Airport	2015	Boise Airport 14 CFR § 150 Study Update, Updated Noise Exposure Maps and Noise Compatibility Program *Available online at*: https://www.iflyboise.com/media/1148/cfr-part150-studyupdate1.pdf

Key: CFR – Code of Federal Regulations, EA – Environmental Assessment, EIS – Environmental Impact Statement, IDARNG – Idaho Army National Guard, MHAFB – Mountain Home Air Force Base, MHRC – Mountain Home Range Complex, OCTC – Orchard Combat Training Center, USAF – U.S. Air Force, RSAF – Republic of Singapore Air Force, USDI BLM – U.S. Department of Interior Bureau of Land Management, UTTR – Utah Test and Training Range
Note: All documents incorporated by reference are available at the MHAFB Environmental Website at: https://www.mountainhome.af.mil/Home/Environmental-News in the Environmental Documents section.

1.7 Scope and Organization of the EA

The scope of analysis in this EA includes evaluation of the Proposed Action and the range of alternatives and impacts in accordance with NEPA. The purpose of this EA is to inform decision makers and the public of the potential environmental consequences of the Proposed Action and alternatives.

The Proposed Action consists of up to six months of construction and preparation actions (e.g., facility modifications and increased personnel) and three weeks of familiarization flights, followed by training activities (air and ground training operations, including munitions expenditures) over a two-week large force exercise at MHAFB, MHRC, OCTC, UTTR, and Boise Airport. The air and ground operations proposed for exercises at MHAFB, MHRC, OCTC, and UTTR would be a continuation of the existing types, conduct, and operational tempos of current and ongoing training currently occurring at those locations. Additionally, the proposed limited operations at the Boise Airport would be consistent with transient military operations that presently occur at the airport as managed and approved by the FAA. The documents incorporated by reference (described in **Section 1.6**) provide information and analyses for air and ground training activities that are similar in type, conduct, and operational tempo to those proposed for Forging Sabre, at MHAFB, MHRC, OCTC, UTTR and the Boise Airport. MHAFB and the MHRC do not have live fire ranges; for SAF to conduct live fire training during Forging Sabre, live fire ranges would be scheduled and utilized at the OCTC and UTTR in a manner consistent with current users of these ranges. The existing live fire ranges at OCTC and UTTR were designed for and are specifically operated for live fire mission training. Therefore, the EA addresses only the components of the Proposed Action that are not currently documented or analyzed in existing references, including the following:

- installation of temporary clamshell hangars to accommodate aircraft, installation of temporary facilities for office and storage space, and renovation of existing facilities to serve as office spaces for participating personnel
- temporary increase in support and exercise personnel
- transit flights of the MRTT between MHAFB and the Boise Airport, and UAS transit flights between MHAFB and the nearby restricted areas.

This EA considers environmental effects of other actions on the human environment that are reasonably foreseeable and have a reasonably close causal relationship to the Proposed Action.

Section 2 of this EA presents the scope and locations of the Proposed Action and the range of alternatives to be considered. In accordance with CEQ regulations implementing NEPA, the No Action Alternative provides the baseline against which the environmental impacts of implementing the range of alternatives addressed can be compared. **Section 3** provides discussions on the affected environment and environmental consequences from implementing the Proposed Action. **Section 4** provides information on other environmental considerations. **Section 5** provides the list of preparers who conducted the analysis and developed the EA. **Section 6** lists the references cited in the EA. **Appendix A** provides additional detailed information on the scope of the Proposed Action at each training location. **Appendix B** provides information on the types of large and small unmanned aircraft systems (UAS) that could be operated during the exercises. **Appendix C** provides a detailed description of the existing airspace wherein training operations would be conducted. **Appendix D** provides materials on interagency coordination and public involvement. **Appendix E** provides supplemental information for the assessments of resource areas in the EA, including the rationale for resources not carried forward for analysis, and resource definitions, regulatory overviews, and supporting information for the resources that were analyzed in the EA. **Appendix F** provides the Air Conformity Applicability Model (ACAM) analysis results. **Appendix G** includes the Section 106 Consultation materials for the Proposed Action.

1.8 Intergovernmental and Stakeholder Coordination

NEPA requirements help ensure that environmental information is made available to the public during the decision-making process and prior to actions being taken. The Intergovernmental Cooperation Act and EO 12372, *Intergovernmental Review of Federal Programs* (amended by EO 12416), require federal agencies to cooperate with and consider state and local views when implementing a federal proposal.

In compliance with NEPA, the Intergovernmental Cooperation Act, EO 12372, and EO 12416, USAF notifies relevant agencies and stakeholders about the Proposed Action and alternatives. The notification process provides these relevant agencies and groups the opportunity to comment on the Proposed Action and potential impacts that could occur. This process allows stakeholders the opportunity to comment on the Proposed Action and provide input on the scope of analysis to be incorporated in the development of the EA. The intergovernmental review period was initiated on November 21, 2020 and ended on December 29, 2020. MHAFB extended the typically 30-day review period by 8 additional days in consideration for delays associated with the COVID-19 national health emergency to enable stakeholders sufficient time to receive, review, and respond to the proposal. **Appendix D** provides stakeholder and public

involvement materials and copies of comment correspondences received during the extended intergovernmental review period. Once the Draft EA is completed, a Notice of Availability will be published in the *Idaho Statesman* and the *Mountain Home News*. Copies of the Draft EA will also be sent to local libraries. Public and agency comments on the Draft EA will be considered prior to a decision being made on whether or not a Finding of No Significant Impact is signed.

1.9 Identification of Reasonably Foreseeable Actions

The September 14, 2020 revised CEQ NEPA regulations (40 CFR §§ 1500) define effects or impacts as "changes to the human environment from the proposed action or alternatives that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action or alternatives, including those effects that occur at the same time and place as the proposed action or alternatives and may include effects that are later in time or farther removed in distance from the proposed action or alternatives." Actions unrelated to the Proposed Action that would occur at the same time and place or later in time or farther removed in distance, and contribute to a greater impact on resources when combined with the Proposed Action, are considered reasonably foreseeable actions. Reasonably foreseeable actions unrelated to the Proposed Action that could result in combined impacts to resources include the following:

- Qatar Emiri Air Force F-15 Beddown at MHAFB
- IDARNG OCTC RPMP Infrastructure and Facilities Modernization Projects and Optimized Annual Throughput of Brigade Combat Team Training
- Airspace Optimization for Readiness for MHAFB.

The effects of these actions, combined with the effects of the Proposed Action discussed in this EA, are described within the Environmental Consequences analysis (see **Section 3.0**) for each resource addressed.

2. Description of the Proposed Action and Alternatives

This section describes the Proposed Action and alternatives considered, including the No Action Alternative. As discussed in **Section 1.5**, the NEPA process evaluates potential environmental consequences associated with a Proposed Action and considers alternative courses of action. Reasonable alternatives must satisfy the purpose of and need for a Proposed Action, as defined in **Section 1.4**. USAF NEPA regulations also specify the inclusion of a No Action Alternative against which potential effects can be compared. While the No Action Alternative would not satisfy the purpose of or need for the Proposed Action, it is analyzed in accordance with CEQ and USAF NEPA regulations.

2.1 Proposed Action

2.1.1 Exercise Overview

Introduction. MHAFB proposes to support Forging Sabre exercises beginning in 2021 and occurring every other year thereafter. Components of each Forging Sabre exercise would include construction, facility modifications, personnel increases, aircraft operations, ground operations, and munitions use. All facilities, aircraft operations, ground operations, and munitions use during exercises would occur on military or joint civil-military use property, or within military ranges that currently support similar operations.

This EA presents all components associated with the proposed exercises to provide a clear picture of the full scope of the exercises. As described in **Section 1.7**, however, only construction and preparation activities and transit flights within the region (MHAFB, Boise Airport, and OCTC) that are associated with the Proposed Action at MHAFB are analyzed in the EA. Airfield and/or training activities proposed at MHAFB, MHRC, OCTC, UTTR, and Boise Airport are continuations of the types of activities currently occurring at those locations and are not analyzed in this EA.

This section generally outlines the components that comprise the Proposed Action. **Sections 2.1.2 through 2.1.5** provide details about each component of the Proposed Action that would occur at the respective training locations. **Table 2-1** provides a summary of the proposed biennial exercise components by location.

Table 2-1. Biennial Exercise Components and Locations

Exercise Component	Exercise Locations				
	MHAFB	MHRC	Boise Airport	OCTC	UTTR
Facility Modifications	X				
Personnel Increases	X	X		X	
Aircraft Operations	X	X	X	X	X
Ground Operations		X		X	
Munitions Use		X		X	X

Key: MHAFB – Mountain Home Air Force Base; MHRC – Mountain Home Range Complex; OCTC – Orchard Combat Training Center; UTTR – Utah Test and Training Range
Note: Helicopter flight operations would be conducted at OCTC. Live ordinance will be expended at OCTC during ground-to-ground firing operations conducted by SAF. No jet flights or munitions expenditures would occur from fixed wing aircraft at the OCTC.

Mission Objectives. The Forging Sabre exercises are designed as command and control exercises with a goal of assessing SAF's ability to integrate major weapons systems, monitor and control multiple military components, establish good communications, and adjust to mission changes in real-time. During the exercises, SAF would set up a Command Post at MHAFB to conduct real-time monitoring of all troops participating in the exercises and assess how they are achieving assigned mission objectives. The mission objectives that would be accomplished by the proposed exercises are as follows:

- Provide air and ground crews the opportunity to train together and gain real-time familiarity of working together as one large unit, as they would in actual combat scenarios.
- Train crews and combat teams on communication and coordination protocols for surveilling, tracking, identifying, and neutralizing threats; train individuals, crews, and battalions to specified vehicle and weapon system proficiencies.
- Train the Command Post crews on the processes and real-time requirement of coordinating the deployed assets to achieve safe and timely missions.

Exercise Operations. For the 2-week duration of the exercises, daily operations would be conducted between 7 am and 10:30 pm beginning each day with administrative meetings, training pre-briefs, and operational coordination prior to flight training operations. A typical day of training during the exercises would include two training scenarios, one during the day (7 am until sunset; approximately 8 pm) and one during the night (sunset until 10:30 pm). Flight operations would also be differentiated by sunrise and sunset; nighttime operations would be those occurring after sunset until 10:30 pm. Individual teams or operators may have their own assigned number of objectives or missions to complete within each day or night exercise scenario. Exercise scenarios could include various combinations of air and ground operations, at multiple training locations.

During exercise operations, air and ground assets would work together to collect timely and accurate intelligence of assets deemed for the exercise as opposing forces or ground threats (e.g., targets/target points on the ranges) and relay this information back to the Command Post to develop a comprehensive situational picture of the scenario. Through the Command Posts, the locations of opposing forces are transmitted to assets capable of neutralizing the exercise

threat. UASs would support the "friendly forces" by surveilling, tracking, identifying, and locating the on-ground threats and SAF air and ground crews would coordinate air and/or ground strikes, as appropriate. With a myriad of air and ground assets working together, the Command Post is able to integrate data provided by those assets to enable commanders to make faster, better informed, and more effective combat decisions.

Exercise operations would be conducted by the following air participants:

- AH-64s from the SAF Apache helicopter detachment stationed with Army National Guard in Marana, AZ under the Peace Vanguard agreement
- RSAF F-15SGs from 428th FS stationed at MHAFB under the Peace Carvin V agreement
- RSAF F-16s from 425th FS stationed at Luke AFB under the Peace Carvin II agreement
- RSAF UAS from Singapore, to include the large UAS "Heron-1" and small UAS capable of being launched and recovered by small platforms or by hand
- RSAF MRTT from Singapore.

The following ground assets (equipment and associated crews) would also participate in exercise operations: High Mobility Artillery Rocket Systems (HIMARS), command post vehicles, multi-mission radars, 5-ton vehicles, sport utility vehicles, High Mobility Multipurpose Wheeled Vehicles, trucks with flat beds, remote controlled vehicles (RCVs), commando detachments, and STrike ObserveR Mission (STORM) teams.

2.1.2 General Exercise Components

Facility Modifications. To provide additional office space and storage capabilities at MHAFB, new temporary facilities would be installed, and one existing facility would be modified prior to the exercises. Facility modifications at other exercise locations would not be required. Temporary targets (e.g., shipping containers) could be placed at MHRC, OCTC, and UTTR to support air and ground training operations, as is regularly done for existing USAF and U.S. Army training operations at these locations. Such actions would be within the operational envelopes analyzed under previous NEPA for each range (see **Section 1.6**).

Personnel Increases. The Proposed Action would require an additional 1,300 deployed personnel during the exercises that would operate air and ground assets and provide necessary support services. This would include 500 SAF personnel from existing U.S. units and 800 SAF personnel from the Republic of Singapore. Timing requirements for exercise preparation and demobilization could vary depending on the operational plans for each exercise. It is projected that approximately 40 percent of the deployed personnel, or 520 of the 1,300 personnel, would arrive up to five weeks prior to the exercises for preparation and mobilization, and therefore would be in the region for approximately seven weeks. The remaining deployed personnel, approximately 780 of the 1,300 personnel, would be in the region up to three weeks prior to the exercises, for a total of five weeks in the region. Following completion of the exercises, up to 65 personnel (5 percent of the 1,300 RSAF personnel) would remain in the region for an additional two days to support demobilization.

Transport of personnel between MHAFB, MHRC, and OCTC would occur using coach buses in accordance with the 2015 *EA for the Proposed Temporary Relocation of the 366th Fighter Wing* (MHAFB 2015a). Coach buses are the available option for efficient transport of troops between the training locations, though it is possible that rental vehicles would be used for supplemental personnel transport as needed. No more than 50 coach bus roundtrips would be required for personnel transport over the duration of the exercise preparation, training activities, and demobilization. It is assumed that coach buses could transport approximately 56 personnel per bus and would be similar in size and engine type as the equipment transfer trucks described in the 2015 EA. As indicated in the 2015 EA, 50 roundtrips between the IDARNG (Gowen Field/OCTC) and MHAFB would result in short-term and less than significant impacts; therefore, personnel transport for Forging Sabre exercises are not analyzed further for potential impacts in this EA (MHAFB 2015a).

Air Operations. Forging Sabre would entail approximately five total weeks of training, including a three-week period of familiarization flight training followed by a two-week integrated air and land exercise. Aircrews would conduct familiarization flights and training operations for the Forging Sabre exercises in existing MOAs and overlying ATCAAs (as applicable), restricted areas, and Military Training Routes. These operations would include activities such as air-to-ground firing operations, coordinated flight maneuvers, aerial refueling, and engagement in combat scenarios involving coordinated efforts of both air and ground crews to neutralize on-ground targets on the ranges. Aircraft operations would be conducted by manned aircraft (e.g., F-15, F-16, AH-64, MRTT), large UAS (e.g., Heron-1), and small UASs (e.g., sUAS, mini UASs such as V-15s, and micro UASs such as Parrot ANAFI Drones). Descriptions of the types of UAS that may be used for air operations and a brief description of the U.S. State Department's formal UAS approval process are included in **Appendix B**. Components of the proposed air operations could include the following:

- use of existing airfields and airspace by manned aircraft for training activities and transit between training locations, as currently authorized for and utilized by manned aircraft operating from the training locations
- training flight operations (e.g., surveillance and tracking, combat maneuvers, air-to-ground firing operations, and close air support operations) by manned aircraft and UASs within existing SUAs
- an FAA Certificate of Authorization (COA) to support transit of UASs between existing military restricted airspaces
- small UASs launched by hand or small platforms at existing military ranges.

No aspect of the Proposed Action would alter the structure or overall nature or use of the local or remote airspace units. The Proposed Action does not include any proposals for new permanent airspace; all aircraft would conduct operations within existing airspace and training areas currently or temporarily authorized for and utilized by aircraft operating from MHAFB and Boise Airport, and within MHRC including SCR and JBR. Transit jet and/or helicopter flights from MHAFB and the MHRC to OCTC or UTTR would use SUAs and MTRs. For operational

efficiency, UASs would be deployed via truck-transport to MHAFB, MHRC's SCR or JBR, and the OCTC, where they would be stationed temporarily for the duration of the exercise.

This EA uses two terms to describe aircraft operations: sortie and airfield operation. A sortie consists of a single military aircraft flight from take-off through landing. An airfield operation represents the single movement or individual portion of a flight in the base airfield airspace environment, such as a departure, an arrival, or a closed pattern. As an example, on a typical training mission at MHAFB, an aircraft makes an initial take-off at the airfield and flies to one or more MOAs to practice flight maneuvers, and then returns to the airfield. This generates one sortie and two airfield operations.

Ground Operations. Ground operations would be conducted solely within the MHRC's SCR and the OCTC and could include, for example, use of lasers and rocket launchers, foot and vehicle maneuvers, and sniper operations. Personnel conducting ground operations would be associated with two STORM teams for joint terminal attack control, one HIMARS Battery, and one Multi-Mission Radar crew with assistance from U.S. Army and USAF operators (administrators, air and ground support personnel), as needed. Coordinated air and ground training operations during Forging Sabre would involve on-ground infantry and observation teams and use of UASs to surveil, identify, track and locate on-ground targets (e.g., containers, vehicle carcasses, and RCVs), communication with the command control station, and firing activities by ground and/or aircrews to neutralize the threat. Administrative and control personnel (e.g., medical, safety) would be present within each military range being utilized during ground operations. Equipment, vehicles, and personnel that would be deployed during exercises could include trucks, sport utility vehicles, 5-ton vehicles, High Mobility Multipurpose Wheeled Vehicles, heavy cargo trucks (trucks with flatbeds), command center vehicles, radars, RCVs, artillery rocket systems, light infantry teams, and observation teams.

Munitions Use. Munitions use during Forging Sabre exercises would be conducted solely within existing military ranges at the MHRC's SCR, OCTC, and UTTR, either as ground-to-ground by troops training on the ranges or air-to-ground expenditures. Air-to-ground expenditures at the MHRC SCR and UTTR would involve fighter aircraft and attack helicopters employing munitions onto targets such as containers, vehicle carcasses, and RCVs to include RCVs with tow boxes. Similarly, air-to-ground expenditures at the OCTC would be conducted by attack helicopters employing munitions onto targets. No fixed wing aircraft flight operations or munitions expenditures would occur at the OCTC under the Proposed Action. Some of these operations involve ground troops and a UAS providing laser guidance to support the precision munitions expenditures. Flight training involving munitions firing activities would be conducted between 2:30 pm and 10:30 pm.

Munitions expenditures could include, for example, live and inert bombs, missiles, rockets, and large and small caliber munitions, within existing military ranges. SAF and MHAFB would coordinate with each military range manager to determine the number of allotted munitions expenditures for each munitions type. Because live fire exercises are not currently permitted, MHRC would support expenditure of inert munitions only. Live munitions expenditures would occur at the OCTC and UTTR in accordance with each installation's scheduling requirements, policies, and procedures.

2.1.3 MHAFB and MHRC

2.1.3.1 Facility Modifications at MHAFB

MHAFB does not currently have the required support facilities to readily accommodate SAF and RSAF personnel that would transit to the installation to support the proposed exercise. USAF would address space limitations on MHAFB prior to exercises to provide sufficient room for additional personnel and supplies during exercises.

Temporary facilities that would be installed to support the exercises include the following:

- approximately 30 temporary trailers to serve as office space for exercise personnel
- approximately 30 temporary shipping containers to house supplies and equipment for exercise personnel
- six temporary shipping containers on existing gravel pads near the Air Traffic Control (ATC) Tower to serve as the Ground Control Stations for UAS
- two temporary clamshell hangers to house aircraft participating in exercises.

Temporary trailer and shipping container locations on MHAFB are shown in **Figure 2-1,** and the clamshell hangars would be located within the boundary of existing airfield pavements. All temporary facilities (e.g., clamshell hangars and trailers) would be installed on ground surfaces in available open space areas up to six months prior to each exercise, beginning with the 2021 Forging Sabre exercise. Trailers and shipping containers would be removed after each exercise is completed; the clamshell hangars could remain in place for future use but would still be considered temporary facilities. The clamshell hangars are modular facilities that can be installed or removed without disturbing the airfield pavements.

Site preparation, construction, and operation of the 68 total temporary facilities would require use of up to 4 acres on MHAFB. Temporary facilities would be installed across several different areas of the installation (shown as the blue outlined areas in **Figure 2-1**) that were previously used for similar purposes, or were previously developed (i.e., the site of buildings that have since been demolished). Temporary facility installation at locations previously used for similar purposes could require placement of gravel on the ground surface but would not require digging or grading. Minor ground disturbance (e.g., clearing and leveling) and gravel placement could occur at sites that were previously developed; it is assumed that ground disturbance would not exceed the depth of disturbance that previously occurred during construction and demolition at these locations. All temporary facilities would meet fire and life safety thresholds. Existing utilities infrastructure would be capable of supporting the temporary facilities, and utilities extensions would not be required.

The renovation of the interior of Building 1361 is also proposed to serve as the exercise Command Post (see **Figure 2-1**). Because of time constraints, Building 1361 would not be renovated until after the 2021 exercise is complete. Renovations are anticipated to focus on the interior of the facility to reorganize office and storage space and would not require exterior modifications resulting in ground disturbance.

Figure 2-1. Proposed Temporary Facilities at MHAFB

2.1.3.2 Personnel at MHAFB and MHRC

Exercise Personnel. Overall, personnel associated with MHAFB in the region would temporarily increase by 28 percent (see **Table 2-2**) for up to five weeks when compared to baseline levels for the installation population, assuming all exercise personnel could operate from MHAFB during the exercises. Personnel would be dispersed during exercise activities, and it is not anticipated that all personnel would operate from MHAFB; only 50 of the proposed personnel would lodge on MHAFB. It is expected that no more than 350 personnel would lodge in a single location or community in the MHAFB region, including in Mountain Home and Boise, Idaho.

Table 2-2. Proposed Temporary Personnel Increase at MHAFB

Personnel	Baseline on Installation [1]	Proposed Action Change [2]	Total Under Proposed Action
Total Personnel	4,686	+1,300	5,986

[1] Baseline personnel numbers as described in MHAFB 2016
[2] Anticipate a maximum of 1,300 personnel required for exercises beginning in fall 2021 and occurring biennially, thereafter. Of the 1,300 personnel, 520 could be in the region for an additional two weeks for exercise mobilization.

Preparation Personnel. Exercise preparation would require contractor support on MHAFB up to six months prior to exercises. Contractor support would include, but not be limited to, temporary facility installation, equipment set-up, and logistics planning. Approximately 15 personnel would be required for exercise preparations; it is anticipated that any workers not hired from the local community would lodge in Mountain Home or nearby communities.

2.1.3.3 Air Operations at MHAFB, MHRC, and Associated Airspaces

Aircraft operations during Forging Sabre exercises at MHAFB and MHRC would include the following:

- use of existing airspace by manned aircraft and UASs, to include training flight operations by manned aircraft and UASs within existing SUAs
- obtaining an FAA COA to support transit of UASs between existing military restricted airspaces
- airfield operations by manned and UAS aircraft from MHAFB
- small UASs launched by hand or small platforms from MHRC.

2.1.3.3.1 Airspace and Training Flight Operations

All aircraft operations within MHAFB airspace would occur as landing and take-offs from the MHAFB airfield. No sorties (e.g., closed patterns, “touch and gos”) are planned to occur solely within MHAFB airspace; rather, following take-off from MHAFB airfield, aircraft would transit to MHRC, OCTC, or UTTR airspace to conduct sorties, prior to returning to MHAFB for landing. See **Section 2.1.3.3.2** for a discussion of landings and take-offs proposed to occur at the MHAFB airfield.

Total sorties and flying hours proposed within MHRC airspace by manned aircraft and large UAS are provided in **Table 2-3**. Approximately half of these sorties would occur during the day (sunrise to sunset) and half would occur during the night (sunset to 10:30 pm).

Table 2-3. Total Proposed Sorties and Flying Hours within MHRC Airspace

Aircraft	MHRC Sorties	MHRC Total Flying Hours
F-15/F-16	235	353
MRTT	24	120
AH-64	40	60
Heron-1 UAS	30	120
TOTAL	**329**	**653**

Key: MHRC – Mountain Home Range Complex;
MRTT – Multi-Role Tanker Transport; UAS – unmanned aircraft system

Manned Aircraft. **Section 1.3** and **Figure 1-1** describe the existing SUAs at the MHRC that would be utilized for proposed Forging Sabre exercise activities by manned aircraft. No changes to existing airspace are proposed to support manned aircraft training activities. Training flight operations during Forging Sabre within the MHRC (including SCR and JBR) would be consistent with existing operations within these SUAs. Sorties proposed by fighter aircraft within MHRC are within the volume described in the *2018 RSAF Beddown of Additional F-15s EA*, which analyzed an increase in F-15 sortie-operations in the MHRC MOAs (MHAFB 2018). Additionally, USAF's 2013 *F-35 Operational Basing EIS* clearly defines the historic level of transient operations within MHRC MOAs and analyzes it as part of its No Action Alternative (USAF 2013a). Forging Sabre transient operations would comprise approximately 1 percent of the total annual transient operations within the MHRC on a temporary (up to 4 weeks) biennial basis. Therefore, the proposed training flight operations for manned aircraft within MHRC airspace during Forging Sabre are not analyzed further for potential impacts in this EA.

UASs. The Heron-1, which is similar in size to a Cessna 172, would utilize the existing SUAs at the MHRC as described for manned aircraft in the paragraph above. UAS operations on MHRC are addressed with the *2017 MHRC Operational Improvements EA*, which discusses use of a proposed assault landing zone within MHRC by unmanned aircraft (366 FW 2017). Operation of the Heron-1 would be consistent with, and within the tempo of operations, currently conducted in MHRC airspace; **Appendix B** provides additional information on the size, noise, and emissions profiles for the Heron-1 in comparison to other aircraft that typically operate within MHRC airspace. Therefore, the proposed training flight operations for UAS aircraft within MHRC airspace during Forging Sabre are not analyzed further for potential impacts in this EA.

Similar to the discussion for manned aircraft in the preceding paragraphs, on each day of the exercise, the Heron-1 would take-off from the MHAFB and be flown to the existing restricted areas at the SCR (SCR; R-3202) or the JBR (JBR; R-3204 A, R-3204 B, and R-3204 C) for training activities. Safe and appropriate operation of the Heron-1 UAS between MHAFB, OCTC, SCR and JBR would require special airspace accommodation for the duration of the proposed familiarization flights and subsequent two-week training periods during each exercise year. For transit between the existing restricted areas, MHAFB would obtain an FAA COA and the UAS would operate in accordance with that COA in one of the following manners: with manned

observer stations along the route of flight with communications to the ground control station, with manned chase aircraft with communications to the ground control station, within restricted airspace provided by temporary flight restriction (TFR), or within other restricted airspace. Additional information on the potential establishment of the TFR for the exercises is provided in **Appendix A.** If opted, activation of a TFR would be achieved through issuance of a Notice to Airmen (NOTAM) to notify pilots operating in the region of the days and times that the TFR would be in use. Additionally, the boundaries of the TFR airspace would be shown on the SkyVector interactive aeronautical map (skyvector.com) for the two-week duration. Per FAA Order 7110.65, *Air Traffic Control*, access to SUA and TFR airspaces (as applicable) by emergency response and medical aircraft would continue to be prioritized and maintained by MHAFB. In emergency circumstances, such as air ambulance operations, law enforcement activities, wildfire response, and in-flight emergencies, the military aircraft using the SUAs and the Special UAS Operations TFR would immediately respond to ATC direction and relocate to another SUA to facilitate an unimpeded emergency response.

Three types of small UASs would be deployed to and launched from MHRC's SCR to support training operations within the SCR and JBR during each two-week Forging Sabre exercise. Small, micro, and mini UASs would also be launched by hand or from a small platform and operated only within the TFR or existing restricted airspaces. These UASs would be operated in concert with the Heron-1 UAS throughout each exercise. **Appendix B** provides additional information on the size and noise profiles for small, micro, and mini UASs. Operation of these UASs within the TFR or existing restricted airspace would result in no significant change to existing environmental conditions. Therefore, use of small UASs within MHRC airspace are not analyzed further for potential impacts in **Section 3** of the EA.

All proposed UAS transit flight operations would be conducted in compliance with Title 14 CFR § 91, *General Operating and Flight Rules* and conditions of the COA for the Forging Sabre 2021 exercise. Per FAA Order 1050.1F – *Policies and Procedures for Considering Environmental Impacts,* NOTAM issuances normally do not have an individual significant effect or a reasonably close causal relationship with other actions to result in significant effects on the human environment. Therefore, transit of UAS aircraft between existing restricted areas during Forging Sabre are not analyzed further for potential impacts in this EA.

2.1.3.3.2 Airfield Flight Operations

Forging Sabre exercises would include airfield operations from MHAFB over two weeks by F-15s and visiting unit aircraft, to include F-16s, AH-64s, and UASs. Take-offs and landings are not proposed from any airfields within MHRC.

F-15s. The proposed F-15 operations at MHAFB during Forging Sabre are not anticipated to increase total annual operations and would be conducted as an incorporation into the installation's regular training cadence. All F-15 operations at MHAFB would be conducted in accordance with the type of and total operations presented for F-15s in the 2018 *EA for Beddown of Additional RSAF F-15SGs at MHAFB* as shown in **Table 2-4** (MHAFB 2018).

The F-15 operations proposed during Forging Sabre would be approximately 80 sorties, or 0.7 percent of the total annual sorties allotted for F-15s at MHAFB. Therefore, the proposed F-15 operations are not analyzed further for potential impacts in this EA.

Table 2-4. F-15 Airfield Operations at MHAFB during Exercises

	Take-offs [1]	Landings [1]
Total F-15 Airfield Operations at MHAFB per Exercise	80	80
Total Allotted F-15 Annual Airfield Operations at MHAFB [2, 3]	**10,879**	**10,879**

Key: MHAFB – Mountain Home Air Force Base

[1] One sortie is one take-off and one landing, combined.
[2] Airfield operations numbers as described in MHAFB 2018
[3] The number of proposed operations includes the maximum anticipated for the Forging Sabre exercises.

Visiting Unit Aircraft. To account for operations by aircraft from visiting units (i.e., in addition to the F-15s) as part of Forging Sabre exercises, it is estimated that approximately 142 total sorties (i.e., 31 familiarization sorties and 111 exercise sorties) would occur at MHAFB airfield. **Table 2-5** provides the proposed operations for the F-16s, AH-64s, and the Heron-1 UAS from MHAFB during approximately three weeks of familiarization flights prior to each exercise, and during each two-week exercise.

Take-off and landing operations for the Heron-1 UAS would require use of the airfield runway. During a typical year, approximately 11,000 to 12,000 sorties occur from MHAFB airfield, and approximately 2,000 of these sorties are conducted by transient aircraft. As shown in **Table 2-5**, the total RSAF visiting unit aircraft sorties (i.e., 31 familiarization sorties and 111 exercise sorties) would be approximately 142 sorties, representing 8 percent of the annual allotted transient sorties at MHAFB, and would be consistent with the historic level of transient unit operations as documented in the 2018 *EA for Beddown of Additional RSAF F-15SGs at MHAFB* (MHAFB 2018). Therefore, the proposed visiting unit flight training operations are not analyzed further for potential impacts in this EA.

Table 2-5. Proposed Visiting Unit Airfield Sorties and Operations at MHAFB during Exercises

Aircraft	Familiarization Sorties[1, 3]	Exercise Sorties[1, 3]
Proposed F-16	14	72
Proposed AH-64	8	35
Proposed Heron-1 UAS	9	4
Total Visiting Unit Airfield Sorties and Operations at MHAFB per Exercise	**31**	**111**
Total Allotted Transient Annual Airfield Sorties at MHAFB[2]	**1,847**	

Key: MHAFB – Mountain Home Air Force Base; UAS – unmanned aircraft system

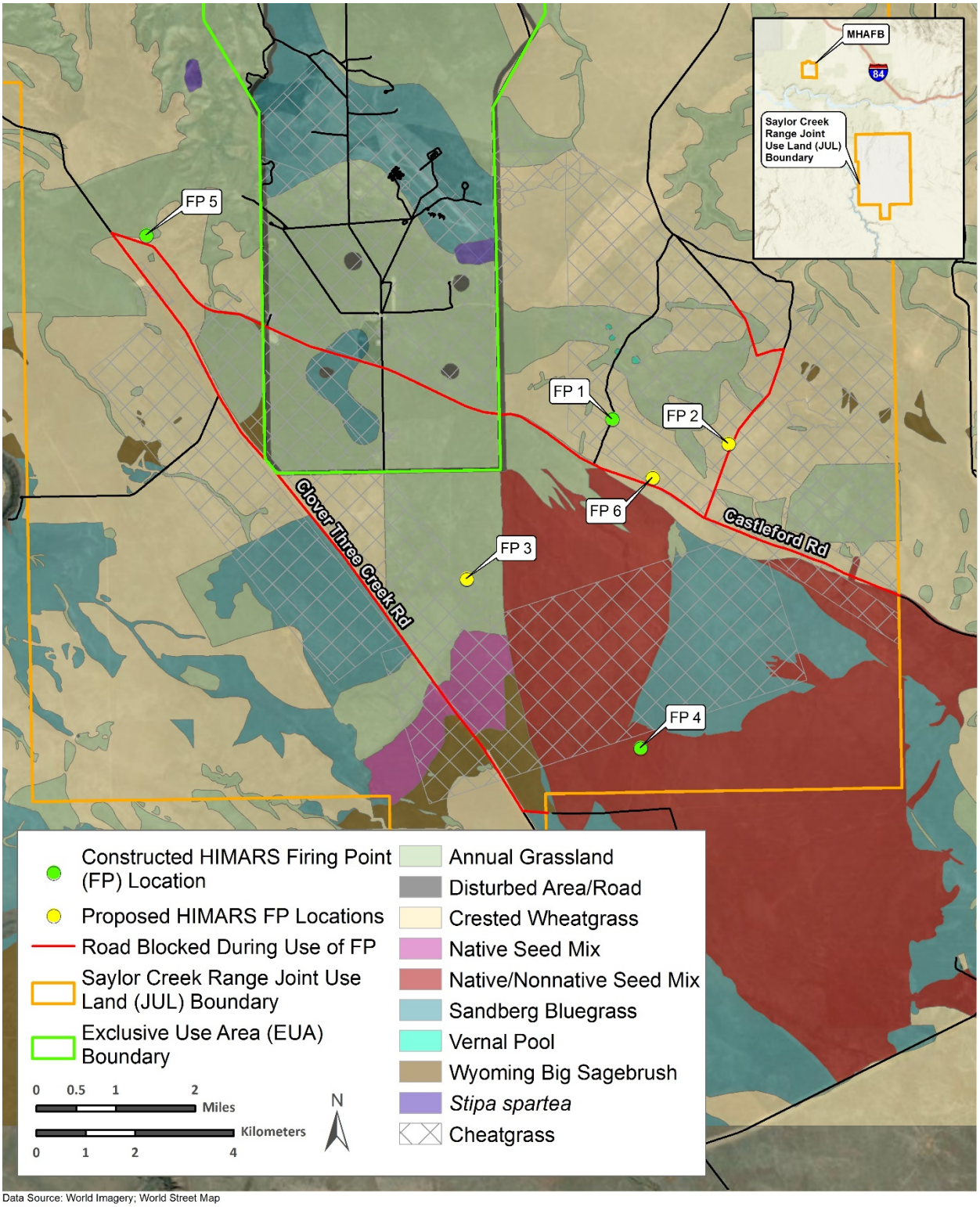
[1] One sortie is equal to one take-off and one landing, combined.
[2] Airfield operations numbers as described in MHAFB 2018
[3] The number of sorties indicates the maximum number required for the Forging Sabre exercises.

2.1.3.4 Ground Operations at MHRC

The use of rocket launchers within MHRC's SCR would occur as part of the ground operations during Forging Sabre. Establishing six quarter-acre rocket and mortar launchers within MHRC's SCR JUL was previously analyzed in the 2017 *EA for Operational Changes and Range Improvements in MHRC* (366 FW 2017). To date, three of these firing locations have been constructed and utilized. In support of the Proposed Action and future training by USAF, the three remaining undeveloped locations would be shifted within the same natural landscape within the JUL to locations where they could be expanded from quarter-acre sites to one-acre sites (see **Figure 2-2**). Because the updated locations are within the same natural environment, the same measures for site preparation and fire management analyzed in the 2017 MHRC EA would be applied including establishing a one-acre vegetation cleared buffer around each firing point to reduce potential ignition sources. Launch pads would either be covered in gravel or temporarily covered with aluminum matting, which would be removed after exercises. Additionally, BLM contracted firefighters would be on site during exercise firing activities. Each firing point could accommodate up to three HIMARS launch vehicles on individual launch pads of approximately 1,000 square feet.

The 2017 MHRC EA describes the natural conditions at the SCR and JBR impact areas as highly disturbed because of wildland fires, training activities, prescribed burning, reseeding, weed invasion, and road maintenance. The remaining lands within the ranges predominantly supports lower quality, non-native vegetation species, a variety of wildlife common in the region, and several species of special concern. One threatened flora species with proposed critical habitat, slickspot peppergrass (*Lepidium papilliferum)* is known to occur throughout JBR. As part of the EA, U.S. Fish and Wildlife Service made a no effects determination on slickspot peppergrass because operations would avoid slickspot microsites and habitat components, and there would be strict adherence to best management practices (BMPs) and standard operating procedures outlined in the MHAFB Integrated Natural Resources Management Plan (MHAFB 2019a). The ranges were intensely surveyed for archeological and cultural resources and identified the eligibility status for found resources to be listed in the National Register of Historic Places (NRHP).

Because the Proposed Action meets the definition of an undertaking in accordance with Section 106 of the National Historic Preservation Act (NHPA) at 36 CFR § 800.16(y) and because the undertaking does not meet the criteria for streamlined review defined in the installation Programmatic Agreement (PA) for alternative Section 106 compliance, MHAFB initiated standard compliance protocols, including defining the undertaking Area of Potential Effect (APE), conducting an updated archaeological survey of the APE, and consulting with the Idaho State Historic Preservation Office (SHPO). Similar to the analysis and SHPO consultation conducted for the 2017 MHRC EA, updated firing point locations were initially identified based on previous intensive archaeological surveys in areas generally devoid of archaeological resources. Based on this analysis, MHAFB received SHPO concurrence on the determination of No Adverse Effect for the undertaking on January 12, 2021 (see **Appendix D**).



Data Source: World Imagery; World Street Map

Figure 2-2 Proposed HIMARS Firing Point Locations on the SCR

Because the proposed ground training operations, including all firing activities, and the siting and establishment of HIMARS anticipated to support Forging Sabre exercises within the MHRC's SCR would be consistent with the operations, prescriptive avoidance and impact minimization measures, and analyses presented in the 2017 MHRC EA (366 FW 2017), they are not analyzed further for potential impacts in this EA.

2.1.3.5 Munitions Use at MHRC

Proposed munitions expenditures within MHRC's SCR are provided in **Table 2-6.** All munitions expended within MHRC's SCR during Forging Sabre would be consistent with the firing operations, volumes, and types of munitions (inert only) currently used on the ranges, as addressed in Table 2-2 of the 2017 MHRC EA (366 FW 2017). Therefore, the proposed munitions used are not analyzed further for potential impacts in this EA.

Table 2-6. Total Proposed Munitions Expenditures within MHRC SCR

Munitions Type	Amount
Bombs (Inert)	80
Hydra Rockets	520
Reduced Range Practice Rocket	84
30-mm rounds	3,200
0.5 caliber	360
7.62 mm	720
5.7 mm	480
5.56 mm	1,800

Key: mm - millimeter

2.1.4 Boise Airport

One SAF MRTT would be temporarily stationed at the Boise Airport Jackson Jet Center during Forging Sabre exercises. An MRTT is the military equivalent of the civilian Airbus A330 aircraft. It has a fuel capacity of 111 tons to support deployment of four fighter aircraft plus 50 personnel and 12 tons of cargo (support materiel such as luggage, spare parts, and equipment). The SAF MRTT would be deployed to the Boise Airport instead of MHAFB because the installation has limited ramp space to support both the MRTT and the other RSAF aircraft assets that would be deployed on the installation for the duration of the proposed exercises. Additionally, the Boise Airport is located near MHAFB, and the commute duration for flights to and from the MHRC would be minimal (estimated 20 minutes per leg); this would support optimized training time and efficiency for the SAF organization. Further, the Boise Airport has the necessary ground operations equipment required to support parking and maintenance of the aircraft. The MRTT would be refueled at the airport per the SAF agreement with the Jackson Jet Center. The SAF MRTT aircrew would conduct a total of 13 take-offs and landings from the airfield within the Class E airspace in accordance with existing airport departure and arrival protocols and consistent with existing transient military operations from the airport. **Appendix A** provides additional information regarding MRTT operation from the Boise Airport. The proposed MRTT operations would be conducted as sanctioned by U.S. State Department approval of the

Singaporean training program in the U.S. and in accordance with pertinent FAA flight rules and safety policies. Because the operations are very minimal and well within the prior environmental impact analysis for this airport, they are not analyzed further for potential impacts in this EA.

2.1.5 OCTC

Activities proposed at OCTC during Forging Sabre exercises include personnel lodging, aircraft operations in OCTC airspace by helicopters and UASs, ground operations, and munitions use. Air-to-ground munitions expenditures from attack helicopters and ground-to-ground munitions expenditures by SAF troops training on the ranges would occur at the OCTC. No fixed wing aircraft flight operations or munitions expenditures would occur at the OCTC. **Appendix A** provides the full context and scope of activities that could occur during the exercises at OCTC. All activities proposed at OCTC are within the scope and quantity of the actions analyzed in the 2020 *EA Approval of the OCTC Real Property Master Plan, Modernization and Infrastructure Improvements, and Optimized Annual Throughput of Brigade Combat Team Training Gowen Field, Cantonment Area and OCTC*, and the documents incorporated by reference within that EA (IDARNG and USDI BLM 2020). Therefore, activities proposed at OCTC are not analyzed further for potential impacts in this EA.

2.1.6 UTTR

Activities proposed at UTTR during Forging Sabre exercises include aircraft operations in UTTR airspace by F-15s and F-16s, and munitions use. **Appendix A** provides the full context and scope of activities that could occur during the exercises. All activities proposed at UTTR are within the scope and quantity of actions analyzed in the 2013 *F-35A Operational Basing EIS*, the 2011 *EIS for Proposed White Elk Military Operations Area*, and the 1997 *Final Range Management Plan and EA for the Hill Air Force Range and Wendover Air Force Range of the Utah Test and Training Range (*USAF 2013a, USAF 2011, HAFB 1997*),* and are consistent with the baseline activities at UTTR described at UTTR in the *Operations and Environmental Conditions at the Utah Test and Training Range as of December 31, 2007* (USAF 2008). Therefore, activities proposed are not analyzed further for potential impacts in this EA.

2.2 Summary of the Proposed Action

Conducting biennial Forging Sabre exercises would include facility modifications, personnel increases, aircraft operations, ground operations, and munitions use. As indicated in **Section 2.1,** many components of Forging Sabre are continuations of the type, degree, and frequency of activities currently occurring at the exercise locations which are on military or joint civil-military property or within military ranges that currently support similar operations. Therefore, in **Section 3** of the EA, analysis of potential impacts from the Proposed Action focuses on facility modifications to support exercises and temporary increases in exercise and preparation personnel, which are not currently analyzed in existing NEPA or other planning documents.

2.3 Selection of Alternatives

Considering alternatives helps to avoid unnecessary impacts and allows for an analysis of reasonable ways to achieve the stated purpose. To warrant detailed evaluation, an alternative must be reasonable. To be considered reasonable, an alternative must be suitable for decision making, capable of implementation, and sufficiently satisfactory with respect to meeting the

purpose of and need for the action. Alternatives to the Proposed Action must meet the following selection standards, in addition to the Purpose and Need, to be carried forward for analysis:

- ***Co-location.*** Conduct exercises from an installation that is a current host to SAF assets. Ensures organizational efficiencies by maximizing SAF-specific logistical and maintenance support facilities, equipment, and trained personnel.
- ***Airspace and Ranges.*** Provide adequate and available training airspace in proximity to ground ranges to optimize readiness. Local training airspace in proximity to ground ranges allows aircrews to perform effective training without wasting finite flying hours on transit that provides little to no training value.
- ***Support Facilities.*** Provide space and facilities for a temporary increase in additional aircraft and personnel with minimal commuting and requirements for facility or infrastructure improvements to avoid or reduce costs and environmental impacts.

MHAFB identified four possible action alternatives to support the proposed biennial exercises, including the use of simulators, whether operations could be entirely hosted at Luke AFB or Hill AFB, and the Proposed Action Alternative at MHAFB/MHRC, OCTC, Boise Airport, and the UTTR. **Table 2-7** provides a comparison of these possible action alternatives to the selection standards described above.

Table 2-7. Evaluation of Potential Alternatives

Potential Alternative	Selection Standards		
	Co-location	Airspace and Ranges	Support Facilities
Simulator Facilities	X	X	X
Luke AFB	✓	X	X
Hill AFB/UTTR	X	✓	✓
MHAFB/MHRC, OCTC, and UTTR (Proposed Action) *	✓	✓	✓

Key: AFB – Air Force Base; MHAFB – Mountain Home Air Force Base; MHRC – Mountain Home Range Complex; OCTC – Orchard Combat Training Center; UTTR – Utah Test and Training Range; ✓ – indicates the alternative meets selection standards; X – indicates the alternative does not meet selection standards

Table Notes: The grey and white rows differentiate between training type alternatives and physical training location alternatives

(*) – As noted in **Section 2.1.4,** this alternative would also use the nearby Boise Airport to support the temporary deployment of one aerial refueling MRTT due to limited facility and ramp space at MHAFB. Other airports were not considered to support this alternative because the Boise Airport is the closest airport to MHAFB with the capability to support the MRTT and that regularly supports similar aircraft.

Simulated Training. MHAFB considered whether SAF integrated exercises could be conducted through the use of simulators. This included whether all air training could be conducted in simulators or whether some air training could be simulator-based while other assets operated from the proposed airfields and military training ranges. Currently, MHAFB has only one simulator facility that supports F-15SG flight training operations. This facility cannot be used to support individual or linked training for or with other aircraft (F-16, MRTT, or AH-64) and associated weapons systems, or with ground vehicles and troops and associated weapons

system, all of which would need to be operated concurrently to achieve the mission and training goals of the proposed exercises. Additionally, SAF operators would not be able to use MHAFB simulators and associated facilities for the exercise due to differences between the USAF and RSAF aircraft systems (e.g., engines, avionics, weapons systems) and classification restrictions. Based on these factors, use of simulators would not meet the selection standards specified in **Section 2.3** or the exercise purpose and need described in **Section 1.4**.

Upon eliminating simulators as a possible action alternative, MHAFB considered additional alternatives to conducting the Forging Sabre biennial exercises from MHAFB as described in **Section 2.1**. USAF identified two possible training location alternatives to the Proposed Action including Luke AFB in Arizona and Hill AFB in Utah, which have the potential to meet the purpose and need as described in **Section 1.4**.

Luke AFB. USAF identified Luke AFB as a potential alternative to the Proposed Action because it has previously hosted Forging Sabre exercises and supports training for RSAF F-16 pilots. Because Luke AFB is a current host to SAF assets, it could provide organizational efficiencies for the exercise. In 2012, however, Luke AFB was selected to host the F-35 mission and since that time has been restructuring to support this new mission (USAF 2013b). There are now limited facilities and ramp space, and limited airspace capacity, to accommodate Forging Sabre in addition to the F-35 mission.

Hill AFB/UTTR. The air and ground ranges associated with Hill AFB's UTTR were also identified as a potential alternative to the Proposed Action because the training activities associated with the proposed Forging Sabre biennial exercises would be consistent with the operating levels, types and conduct of training already approved to occur in the SUA and ground training ranges there. However, no SAF assets are currently hosted at Hill AFB. To conduct the exercises at this alternative location, SAF would be required to transport all assets, equipment, and troops from MHAFB (where they are currently collocated) to Hill AFB (200 miles away) for the duration of the exercises and then back again to MHAFB. Such a transition would require substantial funding and lengthy approval processes that would inhibit any ability to progress with the planned, funded, and approved timeline for biennial training. Additionally, the UTTR lacks nearby support facilities and housing capacity to accommodate SAF's troops and equipment. Further, because SAF and RSAF would be transient operators at Hill AFB, hosted units would have scheduling priority for air and ground ranges to meet their own mission training requirements. Due to the associated scheduling limitations, SAF would not be able to conduct operations at the same tempo that they currently do at MHAFB and would expect to do during the exercises.

As summarized in **Table 2-7** and explained in this section, the Luke AFB and the Hill AFB/UTTR alternatives do not meet the selection standards and were, therefore, dismissed from further analysis. Only the Proposed Action to conduct Forging Sabre from MHAFB and utilize training airspace and ground ranges at MHRC, OCTC, and UTTR, as described in **Section 2.1**, meets the purpose and need and the selection standards, and would be the action alternative carried forward for analysis.

2.4 No Action Alternative

USAF NEPA regulations require consideration of the No Action Alternative. The No Action Alternative serves as a baseline against which the impacts of the Proposed Action and other potential action alternatives can be evaluated. Under the No Action Alternative, USAF would not support Forging Sabre biennial exercises at MHAFB as described in **Section 2.1**. The No Action Alternative would not meet the purpose of and need for the Proposed Action and would not allow RSAF to enhance their training mission at MHAFB. The No Action Alternative would limit RSAF's ability to maintain maximum readiness for RSAF forces and USAF's ability to train with an important partner nation, and would not fulfill the need for USAF and the RSAF to train as a team to perform in a multinational force structure.

3. Affected Environment and Environmental Consequences

3.1 Introduction

3.1.1 Scope of Analysis

As explained in **Sections 1** and **2**, the Proposed Action addressed in this EA consists of up to six months of construction and preparation actions (e.g., facility modifications and increased personnel) and three weeks of familiarization flights, followed by training activities (air and ground training operations, including munitions expenditures) over a two-week large force exercise at MHAFB, MHRC, OCTC, UTTR, and Boise Airport.

3.1.1.1 Resource Analysis in this EA

As discussed in **Section 1.7**, this EA analyzes only the components of the Proposed Action that are not currently documented or analyzed in existing NEPA or other planning documents, including the following:

- installation of temporary clamshell hangars to accommodate aircraft, installation of temporary facilities for office and storage space, and renovation of existing facilities to serve as office spaces for participating personnel temporary increase in support and exercise personnel
- transit flights of the MRTT between MHAFB and the Boise Airport, and UAS transit flights between MHAFB and the nearby restricted areas (described in **Section 2**).

Section 3.1.1.3 details the reasonably foreseeable actions considered in this EA. **Sections 3.2 through 3.9** address impacts on the environmental resources carried forward for analysis in this EA. Resource definitions, overviews of the applicable environmental regulations for the Proposed Action and the project area, and other supporting information is provided in **Appendix E**. Because it has been determined that the proposed construction activities and temporarily increased transient personnel on the installation would not affect airspace, land use, utilities and infrastructure, or environmental justice resources, those resource areas were not carried forward for analysis in the EA. Supporting rationale for not conducting analysis on these resources is provided in **Appendix E**.

3.1.1.2 Summary of Analysis Incorporated by Reference

The documents and analyses incorporated by reference (described in **Section 1.6**) address air and ground training activities that are similar in type, conduct, and operational tempo to those proposed for Forging Sabre at MHAFB, MHRC, OCTC, UTTR and the Boise Airport. **Table 3-1** summarizes the anticipated impacts on resources from the authorized air and ground training operations at each location as described in the incorporated documents. This summary is included to inform the assessment of accumulated impacts where the Proposed Forging Sabre biennial exercises may concurrently occur with other reasonably foreseeable actions.

Table 3-1. Impacts Summary for Authorized Training Operations from Analyses Incorporated by Reference

Installation:	MHAFB and MHRC [1]	Boise Airport [2]	OCTC [3]	UTTR [4]
Resource				
Land Use	◘	●	◘	◘
Airspace	●	◘	●	●
Noise	◘	◘	◘	◘
Air Quality	◘	◘	◘	◘
Cultural Resources	◘	●	◘	◘
Environmental Justice	◘	●	◘	◘
Health and Safety	●	◘	◘	◘
Socioeconomics	+	●	+	◘
Biological Resources	●	◘	◘	◘
Geological Resources	◘	●	◘	●
Water Resources	◘	◘	◘	◘
Hazardous Materials and Wastes	◘	◘	◘	◘
Infrastructure and Utilities	●	◘	◘	●
Transportation	◘	◘	◘	●

Table Notes:
[1] MHAFB 2015a, MHAFB 2018, USAF 2013a, 366 FW 2017
[2] MHAFB 2015a, IDARNG and USDI BLM 2020
[3] MHAFB 2015a, IDARNG and USDI BLM 2020
[4] HAFB 1997, USAF 2011, USAF 2013a
Acronyms Key: MHAFB – Mountain Home Air Force Base; MHRC – Mountain Home Range Complex; OCTC - Orchard Combat Training Complex; UTTR – Utah Test and Training Range
Impacts Key: ● – no or negligible impacts, ◘ – nonsignificant impacts ranging from low to moderate intensity, **+** potential minor beneficial impacts

3.1.1.3 Reasonably Foreseeable Actions

As noted in **Section 1.9**, this EA analyzes environmental impacts from the Proposed Action combined with potential impacts from reasonably foreseeable actions per the September 14, 2020 new CEQ NEPA regulations (40 CFR § 1500)**. Table 3-2** describes reasonably foreseeable actions that could have a causal relationship to the Proposed Action and contribute to additional impacts on the human environment. Refer to the Environmental Consequences discussion for each resource area analyzed in this EA.

Table 3-2. Reasonably Foreseeable Actions in the vicinity of the Proposed Action

Project Name	Location	Timeframe	Description
Qatar Emiri Air Force F-15 Beddown	MHAFB	2023/2024-ongoing	USAF proposes to establish a USAF-flagged Qatar Emiri Air Force operations squadron of F-15QA aircraft at MHAFB with four component parts: 1) basing and operating up to 12 Qatar Emiri Air Force F-15QA aircraft tentatively beginning in late 2023/early 2024; 2) using the airfield and associated airspace for training; 3) increasing personnel; and 4) constructing, modifying, and equipping facilities to support the beddown.
IDARNG OCTC RPMP Infrastructure and Facilities Modernization Projects and Optimized Annual Throughput of Brigade Combat Team Training	MHAFB, OCTC, Gowen Field	2020-2027	The Army National Guard proposes to: 1) approve the Gowen Field and OCTC's Master Plan, 2) implement infrastructure and development projects to ensure adequate capacities to support multiple brigade-sized units on the OCTC in accordance with the OCTC's Range Complex Training Center Level I designation, and 3) to optimize annual training throughput on the OCTC to support the training equivalent of three brigade combat teams at 85 percent strength (approximately 10,500 soldiers and associated equipment) per year (IDARNG and USDI BLM 2020).
Airspace Optimization for Readiness for MHAFB	MHAFB, MHRC	Future	USAF issued a Notice of Intent to prepare an EIS and has completed scoping its proposed airspace optimization of special use airspace in the MHRC. This action would support aircrew low altitude (LOWAT) certification and maintenance training, LOWAT masking and combat maneuvers in terrain training, and optimized supersonic flight training at lower, more realistic altitudes (MHAFB 2019b). The MHRC MOA airspace floors are the higher of 3,000 feet above ground level (AGL) or 10,000 feet mean sea level. The proposed airspace optimization proposes modifying MOA floors consistently throughout the MHRC from between 100 and 500 feet AGL to allow for LOWAT training, and proposes to lower the floors for supersonic flight operations to be consistent across all MOAs at either 10,000 feet AGL or 5,000 feet AGL.

Key: AFB – Air Force Base; MHAFB - Mountain Home AFB; MHRC – Mountain Home Range Complex; MOA – Military Operations Area; EIS – Environmenrtal Impact Statement; IDARNG – Idaho Army National Guard; OCTC – Orchard Combat Training Center; RPMP – Real Property Master Plan; ACC – Air Combat Command; LOWAT – low altitude; AGL – above ground level

3.2 Noise

This section includes a discussion of the existing ambient noise environment and environmental consequences due to noise. **Appendix E** includes a definition of noise as a resource and a regulatory overview.

3.2.1 Existing Conditions

This section includes a discussion of the existing noise levels at MHAFB, MHRC, Boise Airport, and the OCTC. Background noise levels contained herein are primarily from modeling efforts, that combine documented and established noise levels for aircraft and training activities taken in a controlled setting, and use standard noise propagation calculations to estimate the noise surrounding these installations. Taking actual noise measurements is unreliable due to the many variables that affect noise readings such as temperature, cloud cover, and wind, and the area of concern in this EA is so large it would be infeasible to attempt to set up noise monitors at many locations. Monitoring aircraft noise is subject to the same variables and is highly irregular, for many locations, aircraft may not fly over a particular location for months at a time. A USAF noise analyst reviewed these factors and determined that actual noise measurements would be unreliable and infeasible to collect.

Mountain Home AFB

Existing sources of noise on and adjacent to MHAFB include military and civilian aircraft overflights, road traffic, and other noises such as lawn maintenance equipment, construction, and bird and animal vocalizations. The existing mission at MHAFB includes a variety of aircraft and operations; although F-15s conduct the majority of operations and dominate the overall ambient noise environment at and around the base. For reference purposes, **Table 3-3** outlines the sound exposure level (SEL) and maximum sound level (L_{max}) for individual F-15s at 1,000 AGL under different operational conditions.

Table 3-3. Sound Levels for Individual F-15E/SG Overflights at 1,000 feet AGL

Condition	SEL (dBA)	L_{max} (dBA)	Power	Speed (knots)
Afterburner Assisted Take-off	120.4	115.6	91%	350
Take-off	113.5	105.8	90%	300
Approach	90.4	83.1	75%	170
Cruise	90.2	83.2	74%	280

Source: USAF 2019a
Key: SEL – sound exposure level; dBA – A-weighted decibel; L_{max} – maximum sound level

USAF adopted the NOISEMAP computer program to describe noise effects from aircraft operations. NOISEMAP is a suite of computer programs and components developed by USAF to predict noise exposure in the vicinity of an airfield due to aircraft flight, maintenance, and ground run-up operations. NOISEMAP Version 7.3 was used to calculate the existing day-night sound pressure level (DNL) noise contours at MHAFB. NOISEMAP accounts for all aircraft activities, including landings, take-offs, in-flight operations, maintenance activities, and engine run-ups.

Figure 3-1 shows the existing DNL noise contours plotted in 5 decibel (dB) increments, ranging from 65 to 85 A-weighted decibel (dBA) DNL. The 65 dBA DNL is the noise level below which

generally all land uses are compatible with noise from aircraft operations. The noise contours as shown depict 2016 operational conditions at the installation. There have been no substantial changes in operations or mission at the installation since the noise contours were developed. Therefore, the 2016 noise contours have been carried forward as the baseline for comparison to determine the level of effects under NEPA. The 65- dBA DNL noise contour extends approximately 3 to 4 miles beyond the installation boundary. These noise levels, which are often shown graphically as contours on maps, are not discrete lines that sharply divide louder areas from land largely unaffected by noise. Instead, they are part of a planning tool that depicts the general noise environment around the installation based on typical ground and air operational activities. Areas beyond 65-dBA DNL can also experience levels of appreciable noise depending upon training intensity or weather conditions. In addition, DNL noise contours may vary from year to year due to fluctuations in operational tempo due to unit deployments, funding levels, and other factors.

Mountain Home Range Complex

Aircraft operations at the MHRC produce an ambient noise environment that is somewhat different from that around airfields. Rather than regularly occurring operations like at airfields, activity in the MHRC is highly sporadic. Military aircraft within the MOAs at MHRC generate two types of sound: (1) sound generated by the aircraft's engines and by air flowing over the airframe, and (2) sonic booms, which are impulsive sounds generated during supersonic flight.

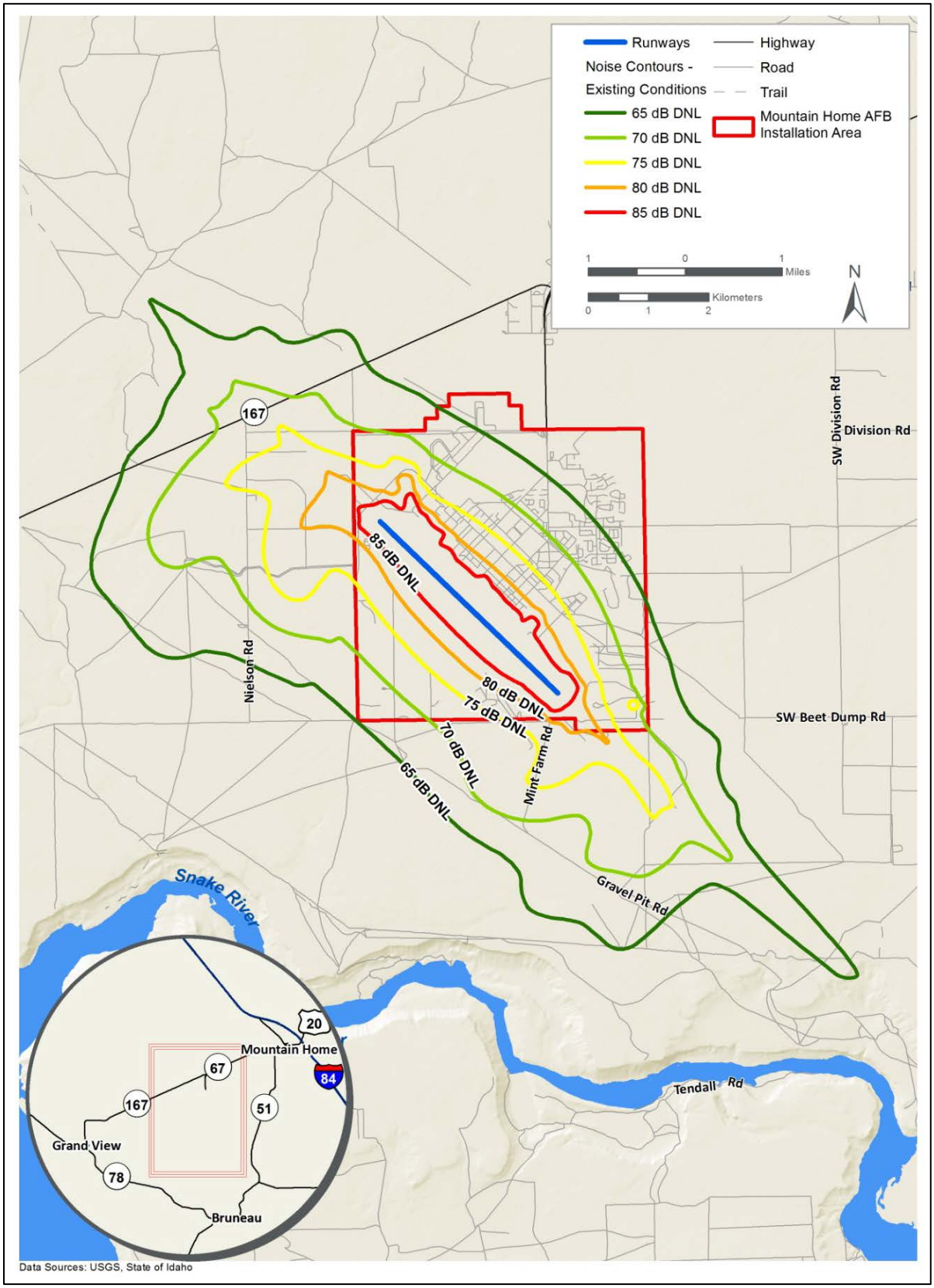
Engine and Airframe Noise. Noise from an aircraft's engines and airframe is a time-varying sound increasing as the aircraft approaches and diminishing as it departs. The noise depends on the altitude, speed, and power setting of the aircraft. The cumulative noise metric devised to account for the "surprise" effect of the sudden onset of aircraft noise events on humans and the sporadic nature of airspace activity is L_{dnmr}. **Table 3-4** presents the existing sound levels within the MHRC MOAs (366 FW 2017). The assessment included the total annual average aircraft operations within the MOAs, including aircraft operating out of MHAFB, the IDARNG, and other transient users. The existing sound levels are less than 65 dBA, and compatible with all land uses.

Table 3-4. Noise Levels and Number of Sonic Booms at MHRC

	Jarbidge		Owyhee		Paradise	
	North	**South**	**North**	**South**	**North**	**South**
L_{dnmr}	62	55	59	53	48	49
CDNL	54	-	53	-	47	-
Booms/Day	2.8	-	2.5	-	2.2	-
Booms/Month	56	-	50	-	44	-

Source: 366 FW 2017
Key: CDNL - C-weighted day night sound level; L_{dnmr} – onset-rate adjusted day-night average sound level

Sonic Booms. Aircraft in supersonic flight (i.e., exceeding the speed of sound) cause sonic booms. A sonic boom is characterized by a rapid increase in pressure, a decrease in pressure, and then a return to normal atmospheric pressure. This change occurs very quickly, usually within a few tenths of a second, and is often perceived as a "bang-bang" sound.



Source: USAF 2020a

Figure 3-1. Noise Contours for MHAFB – Existing Conditions

The amplitude of a sonic boom is measured by its peak overpressure, in pounds per square foot, and can be converted to dB as needed. The sound levels depend on the aircraft's size, weight, geometry, speed, and altitude. Sonic booms can be annoying and cause startle reaction in humans and animals. On occasion, very loud sonic booms can cause physical damage to structures such as window breaking and plaster cracking.

Supersonic operations are permitted by waiver in Owyhee North and Jarbidge North MOAs at altitudes above 10,000 feet AGL, except over the Duck Valley Indian Reservation where it is prohibited. Supersonic flight is also permitted above 30,000 feet mean sea level in Paradise North MOA and the ATCAAs above all the other MOA airspace; however, sonic booms generated at these high altitudes rarely reach the ground. BoomMap3 is a suite of computer modeling programs that predict noise exposure from sonic booms under the flight path of supersonic aircraft operations. **Table 3-5** outlines the number of sonic booms within the MHRC MOAs (USAF 2013a). The information includes the total annual average aircraft operations within the MOAs, including aircraft operating out of MHAFB, the IDARNG, and other transient users. There are seven to eight sonic booms each day distributed throughout the eight MHRC MOAs.

Table 3-5. Maximum Noise Levels of Aircraft

Slant Distance (Feet AGL)	Maximum Noise Level (dBA)							
	AH-1	AH-64	CH-47D	OH-58D	UH-1	UH-60	C-17	C-130
200	93	92	98	89	91	91	101	100
500	85	83	89	81	83	83	91	100
1,000	79	77	83	74	76	76	83	92
2,000	72	70	77	67	70	69	74	77
5,000	61	59	67	56	60	58	62	66
10,000	52	50	59	47	52	48	52	57

Source: USAF 2019a

Boise Airport

IDARNG's Boise Army Aviation Support Facility (AASF) is located at Gowen Field on the Boise Airport property. The predominant noise sources on Gowen Field include military and civilian flight operations out of the joint airfield with the Boise International Airport. Highway vehicular traffic and noise from interspersed construction projects throughout the nearby communities are also common. Over 165,000 annual commercial and general aviation air operations dominate the ambient noise environment at the airport. The Boise AASF is located within the 70 A-weighted day night sound level or Noise Zone II for the Boise Airport (Boise Airport 2015). Operations from Gowen Field make up a very small percentage of overall aircraft activity, and do not contribute appreciably to the overall noise at the airport (USACHPPM 2006).

The military aircraft stationed and/or supported at the Boise AASF include A-10 Warthog, AH-64 Apaches, UH-60 Blackhawks, and CH-47 Chinooks, and tankers such as the C-130. In addition, other transient Army aircraft utilize the facilities at Gowen Field. Studies have found that a good predictor of annoyance for facilities with 50 to 200 operations per day, such as the AASF, is the maximum level of the noisiest events (Rylander 1974, Rylander 1988). The maximum noise

levels for U.S. Army aircraft operating at Gowen Field are listed in **Table 3-5** (USAF 2019a). These maximum levels are compared with the levels listed in **Table 3-6** to determine the percent of the population highly annoyed. While noise levels may be lower at flight tracks with fewer than 50 operations per day, it is a tool in providing some indication of the percent of people who might be annoyed by individual Army National Guard (ARNG) aircraft operations at Gowen Field.

Table 3-6. Percentage of Population Highly Annoyed From Aircraft

Maximum Noise Level (dBA)	Percentage Highly Annoyed
70	5
75	13
80	20
85	28
90	35

Sources: Rylander 1974, Rylander 1988

The IDARNG Statewide Operational Noise Management Plan (SONMP) is the primary tool the ARNG uses to analyze noise impacts and land use compatibility on and around IDARNG facilities (USACHPPM 2006). The SONMP includes noise contour footprints associated with operations taking into account both location and intensity. Management practices are then implemented to isolate and minimize noise based on findings within the SONMP (USACHPPM 2006). As outlined in the SONMP, except when necessary for take-off or landing, no person may operate an aircraft below the following altitudes:

- Over any congested area of a city, town, or settlement, or over any open-air assembly of persons, an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft.
- An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.

OCTC

On the OCTC, baseline noise is predominantly generated by live fire activity, tank and vehicular transport, and aircraft overflights. The noise generated by military aircraft and weapons extends to areas outside the installation boundary. Although not subject to local noise policies or ordinances, the OCTC has no existing activities that conflict with local standards and guidelines related to human health and safety.

Large-caliber weapons and demolitions are assessed using C-weighted day night sound level (CDNL) for land use planning and peak levels to evaluate the potential for concern and complaint. Existing large-caliber and demolition noise (CDNL) contours for the OCTC are shown in **Figure 3-2**. Noise Zone III extends into a small area of state and private land along the eastern boundary. Noise Zone II extends beyond the OCTC eastern and western boundaries in a combination of federal, state and private lands. Much of the area affected by the training noise is undeveloped, scattered residential, and agricultural land use.

Noise Zones III and II near Range 10 extend approximately 0.4 and 0.8 mile, respectively, beyond the northern and eastern boundary. Noise Zone II extends approximately 0.8 and 0.7 mile beyond the southern and western boundaries, respectively. Within Noise Zones II and III, the land is primarily used for agricultural purposes and does not contain any noise-sensitive land uses. During periods of intense training, the short-term CDNL at a particular range would be larger than that depicted here. Such periods of intense activity can lead to complaints, particularly when artillery firing takes place at night when people are more likely to be at home and background noise levels are lower. However, the remote location of OCTC coupled with the scarcity of nearby residences has resulted in few noise complaints (USACHPPM 2006).

The existing large-caliber weapons peak level contours are shown in **Figure 3-3**. Under unfavorable weather conditions, peak sound levels between 115 and 130 dB extend beyond the boundary approximately 1.9 miles to the east, south, and west. Peak sound levels above 130 dB extend beyond the boundary less than 0.7 mile. The contours indicate that a moderate probability of receiving noise complaints exists for these areas; however, there are no noise-sensitive receptors in either area. Although the activity may be audible in the homes in the Northwest Harper Road and South Cinder Butte Road areas, the peak noise levels indicate a low risk of complaints.

Small arms (small-caliber, 20mm or smaller) ranges are primarily around the perimeter of the impact area. Noise Zone II (>87 dB Peak) and Noise Zone III (>104 dB Peak) are entirely within the OCTC boundary except for an overlap to a small agricultural area east of the OCTC. Noise from small arms training is audible in some off-post areas, but is compatible with the surrounding areas (USACHPPM 2006).

Although there are no aircraft stationed at OCTC, air operations are conducted on OCTC by Army helicopters similar to those at Gowen Field (OH-58, UH-60, CH-47, AH-1W and AH-64). Because of the low number of aircraft operations at OCTC, there is not enough aircraft noise to generate noise contours greater than 65 dBA DNL; however, there is the potential that aircraft could cause a noise complaint while entering or exiting the OCTC airspace (USACHPPM 2006). These effects are similar in nature and overall level to those from individual overflights near the AASF at Gowen Field but take place in and around the OCTC which is surrounded by primarily undeveloped, rural, and agricultural areas. Pilots specifically avoid operating directly over homes while flying to and from OCTC.

UTTR

At Hill AFB, baseline noise is predominantly generated by aircraft flight operations (HAFB 2018a). The 65 dBA-DNL noise contour for the airfield extends to areas approximately 1 mile outside the installation boundary. No off-base land to the north of the installation is affected by greater than 75 dB DNL. Certain areas within 0.5 mile of the southern and eastern borders of the base are affected by noise levels above 75 dB DNL. Although not subject to local noise policies or ordinances, Hill AFB has no existing activities that conflict with local standards and guidelines related to human health and safety. Procedures and noise abatement strategies are implemented to minimize potential for noise and vibration impacts on persons and structures on

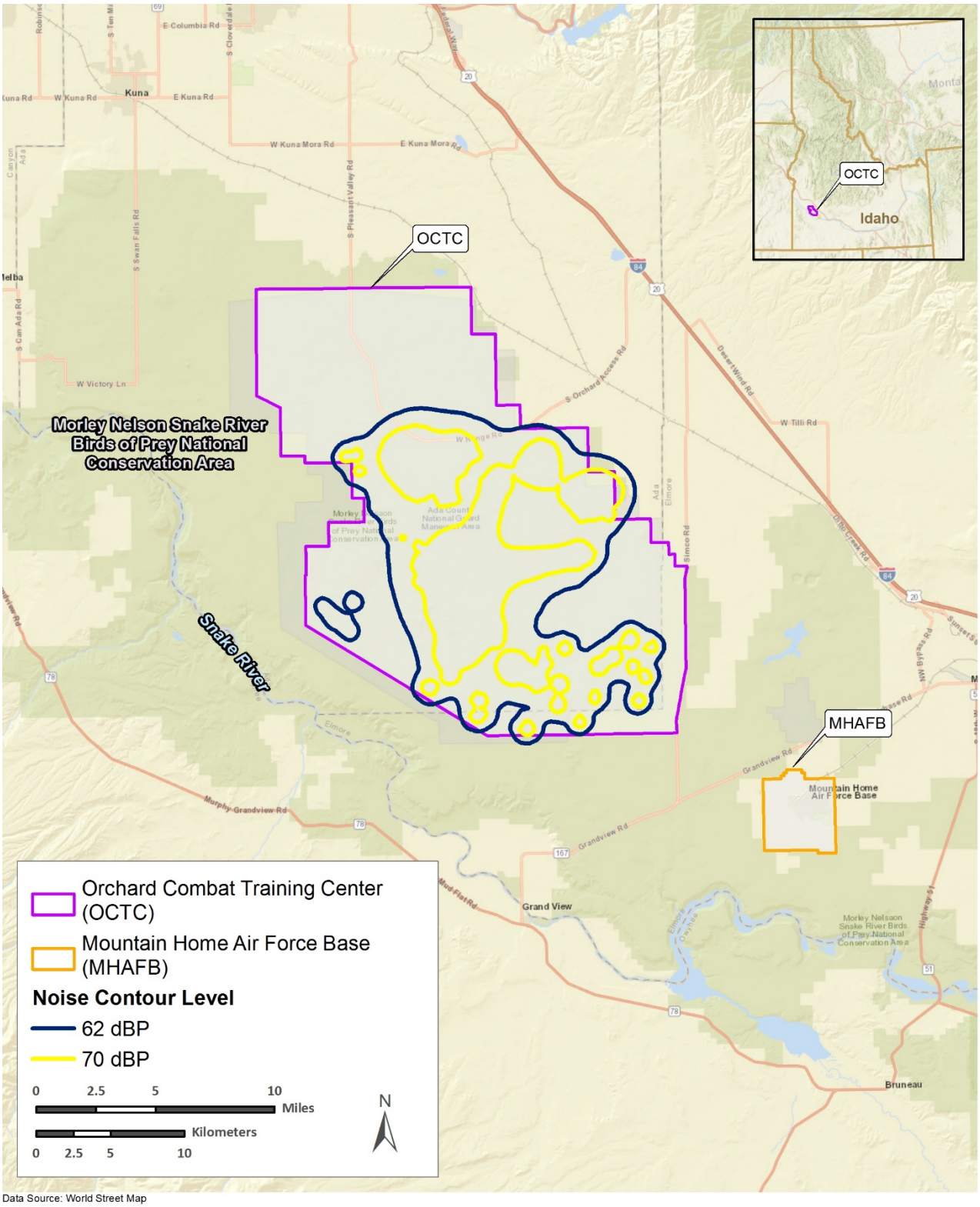
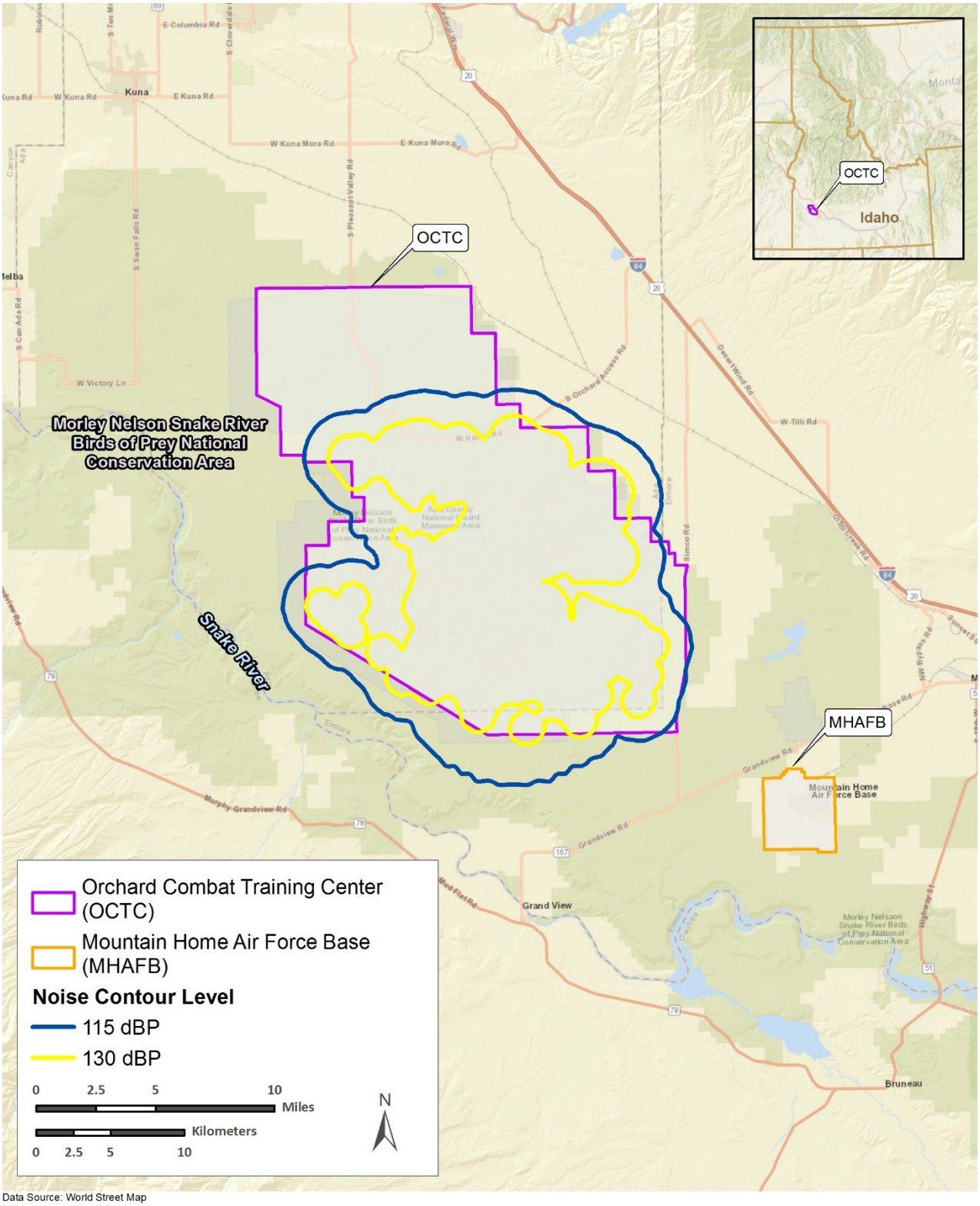


Figure 3-2. Existing Large-Caliber and Demolition CDNL Noise Contours at OCTC



Data Source: World Street Map

Figure 3-3. Existing Large-Caliber and Demolition Peak Level Noise Contours at OCTC

or near the installation, as documented in the *Hill AFB Noise Abatement Program* (HAFB 2018a).

Hill AFB and the UTTR support aircrew flight training operations for permanently assigned and temporarily assigned units and associated aircraft including the F-35 Lightening II, F-16, A-10, C-130, and F-22. The installation also supports operations conducted by transient units and aircraft (e.g., A-10, F-15 variants, KC-135, and many helicopter variants). Temporarily assigned aircraft come to Hill AFB for intensive maintenance work, and are flight tested following the work. Transient aircraft may be associated with aircraft stopping over during a long cross-country trip or aircraft that come to Hill AFB from their home base to train at an unfamiliar airfield or to train in the varied landscape of the UTTR.

The majority of air traffic at Hill AFB goes to or comes from the UTTR's 12,574 square nautical miles of SUA and associated 2.3 million acres of sparsely populated, DoD-owned land located in the West Desert approximately 100 miles west of the installation (HAFB 2018a) (see **Figure 1-1)**. The UTTR supports various mission training objectives including air-to-air, air-to-ground, and ground-to-ground munitions firing operations, combat air support, combat maneuvers and tactical support, combat search and rescue, aerial refueling, and pilot proficiency training. Operations in the UTTR are conducted in accordance with the *UTTR Noise Prediction, Mitigation, and Management Program*, which was developed based on work conducted in partnership between the DoD and the Utah DEQ to minimize the potential for training noise and vibration impacts on offsite (outside of the boundaries of the UTTR) receptors (HAFB 2013). The program implements requirements for predictive noise modeling and on-site noise monitoring to inform the planning and conduct of various munitions firing and detonation activities (HAFB 2013, HAFB 2018b). Under this program, operations may be delayed or canceled if they are predicted to generate unacceptable noise levels. The predictive model employed at the UTTR is continually updated based upon the onsite noise verification monitoring.

3.2.2 Environmental Consequences

Changes in noise would be considered significant if they would lead to a violation of any federal, state, or local noise ordinance, or substantially increase areas of incompatible land use outside the installation. **Appendix E** provides definitions of terms relating to noise and an overview of the noise regulations applicable to the Proposed Action.

3.2.2.1 Proposed Action Alternative

Proposed Action

Construction noise generated under the Proposed Action would cause short-term minor adverse effects on the ambient sound environment. Short-term effects would be due to noise generated by heavy equipment during site preparation and facility assembly activities. As indicated in **Section 1.7**, there would be no long-term effects from changes in aircraft noise in areas surrounding MHAFB from the proposed flight operations. The Proposed Action would not lead to a violation of any federal, state, or local noise ordinance, and would not substantially increase areas of incompatible land use on land adjacent to MHAFB. Bus transport of the up to 1,300 RSAF and SAF troops to and from MHAFB lodging facilities in Mountain Home, the OCTC, or

Boise would result in minor, intermittent, increases in highway traffic noise over the 5 weeks that they would be present in the region to participate in the biennial exercises.

Construction of the temporary support facilities and hangars would require use of heavy equipment that would generate short-term increases in noise near the project sites. Table **3-7** presents typical noise levels (dBA at 50 feet) for the main phases of outdoor construction. Individual pieces of heavy equipment typically generate noise levels of 80 to 90 dBA at a distance of 50 feet from the noise source. With multiple items of equipment operating concurrently, noise levels can be relatively high within 400 to 800 feet of active construction sites.

Table 3-7. Noise Levels Associated with Outdoor Construction

Construction Phase	L_{eq} (dBA)
Ground clearing	84
Excavation, grading	89
Foundations	78
Structural	85
Finishing	89

Sources: USEPA 1971, FHWA 2006
Key: dBA – A-weighted decibel; L_{eq} – equivalent sound level

All construction activities in support of the Proposed Action would be within the installation's property boundary and would be conducted in the context of an active USAF installation where aircraft and other types of noise are typical. No residents live within 800 feet of the proposed construction sites. Given the temporary nature of proposed construction activities, distance to nearby noise sensitive areas, and the existing ambient noise environment, these effects would be minor. The following BMPs would be implemented to reduce further any realized noise effects:

- Heavy equipment use would primarily occur during normal weekday business hours.
- Heavy equipment mufflers would be properly maintained and in good working order.
- Personnel, particularly equipment operators, would don adequate personal hearing protection to limit exposure and ensure compliance with federal health and safety regulations.

There would be no change in the authorized types of operations conducted at, or subsequent changes in the noise environment near MHAFB, MHRC, OCTC, UTTR, or Boise Airport. The nature and levels of noise from overflights and range training activities would be comparable to existing conditions, and completely within the existing operational envelope for these locations. Background noise in areas between the primary training sites outlined in this EA are, and would continue to be, predominantly void of aircraft noise. Both military and civilian high-altitude aircraft overflights would continue to occur at altitudes at which they would be barely perceptible to individuals on the ground. For areas between MHAFB, MHRC, OCTC, and Boise Airport, both the level of noise and the frequency of overflights are, and would continue to be, very low, and there would be no perceptible change in the noise environment from aircraft in transit between these installations and training areas.

Reasonably Foreseeable Actions

Construction noise associated with the Proposed Action would be additional to other on-going activities (e.g., development of new facilities and infrastructure to support the Qatar Emiri beddown and the IDARNG infrastructure and development projects) on MHAFB. The accumulation of noise impacts from concurrent actions would include construction vehicle transport of materials, construction activities, and operation of equipment at work sites on the installation. No past, present, or reasonably foreseeable actions have been identified that when combined with the Proposed Action would be expected to result in significant noise effects.

As noted in **Sections 1.7** and **3.1**, the nature and levels of noise from the proposed Forging Sabre exercise overflights and range training activities would be comparable to existing conditions (refer to **Table 3-1** for the summary of impacts from existing conditions), and entirely within the existing operational envelopes for MHAFB, MHRC, OCTC, UTTR, and Boise Airport. When considered in combination with the proposed MHAFB Airspace Optimization activities to enable lower altitude training and the proposed Qatar Emiri beddown operations at MHAFB, the proposed RSAF Forging Sabre biennial exercises could contribute to an increased frequency of aircraft noise generated during lower altitude overflights and LOWAT training in the MHRC. Because the proposed exercises would be conducted every other year and RSAF aircrews and aircraft would be distributed across the MHRC, OCTC, and UTTR airspaces (as approved by those ranges), it is expected that noise effects from the Proposed Action and reasonably foreseeable actions would be minor to moderate, intermittent, and short-term.

3.2.2.2 No Action Alternative

Under the No Action Alternative, USAF would not support Forging Sabre biennial exercises at MHAFB, and the existing conditions discussed in **Section 3.2.1** would remain unchanged. Therefore, no impacts on noise would occur from implementation of the No Action Alternative.

3.3 Air Quality

3.3.1 Existing Conditions

Federal regulations designate areas in violation of the National Ambient Air Quality Standards (NAAQS) as nonattainment areas. Federal regulations designate areas with levels below the NAAQS as attainment areas. The U.S. Environmental Protection Agency (USEPA) has designated Elmore County, MHAFB, and all adjacent areas as in attainment for all criteria pollutants (USEPA 2020a).

MHAFB is a major source of air emissions and holds a Title V air operating permit, number T1-2019.0051 issued on October 6, 2020 (IDEQ 2020a). The permit requirements include annual periodic inventory of all significant stationary sources of air emissions for each of the criteria pollutants of concern, and monitoring and recordkeeping requirements. Primary stationary sources of air emissions include paint booths, fuel storage areas, aircraft engine test stands, and diesel generators.

Table 3-8 lists MHAFB's facility-wide air emissions from all significant stationary sources. Idaho does not require permitting of mobile source emissions, such as aircraft and vehicle operations.

Table 3-8. Annual Emissions for Significant Stationary Sources at MHAFB

Pollutant	Emissions (tpy)
CO	17.0
NO_x	14.4
VOCs	11.7
PM_{10}	27.4
$PM_{2.5}$	4.8
SO_2	0.6

Source: IDEQ 2020b
Key: CO – carbon monoxide; NO_x – nitrous oxides; tpy - tons per year; PM_{10} – particulate matter less than 10 microns; SO_2 – sulfur dioxide; $PM_{2.5}$ – particulate matter less than 2.5 microns; VOC -volatile organic compound

3.3.2 Environmental Consequences

Because the area within and around MHAFB is in attainment for the NAAQS, the General Conformity Rule does not apply. Effects on air quality would be considered significant if the total emissions would exceed the Prevention of Significant Deterioration (PSD) major source thresholds, or the Proposed Action and its alternatives would contribute to a violation of any federal, state, or local air regulations.

3.3.2.1 Proposed Action Alternative

Proposed Action

There would be short-term, minor, adverse effects on air quality from fugitive dust and the use of heavy equipment during construction and renovation. There would be no long-term effects from changes in aircraft operations in areas surrounding MHAFB. Emissions would not exceed the PSD major source thresholds, and the Proposed Action would not contribute to a violation of any federal, state, or local air regulation.

USAF's ACAM was used to estimate the total direct and indirect emissions from the Proposed Action, which have been compared to the PSD major source thresholds to determine the level of effects under NEPA (USAF 2020b) (see **Appendix F**). **Table 3-9** lists total direct and indirect emissions resulting from the Proposed Action. Construction and renovation emissions were estimated for fugitive dust, on- and off-road diesel equipment and vehicles, and worker trips. Temporary operational emissions were estimated for changes in personnel. The total annual emissions would be below the PSD major source thresholds of 250 tpy of each pollutant in all areas; therefore, the level of effects would be minor.

The proposed construction activities and increase in personnel on the installation would not include any new major stationary sources of air emissions and would not cause an appreciable net increase of air emissions from operation of existing sources. There would be no change in the authorized types of training operations conducted at, or subsequent changes in the emissions or air quality near MHAFB, MHRC, OCTC, UTTR, or Boise Airport. The nature of and the levels of emissions from overflights and range training activities would be comparable to existing conditions, and completely within the existing operational envelopes for these locations.

Table 3-9. Annual Air Emissions of the Proposed Activity Compared to PSD Major Source Thresholds

Criteria Pollutant:	CO	NO_x	VOC	SO_x	PM_{10}	$PM_{2.5}$	*PSD major source threshold [tpy]*	*Exceeds Thresholds? [Yes/No]*
Proposed Activity	***Emissions Levels [tpy]***							
Construction and Renovation of Temporary Facilities	0.5	0.4	0.1	<0.1	<0.1	<0.1	**250**	**No**
Temporary Personnel Increases	11.0	0.9	1.0	<0.1	<0.1	<0.1		
Total Emissions	**11.5**	**1.3**	**1.1**	**<0.1**	**<0.1**	**<0.1**		

Source: USAF 2020b
Key: tpy - tons per year; CO - carbon monoxide; NO_x - nitrous oxides; VOC - volatile organic compound; SO_x - sulfur oxides; PM_{10} - particulate matter less than 10 parts per microns; $PM_{2.5}$ - particulate matter less than 2.5 microns

The State of Idaho takes into account the effects of all past, present, and reasonably foreseeable emissions during development of the State Implementation Plan. The State accounts for all significant stationary, area, and mobile emission sources in the development of this plan. Estimated emissions generated by the Proposed Action would be PSD major source thresholds, and it is understood that activities of this limited size and nature would not contribute significantly to adverse effects to air quality in an attainment area.

The Idaho Administrative Procedures Act (IDAPA) outlines other non-permitting requirements, such as controlling fugitive dust and open burning during construction. All persons responsible for any operation, process, handling, transportation, or storage facility that could result in fugitive dust would take reasonable precautions to prevent such dust from becoming airborne. Reasonable precautions might include using water to control dust from road grading or land clearing. The Proposed Action would proceed in full compliance with current IDAPA requirements with compliant practices and/or products as specified in the following:

- Rules for control of fugitive dust (IDAPA 58.01.650)
- Rules for control of visible emissions (IDAPA 58.01.625)
- Rules for fuel burning equipment (IDAPA 58.01.675)
- Rules for categories of allowable burning (IDAPA 58.01.606).

This listing is not all-inclusive; USAF and any contractors would comply with all applicable air pollution control regulations.

Climate and Greenhouse Gases (GHG). This EA examines GHGs as a category of air emissions. This EA does not attempt to measure the actual incremental impacts of GHG emissions from the Proposed Action. There is a lack of consensus on how to measure such impacts. Existing models have substantial variation in output, and do not have the ability to measure the actual incremental impacts of a project on the environment. There are also no established criteria identifying monetized values that are to be considered significant for NEPA purposes. **Table 3-10** compares the estimated GHG emissions from the Proposed Action to the global, nationwide, and statewide GHG emissions. The estimated GHG emissions from the Proposed Action would be relatively small; therefore, these effects would be minor.

Table 3-10. Global, Countrywide, Statewide, and Proposed Action Annual GHG Emissions

Scale	CO_2e Emissions (MMT)	Change from Proposed Action
Global	43,125	0.000002%
United States	6,870	0.00001%
Idaho	16.6	0.00034%
Proposed Action	0.001	-

Sources: USAF 2020b, USEIA 2016
Key: CO_2e – carbon dioxide equivalent; MMT - million metric tons.

Reasonably Foreseeable Actions

All construction and transport-related emissions associated with the Proposed Action would be in addition to those created by other on-going activities (e.g., beddown actions involving development of facilities and infrastructure to support increased training) on MHAFB. No past, present, or reasonably foreseeable actions have been identified that when combined with the Proposed Action would be expected to result in significant effects.

As noted in **Sections 1.7** and **3.1**, emissions from the proposed Forging Sabre Exercise overflights and range training activities would be comparable to existing conditions (refer to **Table 3-1** for the summary of impacts from existing conditions), and, therefore, would not be expected to exceed PSD major source thresholds. When considered in combination with the proposed MHAFB Airspace Optimization and the proposed Qatar Emiri beddown operations at MHAFB, the proposed RSAF Forging Sabre exercises could contribute to an increase in aircraft and vehicle emissions during training. Because the proposed exercises would be conducted every other year and RSAF aircrews and aircraft would be distributed across the MHRC, OCTC, and UTTR airspaces (as approved by those ranges), it is expected that impacts on air quality from the Proposed Action and reasonably foreseeable actions would be minor, intermittent, and short-term.

3.3.2.2 No Action Alternative

Under the No Action Alternative, USAF would not support Forging Sabre biennial exercises at MHAFB, and the existing conditions discussed in **Section 3.3.1** would remain unchanged. Therefore, no impacts on air quality would occur due to implementation of the No Action Alternative.

3.4 Cultural Resources

3.4.1 Existing Conditions

The Proposed Action is subject to Section 106 of the NHPA and its implementing regulations at 36 CFR § 800. The NHPA requires federal agencies to assess the potential for their actions to adversely affect historic properties. Historic properties are defined as buildings, structures, objects, archaeological sites, and Traditional Cultural Properties that have been determined eligible for listing in, or listed in, the NRHP.

MHAFB currently has a PA for alternative compliance with Section 106 for specified routine undertakings. Because the current undertaking has the potential to effect historic properties and

does not meet the definition of routine outlined in Section I(c) of the PA, MHAFB initiated the standard Section 106 process in accordance with the regulations to include defining the undertaking APE, conducting an intensive survey of the APE, and consulting with the Idaho SHPO.

In accordance with 36 CFR § 800.16(d), MHAFB defined two undertaking APEs: APE 1 includes locations on the installation for installing and operating 68 temporary facilities and modifications to Building 1361. APE 2 includes the updated and expanded locations of the three firing points on the JUL portion of SCR (see **Figure 2-2**).

APE 1 on MHAFB (main base) is generally devoid of significant archaeological resources. The installation has been previously inventoried with one historical archaeological site identified as NRHP-eligible that is located approximately 0.25 mile from the APE boundary. Additionally, all temporary facilities (clamshell hangars and trailers) would be placed on the surface or on graveled pads, and utility connections would not require digging or grading. Building 1361 was previously evaluated for NRHP eligibility. MHAFB received SHPO concurrence on a determination of ineligibility for listing in the NRHP (ID SHPO 2018).

APE 2 includes the proposed, updated, and expanded firing points, a one-acre buffer, and minor secondary access roads to each firing point. Consistent with the stipulations outlined in the 2017 MHRC EA, all firing points were situated within locations previously intensively surveyed for archaeological sites and found generally devoid of resources. MHAFB Cultural Resources Management conducted an updated intensive survey of all firing point locations, buffer, and secondary access routes in December 2020. No archaeological resources were identified. MHAFB consulted with the SHPO and received concurrence on a determination of No Adverse Effect for the undertaking on January 12, 2021 (see **Appendix G**).

Additionally, MHAFB notified federally recognized Native American tribes geographically associated with the area of the proposed undertaking. To date, no responses have been received.

3.4.2 Environmental Consequences

Under Section 106 of the NHPA and its implementing regulations (36 CFR § 800), an adverse effect is found when an undertaking (or action) may alter, directly or indirectly, any of the characteristics of a historic property that qualify it for NRHP eligibility in a manner that would diminish the property's historic integrity of location, setting, feeling, association, design, materials, or workmanship. Examples of adverse impacts on cultural resources can include physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; introducing visual or audible elements that are out of character with the property or that alter its setting; neglecting the resource to the extent that it deteriorates or is destroyed; or the sale, transfer, or lease of the property out of agency ownership (or control) without adequate legally enforceable restrictions or conditions to ensure preservation of the property's historic significance.

3.4.2.1 Proposed Action Alternative

Proposed Action

The elements of the Proposed Action with the potential to impact cultural resources include installation of temporary facilities and renovation of Building 1361 on MHAFB, and ground operations that will include relocation and expansion of three firing points within the JUL on SCR. No NRHP-eligible properties or traditional cultural resources have been identified in the APE of the Proposed Action; therefore, no impacts on cultural resources are expected. MHAFB received SHPO concurrence on a determination of No Adverse Effect for the undertaking on January 12, 2021 (see **Appendix G**). If unanticipated discoveries of cultural resources occur, the relevant procedures contained in the MHAFB Integrated Cultural Resources Management Plan (MHAFB 2020b) would be followed.

Reasonably Foreseeable Actions

Because no impacts on cultural resources are expected, there would be no additional contribution to impacts potentially caused by the reasonably foreseeable actions identified in **Table 3-2**. Therefore, no reasonably foreseeable impacts on cultural resources would be expected.

3.4.2.2 No Action Alternative

Under the No Action Alternative, USAF would not support Forging Sabre biennial exercises at MHAFB, and the existing conditions discussed in **Section 3.4.1** would remain unchanged. Therefore, no impacts on cultural resources would occur from implementation of the No Action Alternative.

3.5 Health and Safety

3.5.1 Existing Conditions

MHAFB is a secure military installation that limits access to only authorized personnel. The installation provides emergency services, including fire response, emergency medical services, law enforcement, and force protection to all installation facilities. Therefore, emergency situations can be responded to within a quick timeframe (MHAFB 2017a).

Construction Safety. All USAF construction contractors are responsible for following federal Occupational Safety and Health Administration (OSHA), USEPA, and state and regional occupational safety regulations, as well as applicable USAF and DoD safety standards. OSHA regulations address the health and safety of people at work and cover potential exposure to a wide range of chemical, physical, and environmental hazards. Administrative or engineering controls, use of personal protective equipment (PPE), and availability of safety data sheets are designed to control health and safety hazards and eliminate hazard exposure from construction activities.

Construction contractors on the installation are responsible for reviewing potentially hazardous workplace conditions and monitoring exposure to workplace chemical (e.g., asbestos, lead, and hazardous substances), physical (e.g., noise propagation and falls), and environmental (e.g., illness, infectious wastes, wildlife, natural hazards such as weather) hazards. In addition, construction contractors on the installation are responsible for recommending and evaluating controls (e.g., prevention, administrative, engineering, PPE) to ensure exposure to personnel is eliminated or adequately controlled, and ensuring a medical surveillance program is in place to

perform occupational health physicals for workers subject to the use of respiratory protection or engaged in hazardous wastes, asbestos, lead, or other work requiring medical monitoring.

Personnel Safety. Operations conducted on MHAFB are performed in accordance with applicable USAF regulations, Air Force Technical Orders, and standards prescribed by Air Force Occupational Safety and Health (AFOSH) requirements (see **Appendix E**). The health and safety of military and civilian personnel is also safeguarded by federal OSHA, USEPA, and state and regional occupation health and safety agencies. The 366 FW and associated mission support squadrons provide police, security, fire, and emergency services to MHAFB, MHRC, and surrounding off-installation areas (MHAFB 2020c).

Installation Restoration Program (IRP) Sites. IRP is a DoD initiative that identifies, investigates, and cleans up former waste disposal sites to reduce the risk to human health and the environment. Sites known to contain or suspected of containing munitions and munitions-related items are investigated and cleaned up under the Military Munitions Response Program (MMRP). MHAFB has 6 active IRP sites, but no IRP sites are located on or near areas proposed for temporary facilities at MHAFB or Building 1361 (MHAFB 2017a). Land use controls have been put in place on IRP sites throughout MHAFB to protect personnel health and safety by restricting access and ensuring no ground disturbance occurs in hazardous areas.

Explosives Safety Quantity Distance (ESQD) Arcs. Explosives safety clearance zones, or ESQD arcs, are established around facilities used for storage, handling, or maintenance of munitions. DoD's *Defense Explosive Safety Regulation* (DESR) 6055.09 and the Air Force Manual (AFMAN) 91-201, *Explosives Safety Standards*, establish requirements for the size of the clearance zone based on quantity-distance criteria and the category and weight of the explosives contained within the facility. ESQD arcs at MHAFB cover a total of 1,356 acres of land and range in size depending on the type and quantity of explosive. ESQD arcs at the installation are associated with the munitions storage area in the northern portion of the installation, the southern end of the aircraft parking area, which is designated for hazardous cargo parking, and the Live Ordnance Loading Area within the southeast portion of the installation. An area proposed for temporary facilities is located within the 328-acre ESQD arc associated with the Live Ordnance Loading Area.

3.5.2 Environmental Consequences

Adverse impacts on health and safety would occur if the following would result from implementation of the Proposed Action:

- Risks associated with the safety of USAF personnel, construction personnel, contractors, or the local community were substantially increased.
- The ability to respond to an emergency was substantially hindered.
- Introduction of new health or safety risks for which the installation is not prepared or does not have adequate management and response plans in place.

3.5.2.1 Proposed Action Alternative

Proposed Action

Construction Safety. Construction and preparation activities under the Proposed Action would result in short-term, negligible, adverse impacts on the health and safety of construction personnel directly involved in installing temporary facilities and renovating Building 1361 at MHAFB. Because the installation and renovation would not require any ground disturbance activities or the use of heavy machinery such as bulldozers and excavators, health and safety risks under the Proposed Action would be low compared to typical heavy construction activities. To minimize health and safety risks, all construction personnel would be required to follow and implement AFOSH and OSHA management procedures and establish site-specific health and safety programs. Construction crews would be required to wear appropriate PPE such as reflective vests, ear protection, safety-toed boots, hard hats, gloves, and other safety gear. To avoid safety impacts to civilian and military personnel at MHAFB, areas undergoing construction would be appropriately marked for hazard potential and contractors would make all reasonable efforts to minimize hazard potential. Increases in safety risks would only occur during the time when installation and renovation activities would be taking place.

Personnel Safety. Short-term, negligible, adverse impacts on personnel safety would occur from the temporary increase in personnel during Forging Sabre exercises. The temporary addition of up to 1,300 SAF personnel at MHAFB and in the surrounding areas during the seven to five-week period prior to and during the biennial exercises could negligibly increase demand on the local police, fire, and emergency services. Training events would not occur in the local community, but the increase in population in the region would generally increase the potential for additional demand on local safety support services. The increase in personnel at MHAFB would not substantially affect the ability of the 366 FW or installation emergency services to provide police, fire, and medical services in the event of an emergency. In addition, transit flights of manned aircraft and UAS would occur at high altitudes over sparsely occupied areas, reducing any potential safety impacts to personnel or the public.

ESQD Arcs. To minimize health and safety risks, all construction activities and siting of proposed facilities would remain outside of existing ESQD arcs unless permitted for use in accordance with DoD regulatory requirements. All facility construction within an ESQD arc must comply with DESR 6055-09 and AFMAN 91-201. All facility construction or use within ESQD arcs requires review for compliance with explosives safety criteria and must have either an approved explosives safety site plan or an approved explosives safety deviation. The 328-acre ESQD arc associated with the Live Ordnance Loading Area encompasses an area proposed for temporary facilities; however, this area would be used for temporary storage of AH-64 helicopters and would not introduce additional health and safety hazards for civilian and military personnel. MHAFB would coordinate with appropriate explosives safety personnel prior to constructing any temporary storage facility within the ESQD arc.

Reasonably Foreseeable Actions

Short-term, minor, adverse impacts resulting from the Proposed Action when combined with construction hazards and personnel increases associated with the IDARNG infrastructure and development projects and the proposed infrastructure projects to support Qatar Emiri Air Force F-15 beddown activities would be slightly increased. Increases in health and safety risks to personnel and the public and demand on emergency services would be temporary and would not be significant.

3.5.2.2 No Action Alternative

Under the No Action Alternative, USAF would not support Forging Sabre biennial exercises at MHAFB and the existing conditions discussed in **Section 3.5.1** would remain unchanged. Therefore, no impacts on the health and safety of military, civilian, or construction personnel would occur due to implementation of the No Action Alternative.

3.6 Socioeconomics

3.6.1 Existing Conditions

MHAFB is located within Elmore County, which is where most of the personnel supporting the Proposed Action would temporarily reside. Ada County, which is adjacent to the west of Elmore County, is the most populous county in Idaho, and contains the state capital (Boise) as well as the OCTC. These 2 counties comprise the socioeconomics Region of Influence (ROI) for the Proposed Action.

Demographics. U.S. Census data from the 2010 Census, 2014-2018 American Community Survey 5-year estimates for Ada and Elmore Counties (i.e., the ROI), and the MHAFB Fiscal Years 2016 and 2018 Economic Impact Statements were used to identify population and economy demographics. Information for the assessed socioeconomics ROI is presented in **Table 3-11**. Demographics for the state are provided for comparison. The population within Ada County is estimated to have increased by 14 percent between 2010 and 2018, and as of 2018 had a total population of 446,052. The population within Elmore County is estimated to have decreased 2 percent between 2010 and 2018, and as of 2018 had a total population of 26,433. The population within the State of Idaho is estimated to have increased 8 percent between 2010 and 2018, and as of 2018 had a total population of 1,687,809 (USCB 2018a).

Table 3-11. Population Characteristics for 2010–2018

Population	Ada County	Elmore County	Idaho
2010 Census	392,365	27,038	1,567,582
2018 American Community Survey 5-year Estimates	446,052	26,433	1,687,809
Percent Change (2010-2018)	+13.7%	-2.2%	+7.6%

Source: USCB 2018a

As of Fiscal Year 2016, the total population at MHAFB was 9,193 people, including 3,612 active/reserve military personnel and 1,074 civilian personnel. A majority of the population at MHAFB, approximately 4,507 persons (49 percent), were dependents (MHAFB 2016). MHAFB currently estimates the Wing population to be nearly 10,000, which includes approximately 4,800 military and civilian personnel, and 5,200 family members (MHAFB 2020d).

Employment. Employment characteristics in Ada County, Elmore County, and Idaho are listed in **Table 3-12**. Armed Forces personnel made up 12 percent of the workforce in Elmore County, and 0.3 percent of the workforce in Ada County and the state of Idaho (USCB 2018b). The civilian regional labor force is spread out across several different industries. The largest labor industries in Elmore County are education, health and social services industry (16 percent), and

the manufacturing industry (14 percent). In Ada County, the largest labor industries are education, health, and social services (23 percent), and the professional, scientific, management, administrative, and waste management services industry (13 percent). In the State of Idaho, the education, health, and social services industry (23 percent), and the retail trade (12 percent) are the largest labor industries (USCB 2018b).

Table 3-12. Employment Characteristics by Industry for 2014–2018

Employment	Ada County	Elmore County	Idaho
Total Population	231,159	12,806	810,430
Percentage of Population in the Labor Force	66.0	62.9	62.4
Percentage of Population employed in the Armed Forces	0.3	11.5	0.3
Percentage of Population employed in the civilian labor force	65.7	51.3	62.1
Percentage of Employed Population by Industry in the Civilian Labor Force			
Agriculture, Forestry, Fishing, Hunting, and Mining	1.5	8.8	5.2
Construction	6.1	5.9	7.3
Manufacturing	8.8	13.8	9.8
Wholesale Trade	2.8	0.6	2.6
Retail Trade	11.8	12.8	12.0
Transportation and Warehousing, and Utilities	4.3	6.9	4.9
Information	2.1	1.0	1.8
Finance, Insurance, Real Estate, and Rental and Leasing	7.1	3.9	5.1
Professional, Scientific, Management, Administrative, and Waste Management Services	12.9	6.5	10.2
Education, Health, and Social Services	23.1	15.6	22.5
Arts, Entertainment, and Recreation	9.1	8.5	9.0
Other Services (except public administration)	4.3	3.8	4.6
Public Administration	6.1	11.9	4.9

Source: USCB 2018b

Economic Activity. MHAFB is a major employer with an economic influence that extends throughout southwestern Idaho. Payroll expenditures associated with military and civilian personnel on the installation were approximately $221 million in 2018 (Holley and Giuntini 2019). MHAFB also spent $32 million on contracts and services with local firms for construction, utilities, and other categories listed in **Table 3-13**.

Table 3-13. MHAFB Economic Activity for 2018

Economic Activity	MHAFB Direct Spending (millions)
Military and Civilian Salaries	$221.2
Construction	$13.2
Utilities	$6.3
Educational Services	$2.6
Other Services	$1.1
Other Local Expenditures	$3.1
Relation Portion of Non-Local Goods and Services	$2.6

Economic Activity	MHAFB Direct Spending (millions)
Local Travel Spending	$3.3
Total Spending	***$253.4***

Source: Holley and Giuntini 2019

MHAFB estimates that daily operations at MHAFB created approximately 6,420 secondary jobs in the civilian economy, representing nearly $300.7 million to the local economy in 2018 (Holley and Giuntini 2019).

Housing. Various housing options would be available to support the personnel increase for the Proposed Action. MHAFB provides military family housing, dormitories and visiting officer quarters on the installation. **Section 2.1.3.2** states that MHAFB would plan to provide housing for approximately 50 of the 1,300 personnel. The remaining 1,250 personnel would acquire temporary housing on the OCTC Cantonment Area or in hotels in Elmore or Ada County as available. Because of the COVID-19 health emergency, personnel may be housed at OCTC (located approximately 20 miles northwest of MHAFB) upon arrival for a quarantine period. OCTC has the capacity to support this requirement.

3.6.2 Environmental Consequences

Socioeconomic impacts would be considered significant if changes associated with the Proposed Action substantially affected the local economy, employment, or economic stability in the region.

3.6.2.1 Proposed Action Alternative

Proposed Action

No long-term significant effects would be expected on socioeconomics.

Demographics. The increase of 1,300 personnel (500 SAF personnel from existing U.S. units, and 800 SAF personnel from the Republic of Singapore) would have short-term, negligible, effects on demographics. Conservatively assuming that all 1,250 personnel reside in either Elmore County or Ada County, it would result in a temporary (up to 5 weeks) population increase of approximately 4.7 percent in Elmore County and 0.3 percent in Ada County. Because the increase in personnel within the ROI would be temporary, there would be no long-term adverse effects on demographics.

Employment. The use of regional labor would have short-term, minor, beneficial impacts on employment within the construction industry. Site preparation and construction activities required for facility modification would be completed by people in the regional construction industry, which would increase local employment. As of 2018, approximately 12 percent of the ROI's total employed population is within the construction industry. Ada County employed 6.1 percent (approximately 14,101 employees) of workers in the construction industry, and Elmore County employed 5.9 percent (approximately 755 employees) (USCB 2018b). It is anticipated that Elmore and Ada Counties would be able to provide the labor force needed to support construction for the Proposed Action.

Economic Activity. The purchase of goods and services to support the site preparation and construction of the temporary facilities associated with the Proposed Action would have a short-

term, minor, beneficial effect on the MHAFB region economy. Approximately $13.2 million were spent at MHAFB on construction activities in 2018. An increase in employment to support the construction and modifications at MHAFB would be beneficial to the regional economy through increased payroll disbursements. Any spending to support the construction and installation needs for the Proposed Action would have a short-term, minor, beneficial effect on the ROI's economy.

Housing. The temporary increase of 1,300 personnel within the ROI would have no short or long-term adverse effects on housing. MHAFB would be able to provide housing and living essentials for only a small fraction of RSAF personnel. RSAF would arrange off-installation housing for most of its personnel at the OCTC Cantonment Area and hotels in Boise and Mountain Home. Because there would be ample housing available within the MHAFB region to support the increase in personnel, no short or long-term adverse effects on housing would be expected.

If a COVID-19 quarantine is required either upon arrival or during the exercises for the 1,300 personnel supporting the Proposed Action, OCTC has the capacity to support and house the personnel for the duration of quarantine. OCTC can support an annual total of approximately 10,500 personnel (resident and transient units) (see **Section A.3.1** in **Appendix A**) and has the capacity to support the personnel for the Proposed Action, if needed.

Reasonably Foreseeable Actions

Considered in conjunction with other reasonably foreseeable actions, short-term, minor, beneficial impacts on the local economy would be expected from increased construction and personnel spending associated with the Proposed Action, the IDARNG infrastructure and development projects, and proposed infrastructure projects to support the Qatar Emiri Air Force beddown activities. It is expected sufficient temporary housing is also available to accommodate these actions as required.

3.6.2.2 No Action Alternative

Under the No Action Alternative, USAF would not support Forging Sabre biennial exercises at MHAFB, and the existing conditions discussed in **Section 3.6.1** would remain unchanged. Therefore, no impacts on the socioeconomics would occur due to the implementation of the No Action Alternative.

3.7 Biological Resources

3.7.1 Existing Conditions

Vegetation. MHAFB exists within the landform and vegetation classification known as the Intermountain Sagebrush Province/Sagebrush Steppe Ecosystem, which is widespread throughout southern Idaho, eastern Oregon, eastern Washington, and portions of northern Nevada, California, and Utah. This ecosystem contains a large diversity of landforms and vegetation types from vast expanses of flat sagebrush-covered plateaus to mountains blanketed with juniper woodlands and grasslands. Open space on MHAFB is covered by a mixture of annual grasses and invasive species such as kochia (*Bassia scoparia*), Russian thistle (*Salsola kali*), and bur buttercup (*Ceratocephala testiculata*). Seedings and weed control treatments on

MHAFB have improved areas by establishing perennial grasses and removing cheatgrass (*Bromus tectorum*) and weeds. Significant declines in the amount and quality of sagebrush habitat have occurred over the last 15 years. A few remnant patches of sagebrush still exist and most have a weedy understory. These remnant patches have been greatly degraded by off-highway vehicle activity, use during military exercises, and weed invasion (MHAFB 2019a).

Idaho listed noxious weed species that occur at MHAFB include rush skeletonweed (*Chondrilla juncea*), with small, incidental infestations of field bindweed (*Convolvulus arvensis*), buffalobur (*Solanum rostratum*), black henbane (*Hyoscyamus niger*), puncturevine (*Tribulus terrestris*), perennial sowthistle (*Sonchus arvensis*), perennial pepperweed (*Lepidium latifolium*), whitetop (*Cardaria draba*), and Canada thistle (*Circium arvense*). Noxious weeds are those species defined by the State of Idaho as having the potential to cause injury to public health, crops, livestock, land, or other property. Landowners are required by Idaho law to control noxious weeds on their lands (MHAFB 2019a).

Wildlife. MHAFB actively manages wildlife on the installation and cooperates with the Idaho Department of Fish and Game (IDFG), U.S. Fish and Wildlife Service (USFWS), and USDI BLM. Currently, 60 different species of wildlife have been identified on MHAFB (MHAFB 2019a). During the vegetation surveys of the installation, only small, isolated lands of native habitat were located. Most lands on and surrounding the installation have been converted to non-native species by fires, agriculture, and development. This limited habitat and small patch size cannot support wide-ranging species, such as mule deer (*Odocoileus hemionus)*, pronghorn antelope (*Antilocapra americana*), and sage-grouse (*Centrocercus urophasianus*). Much smaller mammal, reptile, and bird species have adapted to urban areas and human disturbance (MHAFB 2019a). Raptors, eagles, and owls occur on the installation. Burrowing owls (*Athene cunicularia*) are known to occur on the installation with burrows located in several areas near operational activities. Bats have been observed in the evenings and may roost in buildings and trees and forage around lights. Bats on MHAFB are generally associated with buildings, the urban forest, and the golf course. The bat species identified on MHAFB are the silver-haired bat (*Lasionycteris noctivagans*), big brown bat (*Eptesicus fuscus*), long-eared myotis (*Myotis evotis*), and Yuma myotis (*Myotis yumanensis*) (MHAFB 2019a). Several small mammals occur throughout MHAFB. Piute ground squirrels (*Spermophilus mollis*) are abundant around the golf course and various landscaped areas. Ground squirrels are periodically controlled on the golf course to reduce damage to the facility. Burrows are carefully assessed to eliminate the target species and avoid burrowing owl impacts (MHAFB 2019a).

Wildlife habitat is maintained or removed through vegetation manipulation and ground disturbance and is largely managed through post-fire rehabilitation and grazing practices. There are four dominant wildlife habitat types as defined by topography and vegetation: landscaped areas around residential and installation facilities, isolated sagebrush flats, flat areas dominated by exotic annual weed species, and rubble piles dominated by exotic annual weed species. Other notable areas are the rapid infiltration basins and the treated effluent storage lagoon that attracts waterfowl (MHAFB 2019a). The MHAFB *Bird and Wildlife Strike Hazard Safety Plan* (MHAFB 2009) outlines operational protocols for airfield and airspace avoidance of strike hazards, and the MHAFB *Pest Management Plan* (MHAFB 2007b) outlines BMPs for effective control of various insects, rodents, birds, and weeds.

Various raptors have been observed on the installation, where limited suitable nesting habitat occurs but foraging potential exists. Several waterfowl species use the MHAFB storage lagoons and rapid infiltration systems; however, MHAFB has an active program to discourage waterfowl use of these lagoons for bird/wildlife aircraft strike hazard prevention. Most waterfowl migrate through the area during the spring and fall, but some birds are found year-round (MHAFB 2019a). Because aquatic and sagebrush habitat is limited at MHAFB, no amphibians occur. Only a few species of reptiles have been observed on the installation.

Sensitive and Protected Species. According to the USFWS Information for Planning and Consultation report for the project area, Slickspot peppergrass (*Lepidium papilliferum*) (LEPA) is the only federally listed threatened species that has the potential to occur on or near MHAFB. Proposed USFWS critical habitat for this species is outside the installation boundaries (USFWS 2020). Surveys completed on MHAFB determined that this species does not occur on MHAFB and that the habitat is not suitable to support LEPA species (MHAFB 2019a). No habitat for other federally listed threatened or endangered species is present on MHAFB (MHAFB 2019a).

Species of concern. Species of concern include those federally listed as endangered or threatened, those listed as species of greatest conservation need in Idaho by the IDFG, USDI BLM sensitive species, and DoD Partners in flight birds of conservation concern. Laws protecting wildlife also include the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act (MHAFB 2019a).

Table 3-14 lists species of concern potentially in the project area. This list includes Birds of Conservation Concern that may be present in or near the project area. USFWS determined that these birds are of priority of concern because without additional conservation actions they are likely to become candidates for listing under the Endangered Species Act (ESA) (USFWS 2020).

Table 3-14. Species of Concern with the Potential to Occur within the Project Area

Species	Habitat and Ecology Description [3, 4]
Bats	
Long-eared myotis [1] *(Myotis evotis)*	This species occupies a wide range of rocky and forested habitats over a broad elevation gradient. Summer day roosts include abandoned buildings, bridges, hollow trees, stumps, under loose bark, and rock fissures. Hibernacula include caves and abandoned mines. Occurs year-round throughout Idaho.
Yuma myotis [1] *(Myotis yumanensis)*	Found near water in dry coniferous forests and arid shrublands. Summer day roosts include buildings, bridges, mines, and bat houses, sometimes caves and trees.
Birds	
American white pelican [1] *(Pelecanus erythrorhynchos)*	White pelicans breed mainly on isolated islands in freshwater lakes or reservoirs. They forage on inland marshes, lakes, or rivers. Pelicans favor shallow coastal bays, inlets, and estuaries that have forage fish and loafing sites. During spring and fall migration birds stop at aquatic foraging and loafing areas similar to those used during the breeding season.
Bald eagle [1,2] *(Haliaeetus leucocephalus)*	Bald Eagles are associated with aquatic ecosystems, including lakes, rivers, coastlines, marshes, and reservoirs. They feed primarily on fish, but the diet also includes waterfowl, carrion, and small mammals. Typically breeding in forested areas adjacent to large bodies of water,

Species	Habitat and Ecology Description [3, 4]
	Bald Eagles exhibit mate and breeding site fidelity, and historical nest sites may be used continually by successive pairs.
Brewer's sparrow [1,2] (*Spizella breweri)*	The Brewer's sparrow primarily breeds in sagebrush steppe habitats and are sagebrush steppe obligates. Also sometimes associated with salt desert scrub habitats. Nests are usually constructed in the mid to upper canopy of tall, dense sagebrush or greasewood.
Calliope hummingbird [4] *(Selasphorus calliope)*	Calliope hummingbirds prefer mountain meadows, alder and willow thickets near streams and regenerating forests. Breeding generally occurs at high altitudes but has been noted as low as 600 feet. Nests are made of downy, soft plant materials and camouflaged with moss or bark with spiderweb binding, 6-39 feet above the ground in evergreen trees and can mimic pinecones in appearance.
California gull [1] *(Larus californicus)*	California gulls breed almost exclusively on barren or sparsely vegetated islands in natural lakes, reservoirs, and rivers. California gulls will use a wide variety of open habitats for foraging, including reservoirs, lakes, irrigation canals, weirs, garbage dumps, feedlots, irrigated agricultural fields, and pastures.
Golden eagle [1,2] *(Aquila chrysaetos)*	Golden eagles inhabit partially or completely open country, especially around mountains, hills, and cliffs. They use a variety of habitats ranging from arctic to desert, including tundra, shrublands, grasslands, coniferous forests, farmland, and areas along rivers and streams.
Loggerhead shrike [1] *(Lanius ludovicianus)*	Loggerhead shrikes nest in isolated trees or large shrubs. They use scattered, tall shrubs and fences as perches to feed on a variety of prey, which includes small birds, lizards, and mice.
Long-billed curlew [1,2] *(Numenius americanus)*	Long-billed curlews nest in open short-grass or mixed-prairie habitat with level to slightly rolling topography, and generally avoid areas with trees, high-density shrubs, and tall, dense grasses. Nests are placed on the ground in areas of notably patchy vegetation. This species forages predominately in grassland but may switch to plowed fields and wet pastures if grasslands become too tall or dense after high spring rainfall.
Sagebrush sparrow [1] *(Artemisiospiza nevadensis)*	Sagebrush sparrows prefer semi-open habitats with evenly spaced shrubs 1–2 meters (3-6 feet) high. They prefer big sagebrush, in either pure stands or interspersed with bitterbrush, rabbitbrush, or greasewood. Most nests are found within or under shrubs.
Sage thrasher [1,2] *(Oreoscoptes montanus)*	The Sage thrasher is a sagebrush-obligate species dependent on large patches of sagebrush steppe for successful breeding. They nest most commonly in big sagebrush and three-tip sagebrush, and occasionally uses other species, such as low sagebrush and rabbitbrush. For nesting, it shows a strong preference for tall (>70 centimeters [28 inches]) shrubs. Sage Thrashers breed as second-year birds (first year after hatching), and annually thereafter. Typical of thrashers, this species is elusive when disturbed, frequently running on the ground rather than taking flight.
Western burrowing owl [1] *(Athene cunicularia)*	Western burrowing owls breed in open, well-drained grasslands, prairies, farmlands, steppes, and airfields. Burrowing owls are also very responsive to artificial nesting burrows placed in their natural nesting habitats. This species forages in short-grass, mowed or overgrazed pastures, golf courses, airfields, and irrigated agricultural fields.
White-faced ibis [1] *(Plegadis chihi)*	White-faced Ibis are colonial breeders, generally choosing to nest in shallow marshes with dense emergent vegetation. Most colonies are found in hardstem bulrush/cattail marshes. Nest platforms are constructed within the bulrush, using bent-over bulrush stalks and adjacent upright stalks. This type of nest construction lends itself to

Species	Habitat and Ecology Description [3, 4]
	collapse or flooding and nest failure if water levels drop or rise dramatically during the incubation/early nestling period.
Willow flycatcher [1,2] *(Empidonax traillii)*	The willow flycatcher breeds in moist, shrubby areas, often with standing or running water. Winters in shrubby clearings and early successional growth. Nest built low in a bush or small tree near water, on the outer edge of shrub.

Sources: [1] MHAFB 2019a; [2] USFWS 2020; [3] IDFG 2015; [4] Cornell 2020

3.7.2 Environmental Consequences

For vegetation and wildlife, each species has unique, fundamental needs for food, shelter, water, and space and can be sustained only where their specific combination of habitat requirements are available. Removing sustaining elements of a species' habitat impacts its ability to exist. Therefore, the evaluation of impacts on wildlife and vegetation is based on whether the action would cause habitat displacement resulting in reduced feeding or reproduction, removal of critical habitat for sensitive species, and/or behavioral avoidance of available habitat as a result of noise or human disturbance. The level of impacts on biological resources is based on (1) the importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource, (2) the proportion of the resource that would be affected relative to its occurrence in the region, (3) the sensitivity of the resource to the proposed activities, and (4) the duration of ecological ramifications. Impacts on biological resources are considered significant if species or special habitats are adversely affected over large areas, or disturbances cause reductions in population size or distribution of a species of special concern.

3.7.2.1 Proposed Action Alternative

Proposed Action

Vegetation. The Proposed Action would be expected to result in short-term, negligible, adverse effects on vegetation on MHAFB. Vegetation that would be disturbed within the project area includes grass, shrubs, and other landscaping. Impacts on vegetation would be expected from the installation of temporary facilities and a temporary increase in personnel at MHAFB. Incidental crushing and trampling of vegetation would occur from equipment use and increased foot traffic. To minimize the temporary impact on vegetation during construction, crews should restrict pedestrian and vehicle movement to designated paths and roadways within the project construction area whenever possible. To avoid or minimize impacts on vegetation from spreading noxious weeds, crews should avoid infested areas and clean their equipment prior to coming on-site to ensure it is weed- and weed seed-free. Any fill should be taken from an on-site location that is weed-free to prevent the introduction of new weed species. Because no exterior modifications are planned to occur to Building 1361, no effects on vegetation would occur. Once installation and modification are complete, revegetation with native species should occur where possible to prevent soil erosion and overall site deterioration. Any ground disturbance from installation of the temporary facilities would not have long-term adverse effects because the proposed installations and modification would occur on previously disturbed locations.

Wildlife and Species of Concern. The Proposed Action would have short-term, negligible to minor, adverse effects on wildlife, including species of concern, due to the installation of temporary facilities, modifications to an existing facility (Building 1361), and a temporary

increase in personnel at MHAFB. Noise events could cause wildlife to engage in escape or avoidance behaviors; however, the area of disturbance would be within a developed area at MHAFB where disturbances such as noise and motion (e.g., moving, landscaping, foot and vehicle traffic, and flight line activities) already occur. Since wildlife are currently exposed to these various activities on the installation, habitat displacement or avoidance impacts from noise during the temporary increase in activities would be short-term, negligible to minor, adverse effects (see **Section 3.2.2** for additional information on noise impacts). Low altitude flights would generally occur within installation boundaries where similar flight activities already occur. Transit flights between the installations and the Boise Airport would be short in duration and conducted at an average altitude that would be too high to contribute to adverse impacts on species on the ground. Additionally, the Heron-1 UAS emits approximately half the noise generated by a small comparably sized manned aircraft, and UAS flights would be short in duration and at altitudes too high to generate noise that would be perceptible on the ground. Therefore, no adverse noise effects on wildlife species are anticipated from the Heron-1 UAS transit flights (see **Appendix B** for additional information on UAS flights). All the proposed flight operations would be consistent with the existing day and night flight activities occurring at MHAFB. Because all proposed flight operations would be conducted in accordance with the installation's *Bird and Wildlife Strike Hazard Safety Plan*, impacts on avian species due to transit flights of manned aircraft and UAS are expected to be negligible. No significant impacts on wildlife are expected.

Protected Species. The Proposed Action would have no effect on federally listed species because no known federally listed species occur in the project area. The project area is already within semi-developed or developed ground where vegetation and landscaping are maintained regularly and contains minimal, if any, native vegetation.

Reasonably Foreseeable Actions

Short-term, negligible to minor, adverse impacts (such as increased construction-related noise, potential habitat removal, vegetation removal, soil compaction, or temporary avoidance of habitats) resulting from the Proposed Action when combined with construction activities associated with the IDARNG infrastructure and development projects, and proposed infrastructure projects to support the Qatar Emiri Air Force beddown activities would be slightly increased. These impacts would be temporary and would not be significant.

As discussed in **Section 3.2**, although noise levels associated with the proposed Forging Sabre Exercise overflights and range training activities would be similar to existing conditions, in combination with the proposed MHAFB Airspace Optimization activities, and the proposed Qatar Emiri beddown operations at MHAFB, an overall increase in noise levels could occur in the area, which could deter wildlife from areas of activity. Because wildlife in the area are accustomed to aircraft and vehicle training noises, it is expected that impacts to biological resources from the Proposed Action and reasonably foreseeable actions would be temporary and would not be significant.

3.7.2.2 No Action Alternative

Under the No Action Alternative, USAF would not support Forging Sabre biennial exercises at MHAFB, and the existing conditions discussed in **Section 3.7.1** would remain unchanged.

Therefore, no impacts on vegetation, wildlife, or special status species would occur due to the implementation of the No Action Alternative.

3.8 Water Resources

3.8.1 Existing Conditions

Groundwater. MHAFB and the surrounding areas are located on the Mountain Home Plateau, which includes roughly 1,200 square miles of the western Snake River Plain and is within the Mountain Home Groundwater Management Area. No perennial streams cross the Mountain Home Plateau (AECOM 2012). Annual precipitation near the installation averages 10.55 inches (U.S. Climate Data 2020).

The Bruneau Formation, a component of the Idaho group, is the principal aquifer near MHAFB and the surrounding areas, including the City of Mountain Home (MHAFB 2018, MHAFB 2019a). This aquifer is mostly volcanic and sedimentary layers composed of a mixture of loose gravels, silts, sands, and clays; intermixed with areas that have more consistent structure like basalt, sandstone and shale. The Bruneau Formation is recharged primarily from subsurface flow; the depth beneath MHAFB is approximately 400 feet, with well production ranging between 10 to 3,500 gallons per minute (MHAFB 2018). MHAFB relies on a regional, unconfined aquifer for its water which is shared with the City of Mountain Home and other surrounding communities (MHAFB 2019a). In 1982, the Mountain Home Groundwater Management Area was established in response to long-term sustainability and health concerns about the aquifer (USDI BLM & MHAFB 2017). Restrictions on additional groundwater uses ensure existing water rights are not adversely impacted. Groundwater on the installation is contaminated with nitrates (USGS 2010).

Surface Water and Stormwater. The installation is in a shallow basin that is approximately 55 square miles within the C.J. Strike Dam Recreation Annex watershed, and is roughly eight miles northeast of the C.J. Strike dam (MHAFB 2011, AECOM 2012) The installation does not have any natural impoundments or drainages. When heavy thunderstorms or spring snowmelt occurs, these surface waters flow into four man-made drainage ditches or two ephemeral streams. In general, MHAFB surface waters flow from the northeast to the southwest and is retained onsite. There is no impact to receiving water bodies. Permitted stormwater management regulations compliance is maintained through adherence to the *Mountain Home AFB Stormwater Pollution Prevention Plan (SWPPP)* (MHAFB 2011, MHAFB 2015b).

Open bodies of water on the installation include a treated effluent lagoon and several rapid infiltration basins. A lagoon that stores clear water for irrigation is present on the MHAFB golf course (MHAFB 2018). The installation's surface water quality is considered good based on the 2008 Public Health Assessment, which concluded there were no public health hazards associated with surface water exposures at MHAFB in part because the limited surface water is not readily accessible to the general public (MHAFB 2011).

Floodplains. No significant drainages occur on MHAFB. During rain and snowmelt events, surface water flows towards one of two ephemeral streams or into man-made drainage ditches; there are no significant natural drainages that cross the installation. No 100-year floodplains have been identified on MHAFB (MHAFB 2018, MHAFB 2019a).

Wetlands. Although several wetland features are located on the installation, none would be located near the sites where the proposed temporary facilities would be constructed on the installation. Details on the locations of the existing jurisdictional and non-jurisdictional wetlands and playas are provided in **Appendix E**.

3.8.2 Environmental Consequences

Factors considered in determining whether a proposed action would have a significant impact on water resources include the extent or degree to which its implementation would result in one or more of the following situations:

- Degrade groundwater, surface water, or coastal water quality in a manner that would reduce beneficial uses of the water.
- Reduce the availability of, or accessibility to, one or more of the beneficial uses of a water resource.
- Alter the existing pattern of groundwater or surface water flow or drainage in a manner that would affect the uses of the water within or downgradient from the project area.
- Be out of compliance with existing water quality standards or with other regulatory requirements related to protecting or managing water resources.
- Substantially increase risks associated with human health or environmental hazards.
- Increase the hazard of flooding or the amount of damage that could result from flooding, including from runoff or from severe weather events.

3.8.2.1 Proposed Action Alternative

Proposed Action

Groundwater*.* Negligible impacts on groundwater could occur from an accidental spill during site preparation and construction or removal of 68 temporary facilities, on up to four acres of land used for similar purposes, or during renovation of Building 1361. A spill or release of hazardous materials from equipment used during site preparation, construction, removal or renovation could impact groundwater quality. The potential for contaminant discharges from equipment to reach the groundwater table would be minimized through the use of appropriate BMPs, which include the development of a construction SWPPP to control unauthorized non-stormwater discharges, the preparation of standard contractor specific BMPs, and, if applicable, either a stormwater discharge permit or a Low-Erosivity Waiver submission from IDEQ; as well as prompt responses to discharges as outlined in the Spill Prevention Control and Countermeasures Plan. All equipment would be maintained according to the manufacturer's specifications, and the potential for contamination to occur would be minimized through the implementation of a Spill Prevention Control and Countermeasures Plan.

Minor ground disturbance associated with the temporary facilities is not anticipated to intersect the local groundwater table, and no ground excavation is expected. Construction of the temporary facilities and renovation of Building 1361 is not anticipated to impact groundwater recharge. Temporary or permanent drainage features would be constructed and maintained in accordance with the MHAFB SWPPP. Implementation of BMPs and conformance with Energy Independence and Security Act of 2007 (EISA) requirements would avoid or minimize impacts to any groundwater resources within the project area. RSAF and SAF operation of temporary

and renovated facilities for five weeks biennially in support of the Forging Sabre exercises is not anticipated to have groundwater impacts. As a result, impacts on groundwater would be negligible.

Surface Water and Stormwater. Negligible impacts could result from site preparation, construction, or removal of 68 temporary facilities. All temporary facilities would be installed in areas that were previously used for similar purposes or were previously developed; this might require minor ground disturbance which could displace soils and sediment into on-site stormwater management system. Any construction would be conducted in accordance with a National Pollutant Discharge Elimination System (NPDES) permit for stormwater management and controls. Erosion and sediment controls (e.g., silt fences and sediment traps downslope from construction) and stormwater BMPs (e.g., spill cleanup and appropriate disposal) would be implemented and be consistent with the *Mountain Home AFB SWPPP*, project-specific SWPPPs, and the *Catalog of Stormwater Best Management Practices for Idaho Cities and Counties* to minimize the potential for erosion and sedimentation into surface waters. To meet the performance objectives of EISA, technically feasible stormwater control design features and practices that are effective in reducing the volume of stormwater runoff would be incorporated, to the extent practicable.

There are no surface water features in the temporary facility locations. Therefore, no significant impacts on surface water or stormwater are expected. Operation of temporary and renovated facilities for five weeks biannually is not anticipated to have surface water or stormwater impacts.

Wetlands. Because there are no wetland features in the vicinity of the temporary facility locations, no impacts on wetlands would occur.

Reasonably Foreseeable Actions

Short-term, negligible, adverse impacts (e.g., stormwater runoff) on water resources resulting from the Proposed Action when combined with construction activities associated with the IDARNG infrastructure and development projects, and proposed infrastructure projects to support the Qatar Emiri Air Force beddown activities would be slightly increased. These impacts would be temporary and would not be significant.

3.8.2.2 No Action Alternative

Under the No Action Alternative, USAF would not support Forging Sabre biennial exercises at MHAFB, and the existing conditions discussed in **Section 3.8.1** would remain unchanged. Therefore, no impacts on water resources would occur due to implementation of the No Action Alternative.

3.9 Hazardous Materials and Wastes

3.9.1 Existing Conditions

Hazardous Materials and Petroleum Products. MHAFB uses hazardous materials and petroleum products such as liquid fuels, aircraft deicer, pesticides, and solvents for everyday operations. Diesel, gasoline, and oil are stored in designated material storage lockers and

tanks, while jet fuel is stored in regulated aboveground storage tanks (MHAFB 2015b). Hazardous materials and petroleum products are currently not used or stored within areas proposed for the temporary facilities (MHAFB 2017a). Hazardous materials and petroleum products are currently used and stored at Building 1361 (MHAFB 2018).

Hazardous and Petroleum Wastes. MHAFB is a Resource Conservation and Recovery Act (RCRA) large-quantity generator of hazardous wastes under USEPA Identification Number ID3572124557 (MHAFB 2017b). Using hazardous materials and petroleum products such as liquid fuels and pesticides results in the generation and storage of hazardous wastes and used petroleum products on the installation. MHAFB generates over 2,200 pounds of hazardous waste each month, which are collected at designated accumulation points and sent to a 90-day facility before being transported to a licensed and certified disposal facility (MHAFB 2017a). MHAFB institutes waste minimization measures to reduce waste quantities. These measures include seeking out less hazardous or nonhazardous replacements (i.e., green alternatives) for hazardous materials, managing shelf life and quantities of hazardous materials, and ordering only what is necessary to complete projects (MHAFB 2017b).

MHAFB implements an installation-specific hazardous waste management plan that defines roles and responsibilities, addresses record-keeping requirements, and provides spill contingency and response requirements (MHAFB 2017b). The installation also maintains an integrated contingency plan that identifies specific procedures and responsibilities for responding to a spill of a hazardous substance or oil (MHAFB 2017c). Hazardous and petroleum wastes are currently not stored at the sites proposed for construction and use of temporary facilities or within the portion of Building 1361 proposed for renovation (MHAFB 2017a).

Toxic Substances. The areas proposed for the temporary facilities do not include buildings and are not likely to contain asbestos-containing materials (ACMs), lead-based paint (LBP), and polychlorinated biphenyls (PCBs). It is assumed that Building 1361, constructed in 1965, may contain ACMs, LBP, and PCBs based on the facility's age.

Radon. MHAFB is in Elmore County, which is rated as radon zone 1 by USEPA. Counties in zone 1 have a predicted average indoor radon screening level greater than 4 picocuries per liter (USEPA 2020c). USEPA has a radon guidance level of 4 picocuries per liter in indoor air for residences; however, there are no established standards for nonresidential structures.

Environmental Restoration Program. All known or suspected environmental contamination sites at MHAFB are organized into solid waste management units (SWMUs). SWMUs include Environmental Restoration Program (ERP) and MMRP sites. Each SWMU is investigated and appropriate remedial actions are taken under the supervision of the Idaho Department of Environmental Quality (IDEQ). When no further remedial action is necessary for a SWMU, the unit is closed and no longer represents a threat to human health. Areas proposed for the temporary facilities and Building 1361 are not within or near any ERP or MMRP sites (MHAFB 2017a).

Because areas proposed for the temporary facilities and Building 1361 are not within any SWMU, the Proposed Action is not anticipated to result in impacts on ERP or MMRP sites. Therefore, ERP and MMRP sites are not discussed further in this EA.

3.9.2 Environmental Consequences

Significant impacts on or from hazardous materials and wastes would occur if a proposed action resulted in noncompliance with applicable federal or state regulation or increased the amount of waste generated beyond current management procedures, permits, and capacities. Impacts on contaminated sites would be considered significant if a proposed action would disturb or create contaminated sites resulting in negative impacts on human health or the environment, or if a proposed action would make it substantially more difficult or costly to remediate existing sites.

3.9.2.1 Proposed Action Alternative

Proposed Action

Hazardous Materials and Petroleum Products. Short-term, minor, adverse impacts on hazardous materials and petroleum products would occur from renovation of Building 1361. Hazardous materials are not likely to be used during temporary facility installation; however, renovation of Building 1361 could employ paints, solvents, liquid descalers, hydrochloric acid, glycol, and sealants. Hydraulic fluids and petroleum products, such as diesel and gasoline, would be used in vehicles and equipment for renovation activities. Hazardous materials could be used for minor equipment servicing and repair activities. All hazardous materials and petroleum products would be contained, stored, and managed appropriately in accordance with AFMAN 32-7002 and MHAFB Oil Spill Prevention and Emergency Response procedures to minimize the potential for release. Hazardous materials and petroleum products within Building 1361 would be temporarily relocated to an appropriate facility to accommodate building renovation. Therefore, significant impacts on hazardous materials and petroleum products would not be expected.

Hazardous and Petroleum Wastes. Short-term, minor, adverse impacts would occur from generating hazardous and petroleum wastes during renovation activities. Petroleum products and hydraulic fluids would be used in construction equipment to support renovation operations, which would produce waste products. Handling of waste products is covered under the MHAFB Hazardous Waste Management Plan as well as federal, state, and local regulations. The implementation of BMPs would reduce the potential for an accidental release of hazardous and petroleum wastes.

The Proposed Action does not include major ground disturbing activities; however, should unknown contamination be discovered or unearthed, the construction contractor would immediately stop work, contact appropriate installation personnel, and implement appropriate safety measures. Sampling and analysis would be conducted, as necessary, and commencement of construction would not continue until the concern is investigated and resolved. Any soils determined to be contaminated or hazardous would be managed or disposed of in accordance with applicable federal, state, and local laws and regulations.

Toxic Substances. Short-term, minor, adverse impacts from toxic substances might occur from the proposed renovation of Building 1361 because the facility might contain ACMs, LBP, and PCBs, which could be disturbed during renovation activities. Surveys for special hazards would be completed, as necessary, by a certified contractor prior to work activities to ensure appropriate measures, including adherence to all federal, state, and local regulations and the

installation's management plans, are taken to reduce potential exposure to, and release of, these toxic substances.

Radon. Short-term, intermittent, negligible, adverse impacts on radon levels could occur from the Proposed Action. Because MHAFB is in Elmore County, which has a rating of radon zone 1, any new facilities at the installation could have indoor radon screening levels greater than 4 picocuries per liter. Although basements and poorly ventilated areas are most commonly affected by radon, any indoor space in contact with the ground is at risk. Radon would be managed at Building 1361 by including passive radon-reducing features such as installing ventilation systems, using tight seals around pipes and wires, and placing aggregate material between structures and the ground to encourage lateral flow of soil gas, where applicable.

Reasonably Foreseeable Actions

Short-term, negligible to minor, adverse impacts resulting from the Proposed Action when combined with construction activities associated with the IDARNG infrastructure and development projects, and proposed infrastructure projects to support the Qatar Emiri Air Force beddown activities would be slightly increased. Construction, renovation, and demolition activities could contribute to an increase in handling and storage of hazardous materials and hazardous wastes accumulation. These impacts would be temporary and would be conducted in accordance with appropriate DoD, local, state, and federal regulations. Therefore, impacts would not be significant.

3.9.2.2 No Action Alternative

Under the No Action Alternative, USAF would not support Forging Sabre biennial exercises at MHAFB, and the existing conditions discussed in **Section 3.9.1** would remain unchanged. Therefore, no impacts on hazardous materials and wastes would occur due to implementation of the No Action Alternative.

4. Other Environmental Considerations

4.1 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 would 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). Irreversible and irretrievable commitments of resources usually result from implementation of actions that involve the consumption of material resources used for construction, energy resources, and human labor resources. The use of these resources is considered to be permanent. Under the Proposed Action, most resource commitments are neither irreversible nor irretrievable. Most of the impacts would be short term and negligible.

4.2 Unavoidable Adverse Impacts

Unavoidable adverse effects resulting from implementation of the Proposed Action would include the continued use of fossil fuels—a nonrenewable natural resource—during construction, and the generation of hazardous materials and waste during construction activities. The use of nonrenewable resources and generation of hazardous materials and wastes are unavoidable occurrences but would not be considered significant.

4.3 Relationship between Short-term Uses and Long-term Productivity

Implementation of the Proposed Action would not require short-term resource uses that would result in long-term compromises of productivity. Under the Proposed Action, short-term uses of the environment would result in short-term, minor, adverse impacts on noise, air quality, health and safety, biological resources, water resources, and hazardous materials and wastes from construction actions. Long-term impacts are not expected because of the interim nature of the construction. The nature of activities for the Proposed Action would not differ from current uses of these areas. Therefore, implementation of the Proposed Action would not result in significant impacts on sensitive resources. As a result, it is not anticipated that the Proposed Action would result in any environmental impacts that would permanently narrow the range of beneficial uses of the environment or pose long-term risks to health, safety, or the general welfare of the public.

4.4 Compatibility with Existing Plans and Policies

The Proposed Action would occur on government-owned lands on which USAF currently operates. The nature of activities for the Proposed Action would not differ from current USAF use of these areas. USAF would continue to follow all requirements related to development and would therefore be consistent with current federal, regional, state, and local land use policies and controls.

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A

Proposed Action Supporting Information

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Appendix A: Proposed Action Supporting Information

This Appendix presents additional information regarding the Proposed Action components that are described in **Section 2.1**. This appendix continues with acronym and abbreviations that have been used in the main volume of the document. See inside cover sheet for acronyms and abbreviations. References cited in this appendix are included in **Section 6: References** of the main document.

A.1 UAS Transit Utilizing a Temporary Flight Restriction: Continued from Section 2.1.3.3.1

The MHRC and the OCTC both have legacy/established restricted areas (R-3202 at SCR and R-3204 at JBR in the MHRC, and R-3203 at OCTC) that could support Heron-1 UAS training operations. To operate from MHAFB, and operate per a COA, Heron-1 UAS would need to take off from MHAFB and be flown to one of the existing restricted areas. Because the MHRC and OCTC restricted areas are not connected to the Class D airspace at MHAFB or to each other, the Heron-1 UAS would operate with one of the following: manned observer stations along the route of flight with communications to the ground control station, manned chase aircraft with communications to the ground control station, within restricted airspace provided by a TFR, or other restricted airspace. A TFR is a regulatory action issued via the NOTAM system to restrict certain aircraft from operating within a defined area, on a temporary basis, to protect persons or property in the air or on the ground. If opted, the boundaries of the TFR airspace would be shown on the SkyVector interactive aeronautical map (skyvector.com) for the two-week duration.

If MHAFB chose to utilize the TFR to address transit for the Heron-1 UAS during Forging Sabre exercises, local procedures would be developed that encompass the Class D airspace overlying MHAFB and add two connecting airspace “bridges” between the Class D airspace at MHAFB and MHRC’s SCR (R-3202), and between MHRC’s SCR and JBR (R-3204). The “bridges” would be used as transit corridors between the restricted areas. Once the TFR request is approved and active, the TFR would provide restricted airspace that would support Heron-1 UAS flights in accordance with the FAA COA. Except for the departure and/or arrival transitions from the TFR at MHAFB or the OCTC, the operating altitude of the Heron-1 UAS would be higher than 6,000 feet above mean sea level.

Combined, the restricted airspace provided by the TFR would span a total distance of 43 nautical miles; approximately 10 nautical miles between the OCTC and MHAFB, 17 nautical miles between MHAFB and SCR, and 16 nautical miles between SCR and JBR. The airspace would encompass blocks that range in altitude between 6,000 feet above mean sea level and up to 18,000 feet above mean sea level. To limit the potential for impacts on civilian flight operations through the region, only the volume of airspace required to sufficiently support safe separation of the Heron-1 UAS operations from other aircraft would be requested. Additionally, MHAFB Approach Control would coordinate with the Salt Lake Center Air Route Traffic Control Center and the Mountain Home Airport to facilitate approaches and departures of civilian flights

from those airports. Per FAA Order 7110.65, *Air Traffic Control*, access to SUA by emergency response and medical aircraft would continue to be prioritized and maintained by MHAFB. In emergency circumstances, such as air ambulance operations, law enforcement activities, wildfire response, and in-flight emergencies, the military aircraft using the SUAs and the Special UAS Operations TFR would immediately respond to ATC direction and relocate to another SUA to facilitate an unimpeded emergency response.

Figure A-1 shows the notional airspace boundaries provided by the TFR (outlined in light blue) that would be created to support the Forging Sabre exercises.

Figure A-2 shows a profile view of the proposed TFR airspace (outlined in light blue). As indicated in the figure, the TFR would establish airspace corridors connecting MHAFB restricted areas R-3202 to R-3203, would encompass the existing Class D airspace at MHAFB from 0 feet AGL (ground surface) up to 6,000 feet mean sea level to connect to the airspace bridge between R-3202 and R-3203, and would connect R-3202 to the OCTC restricted area R-3204.

The proposed restricted airspace provided by the TFR would be active up to three weeks prior to exercises to allow for familiarization flights and during the proposed two-week training period for the Forging Sabre exercise during late Summer. At the time of activation, a NOTAM would be issued to notify pilots operating in the region of the days and times that the restricted airspace would be in use. Additionally, the boundaries of the restricted airspace would be shown on the SkyVector interactive aeronautical map (skyvector.com) for the five-week duration.

MHAFB is coordinating the TFR request with the FAA Special Operations Support Center to ensure transit flight operations of the Heron-1 UAS would be supported in accordance with the FAA Order Job Order 7200.23B - *Processing of Unmanned Aircraft Systems Requests* (effective July 16, 2020). MHAFB would also coordinate requests for the restricted airspace configurations with the FAA Special Operations Support Center for each exercise. Typically, such TFR requests are coordinated a few weeks prior to the planned action to support real-time management of the airspace.

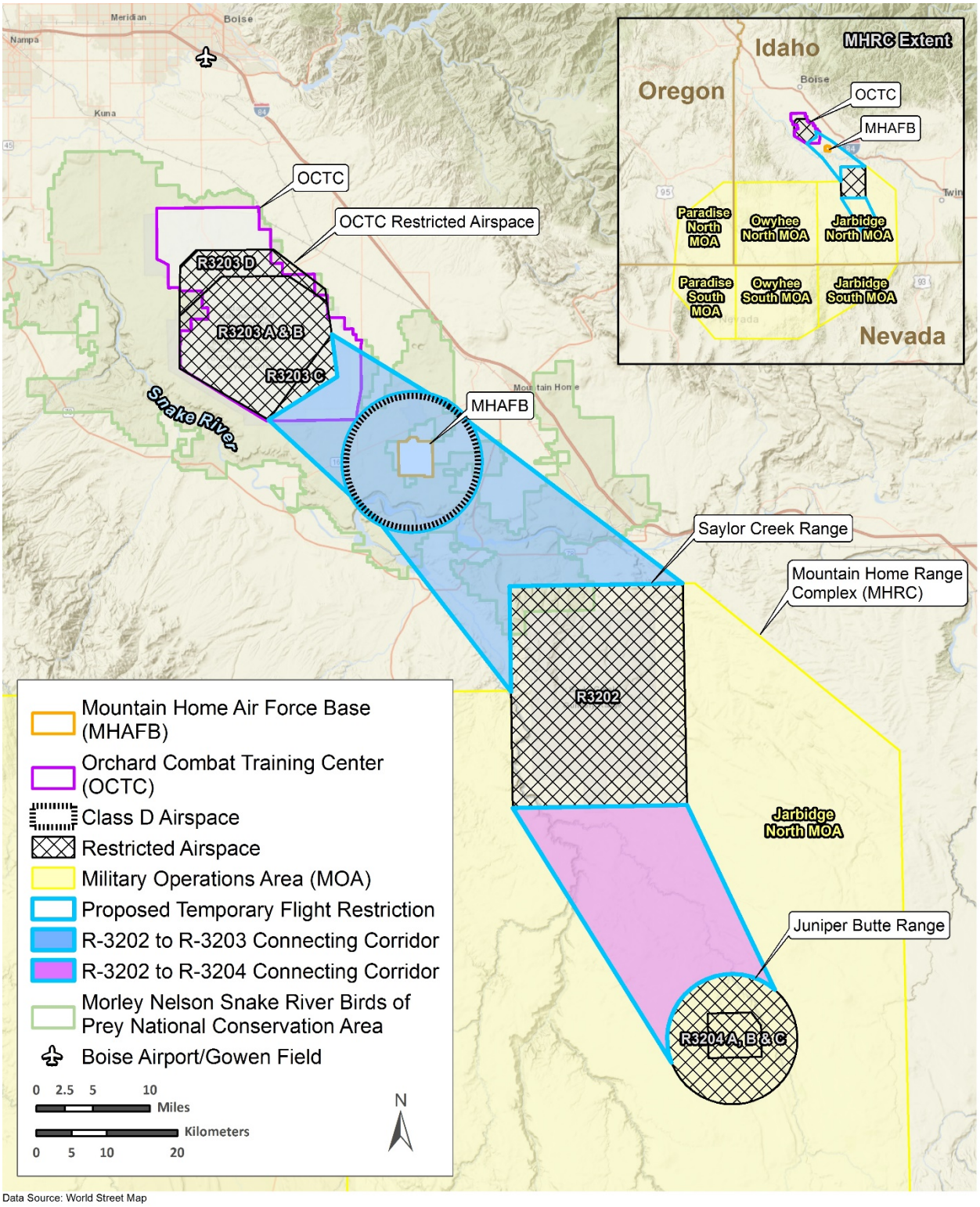

Figure A-1. Notional Boundaries of the Proposed Special UAS Operations TFR

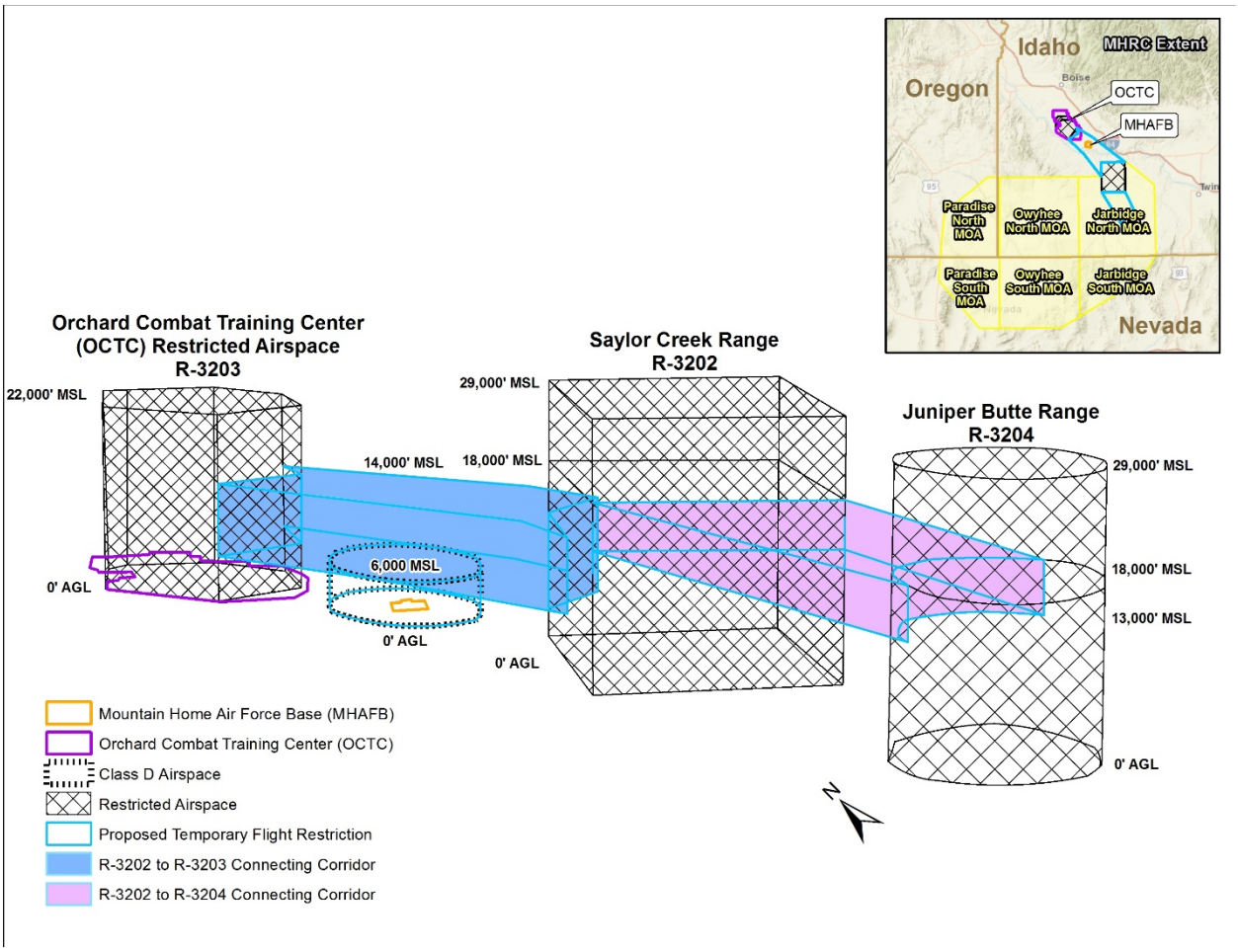

Figure A-2. Profile View of the Proposed Special UAS Operations TFR connecting MHAFB and OCTC Airspaces

A.2 MRTT Operation at the Boise Airport: Continued from Section 2.1.4

Source: Airbus 2020

Figure A-3. RSAF A330 MRTT in an Aerial Refueling Operation with an RSAF F-15SG

At Boise Airport, the proposed MRTT take-off and landing operations would be conducted within the Class C, D, and E airspace in accordance with existing airport departure and arrival protocols and consistent with existing transient military operations from the airport. From the airport, the MRTT would transit National Airspace System (NAS) airspace to access and participate in training activities in the MHAFB, MHRC, and UTTR airspaces, as needed. No changes to existing airspace are proposed to MRTT operations at the Boise Airport.

A total of 13 MRTT sorties (where one sortie is equal to one take-off and one landing) are proposed at Boise Airport for the proposed Forging Sabre biennial exercises. This number includes 1 sortie to cover the initial arrival at and final departure from the airport. The SAF MRTT aircrew would conduct 2 or 3 familiarization sorties from the Boise Airport during one week prior to the exercises, and 9 flights to MHAFB during the two-week exercises. The Republic of Singapore has signed a Letter of Offer and Acceptance with the U.S. government for the Forging Sabre exercises, to include operation of the MRTT. As such, flight of the SAF MRTT in the NAS would be conducted as sanctioned by the U.S. State Department; for the Proposed Action, flights would be conducted between the Class C, D, and E airspaces at Boise Airport and the MHAFB, MHRC and UTTR military airspaces. While operating within the NAS, the MRTT would comply with FAA Instrument Flight Rules, flight safety regulations, and **ATC** instructions. SAF MRTT aircrews would conduct their operations under ATC-approved Instrument Flight Rules flight plans.

As analyzed in the 2019 *Boise Airport Master Plan* and the 2015 *Boise Airport 14 CFR Part 150 Study Update: Updated Noise Exposure Maps and Noise Compatibility Program*, the joint civil/military airport routinely supports flight operations for a fleet of corporate carrier and cargo aircraft, which include aircraft that are larger than the MRTT, as well as transient and military

flight operations, with maintained compatibility of surrounding land uses (Boise Airport 2015, Boise Airport 2019). The Boise Airport supports approximately 137,240 flight operations per year. Approximately 45,290 (33 percent) of this total is conducted by transient operators, and approximately 10,980 (8 percent) is conducted by the military (AirNav.com 2021). The remaining flights are comprised of local and general aviation operations. Considering this, the proposed 13 take-offs and landings at the airport would represent a fraction of one percent of the flight operations at the airport and would not contribute to an appreciable change in existing operational conditions. Per FAA Order 1050.1F – *Policies and Procedures for Considering Environmental Impacts,* activities that would be consistent with the existing operating environment of the airport and would neither have an individual significant effect nor have a reasonably close causal relationship with other actions to result in a significant effect on the human environment may be categorically excluded from NEPA. Because the proposed MRTT take-off and landing operations at Boise Airport would be few and typical of those conducted at the airport, and because the MRTT airfield operations and transit flights out of the Boise Airport to the military airspaces would be conducted as sanctioned by U.S. State Department approval of the Singaporean training program in the U.S. and in accordance with pertinent FAA flight rules and safety policies, they are not analyzed further for potential impacts in the EA.

A.3 Exercise Components at OCTC: Continued from Section 2.1.5

A.3.1 Personnel at OCTC

Depending on planning requirements that vary for each exercise, between 250 and 1,300 SAF personnel (of the proposed total 1,300 personnel required to support the Forging Sabre exercise) could be housed at and operate from the OCTC. As analyzed in the 2020 *EA Approval of the OCTC Real Property Master Plan, Modernization and Infrastructure Improvements, and Optimized Annual Throughput of Brigade Combat Team Training Gowen Field, Cantonment Area and OCTC*, and the documents incorporated by reference within that EA, OCTC is able to support an annual total of approximately 10,500 personnel operating on the ranges, including both resident and transient units, indicating that OCTC has the capacity to support the SAF personnel (IDARNG and USDI BLM 2020). The 2020 EA analyzed an annual 29 percent increase in the throughput of personnel operating on the OCTC from the historic baseline of approximately 8,100 troops; the proposed increase accounted for both the resident units and transient units, such as the SAF personnel during Forging Sabre, allowing for a maximum of 10,500 troops. Data in the 2020 EA was developed as a representation of the possible combination of troops (units) training on the OCTC based upon historical averages and the installation's projected training schedule and anticipated personnel. No matter the combination of fluctuation in the numbers of troops associated with particular training units from year to year, troop numbers operating on the OCTC would not exceed the annual 10,500 maximum (IDARNG and USDI BLM 2020). All personnel throughput at OCTC during Forging Sabre would be conducted as part of the total annual maximum analyzed in the 2020 EA and would be coordinated with the OCTC range managers so that maximum would not be exceeded.

A.3.2 Airspace and Training Flight Operations at OCTC

AH-64 and Heron-1 UAS aircrews would conduct familiarization flights and flight training operations within the R-3203 at OCTC. Total sorties and flight hours proposed within OCTC airspace by manned aircraft and large UAS are provided in **Table A-1**. Approximately half of these sorties would occur during the day (sunrise to sunset, approximately 7 am to 8 pm) and half would occur during the night (sunset to 10:30 pm). As analyzed in the 2020 EA, OCTC is able to support an annual total of 300 rotary wing, to include AH-64, flying hours; and an annual total of 1,000 medium and large UAS flying hours, indicating that OCTC has the capacity to support the flight training operations proposed during Forging Sabre (IDARNG and USDI BLM 2020). All flight operations at OCTC would be conducted as part of the total annual sorties analyzed in the 2020 EA and would be coordinated with the OCTC range and airspace managers to ensure the total number of flying hours analyzed at OCTC would not be exceeded.

Table A-1. Total Proposed Sorties and Flying Hours within OCTC Airspace

Aircraft	OCTC Sorties	OCTC Flying Hours
AH-64	40	60
Heron-1 UAS	30	120
MRTT	0	N/A

Key: NA – Not Applicable; UAS – unmanned aircraft system; MRTT – multi-role tanker transport; OCTC – Orchard Combat Training Center

No aspect of the Proposed Action would alter the structure or overall nature or use of the local or remote airspace units at the OCTC. The Proposed Action does not include any proposals for new permanent airspace. Training flight operations during Forging Sabre within R-3203 at OCTC would be consistent with the types and conduct of existing operations at that range. The types of training flight operations, including air-to-ground firing operations that are planned at the OCTC would be consistent with existing operations.

Similar to operations on the MHRC-SCR, small, mini, and micro UASs would also be deployed within the restricted airspace (R-3203) at OCTC during each two-week Forging Sabre exercise. Small UAS deployments at OCTC would facilitate operation of those systems on the OCTC ranges and within the confines of OCTC airspace. As described in the 2020 EA, UAS platforms are currently flown year-round on OCTC during weapons qualifications training as well as during brigade-level exercises. The AeroVironment RQ-11 Raven is an example of a small, hand-held UAS that is currently operated on OCTC, and is launched by hand and recovered after it lands on the ground. Use of small UASs during Forging Sabre would be similar to UAS operations currently conducted at OCTC during training exercises and described in the 2020 EA, such as surveilling the area for opposing forces, tracking vehicle movements on the ranges, and for UAS pilot proficiency training (IDARNG and USDI BLM 2020). The number of small UAS flight operations are not tracked by ATC at OCTC because they can be launched by hand and are battery-powered. All UAS operations at OCTC would be coordinated with the OCTC range and airspace managers and conducted in accordance with the type of activities currently occurring on the range. **Appendix B** provides additional information on the size and noise profiles for

small, micro, and mini UASs; use of these UASs within OCTC's existing restricted airspace would result in no significant change to existing environmental conditions.

Transit helicopter or large UAS flights between MHAFB and the MHRC and OCTC would use existing restricted airspace or the proposed TFR (see **Section 2.1.3.3.1** and **Appendix Section A.1**).

A.3.3 Ground Operations at OCTC

Coordinated air and ground training operations at the OCTC would occur as described in **Section 2.1.2,** including for example, use of lasers and rocket launchers, foot and vehicle maneuvers, and sniper operations. Ground operations on the OCTC, including all firing activities and munitions expenditures anticipated to support Forging Sabre exercises within the OCTC, would be consistent with existing operations, as described in the 2020 EA.

A.3.4 Munitions Use at OCTC

Proposed maximum munitions expenditures within OCTC ranges during each two-week exercise are provided in **Table A-2.** Munitions use at the OCTC during Forging Sabre exercises would be conducted similarly to that described in **Section 2.1.2** and would involve either ground-to-ground expenditures by SAF forces training on the ranges or air-to-ground expenditures from attack helicopters. No fixed wing aircraft flight operations or munitions expenditures would occur at the OCTC. While the MHAFB and MHRC would support only inert munitions expenditures, the OCTC would support live (explosive) munitions expenditures. All inert and live munitions expended at the OCTC would be within the types of munitions analyzed in Table 2-7 of the 2020 EA and the documents incorporated by reference within that EA, and consistent with the firing operations currently used on the ranges (IDARNG and USDI BLM 2020). Munitions expenditures during Forging Sabre at OCTC would occur as part of the total expenditures analyzed in the 2020 EA and would be coordinated with the OCTC range managers to ensure the total number of expenditures analyzed at OCTC would not be exceeded.

Table A-2. Total Proposed Maximum Munitions Expenditures within OCTC

Munitions Type	Amount
Hellfire Missiles	10
Hydra Rockets	520
Reduced Range Practice Rocket	84
30-mm rounds	3,200
0.5 caliber	360
7.62 mm	720
5.7 mm	480
5.56 mm	1,800

Key: mm – millimeter
Note: Munitions expenditures are associated with helicopter operations (air-to-ground) and ground-to-ground firing operations that would be conducted by SAF during the exercises.

A.4 Exercise Components at UTTR: Continued from Section 2.1.6

A.4.1 Airspace and Training Flight Operations at UTTR

Aircrews would conduct familiarization flights and training operations for the Forging Sabre exercises in the existing UTTR North and South ranges, which are described in **Section 1.3** and shown in **Figure 1-1**. Total sorties and flying hours proposed within UTTR airspace by manned aircraft during each two-week Forging Sabre exercises are provided in **Table A-3**. Approximately half of these sorties would occur during the day (sunrise to sunset; approximately 7 am to 8 pm) and half would occur during the night (sunset to 10:30 pm). No Forging Sabre UAS flight operations would be conducted in the UTTR.

Table A-3. Total Proposed Sorties and Flying Hours within UTTR Airspace

Aircraft	UTTR Sorties	UTTR Flying Hours
F-15/F-16	105	158
AH-64	0	N/A
Heron-1 UAS	0	N/A
MRTT	0	N/A

Key: NA – Not Applicable; UAS – unmanned aircraft system; MRTT – multi-role tanker transport, UTTR – Utah Test and Training Range

The 1997 *Final Range Management Plan and EA for the Hill Air Force Range and Wendover Air Force Range of the Utah Test and Training Range* provides a description of the type of air training operations that currently occur at UTTR and would occur under Forging Sabre exercises, such as air-to-ground bomb and gunnery training (HAFB 1997). All aircraft operations at UTTR would also be conducted in accordance with transient and fighter aircraft operations presented in the 2013 *F-35A Operational Basing EIS* and the 2011 *EIS for Proposed White Elk Military Operations Area* (USAF 2013a, USAF 2011). The 2013 EIS provides a summary of baseline aircraft operations at UTTR, noting that approximately 3,000 transient aircraft operations occur annually within the North and South ranges, and the 2011 EIS clarifies that transient aircraft at UTTR include F-15s and F-16s (USAF 2013a, USAF 2011). The proposed 105 operations during Forging Sabre would represent approximately 4 percent of the transient aircraft operations that currently occur annually at UTTR. Additionally, the 2013 EIS provides an analysis of 12,700 F-35 operations within UTTR North and South ranges, which would dominate the noise environment for the range. In total, the proposed Forging Sabre operations at UTTR would comprise less than 1 percent of the total annual operations at UTTR North and South ranges as presented in the 2013 EIS, and are afforded capacity as transient aircraft to operate on the range (USAF 2013a). All flight operations at UTTR would be consistent with the type of fighter and transient operations currently occurring on the range and would be conducted as part of the total annual operations allotted for UTTR North and South ranges. Forging Sabre would be coordinated with the UTTR range and airspace managers to ensure the total number of operations, the noise profiles, and potential air emissions analyzed at UTTR would not be exceeded.

No aspect of the Proposed Action would alter the structure or overall nature or use of the local or remote airspace units at the UTTR. The Proposed Action does not include any proposals for new permanent airspace. All training flights associated with the Forging Sabre biennial exercises conducted within UTTR would originate from MHAFB. Transit jet flights between MHAFB and UTTR would use SUAs and MTRs to the greatest extent possible.

A.4.2 Munitions Use at UTTR

Proposed maximum munitions expenditures within UTTR during each two-week exercise are provided in **Table A-4.** Munitions use in UTTR during Forging Sabre exercises would be as described in **Section 2.1.2** and involve air-to-ground expenditures. As described in the 2013 EIS, the type and number of ordnance to be expended at UTTR would not differ from that currently employed by aircraft on the range. Aircraft during Forging Sabre would only use ranges and airspace authorized (i.e., approved and analyzed by DoD [ranges] and charted by the FAA [airspace]) for the type of ordnance being employed and within the number already approved at a range and/or target (USAF 2013a). Munitions expenditures would also be consistent with the type of firing operations described as baseline activities in the 2008 *Operations and Environmental Conditions at the Utah Test and Training Range as of December 31, 2007* and presented in the 1997 EA (HAFB 1997). Per the 2008 Conditions document, baseline activities at UTTR historically and currently include, but are not limited to, practice bombing and gunnery by military aircraft, and live and inert munitions expenditures (to include bombs) at authorized test target areas in both North and South UTTR.

Table A-4. Total Maximum Proposed Munitions Expenditures within UTTR

Munitions Type	Amount
Bombs (Inert)	40
Bombs (HE)	40

Key: HE – high-explosive

B

UAS Profiles

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Appendix B: UAS Profiles

This appendix continues with acronym and abbreviations that have been used in the main volume of the document. See inside cover sheet for acronyms and abbreviations. References cited in this appendix are included in **Section 6: References** of the main document.

B.1. Introduction

This appendix describes the U.S. State Department's UAS approval process and operational features of UASs similar to those that would be operated during the proposed Forging Sabre biennial exercises. As explained in **Section 2** of the EA, the Heron-1 would be the large UAS operated during the exercises. Because the U.S. State Department and RSAF are currently deliberating on which specific small, micro, and mini UAS variants would be used for the training, this appendix provides profiles for operationally equivalent small, miniature, and micro UAS surrogates. Differences in operational profiles between the surrogate systems and the systems selected for operations (once determined) are expected to be minimal.

B.2. U.S. State Department's UAS Approval Process

Prior to the import and operation of SAF-owned assets that are not already approved for use in the U.S, the U.S. State Department must conduct a comprehensive review of those assets and proposed activities. In accordance with this review process, the Singapore government must submit a formal request with documentation (including import licenses) on each UAS asset proposed for use during the exercises to the Office of Defense Cooperation (ODC) and the U.S. Embassy in Singapore for an initial review and processing. Upon completion of the initial review, the request and documentation are routed to the U.S. State Department for a determination of approval or denial.

B.3. Large UAS – Heron-1

Source: Wong 2019
Note: The above image shows an example of a Heron-1. The Heron-1 used during Forging Sabre exercises may be slightly different from what is depicted.

Table B-1. Heron-1 Technical Specifications

Technical Details	
Maximum take-off weight	1,270 kg (2,800 lb)
Payload weight	470 kg (1,036 lb)
Length	8.5 m (28 ft)
Wingspan	16.6 m (55 ft)
Maximum speed	140 knots (161 mph)

Source: IAI 2020
Key: kg - kilogram; lb - pound; m - meter; ft – foot; mph - miles per hour

The Heron-1 is a Medium Altitude Long Endurance UAS manufactured by Israel Aerospace Industries. The Heron-1 can operate for up to 45 hours, at altitudes up to 35,000 feet. The Heron-1 navigates using an internal GPS navigation device, and either pre-programmed flight profiles, manual override from a ground control station, or a combination of both. When Heron-1 is flown solely on pre-programmed flight profiles, the UAS is fully autonomous from take-off to landing. The Heron-1 can carry an array of sensors including infrared cameras, visible-light airborne ground surveillance, intelligence systems, and various radar systems. Sensors communicate with the ground control station using a direct line of sight data link or via airborne/satellite relay (Alex 2020, IAI 2020). Technical specifications for the UAS are listed in **Table B-1**. Power for the Heron-1 is supplied by a single Rotax 914 turbocharged air-and water-cooled, 4-cylinder light class aviation engine of 115 horsepower, which uses aviation gasoline (Alex 2020). Noise and air emissions profiles are not available for the Heron-1. However, an operational (engine) comparison between the Heron-1 and the similarly-sized Cessna 172S (i.e., the smallest, single engine, jet fueled, manned aircraft) provides a reasonable surrogate assessment of the noise and air emissions the Heron-1 may generate. Published noise levels for the General Aviation Single Engine Piston and air emissions for the Cessna 172S aircraft were used to estimate Heron-1 air emissions levels. Noise levels for the Cessna 172S can reach up to 88.1 dBA and 75.2 dBA (at a distance of 200 feet) during take-off and landing operations, respectively (USAF 2019a). For reference, normal speech generates around 60 dB and a gas-powered lawnmower generates between 80 and 85 dB (NCEH 2020). Air emissions for the Cessna 172S surrogate are summarized in **Table B-2**. Because the Heron-1 engine operates at around 36 percent less horsepower than the Cessna 172S, it is assumed that the noise and air emissions levels for the UAS would be less than those reported for the manned aircraft.

Table B-2. Heron-1 Estimated Air Emissions

	NO_X	SO_X	CO	VOCs	$PM_{2.5}$	PM_{10}	GHG
Emissions per landing/take-off (pounds)	0.0289	0.0139	14.3301	0.2915	0.6016	0.5415	42.4570
Emissions per hour in flight (pounds)	0.2970	0.0059	93.2391	5.0254	0.0151	0.9457	30.2446

Source: USAF 2018a
Note: Cessna 172S aircraft, operated by a Lycoming IO-360-L2A engine producing 180 horsepower, was used as a reasonable surrogate for Heron-1 noise generation.
Key: NO_x – nitrous oxide; SO_x -sulfur oxide; CO – carbon monoxide; VOC – volatile organic compound; $PM_{2.5}$ - particulate matter less than 2.5 microns; PM_{10} - particulate matter less than 10 microns; GHG – greenhouse gas

B.4. Small UAS – Aerosonde

Source: Textron Systems 2020a

Table B-3. Aerosonde Technical Specifications

Technical Details	
Weight	36.4 kg (80 lb)
Maximum payload weight	9.1 kg (20 lb)
Maximum flight time	14 hours
Wingspan	3.7 m (12 ft)
Maximum speed	45-65 knots (52-75 mph)
Maximum altitude	4572 m (15,000 ft)
Maximum take-off elevation	2438 m (8,000 ft)
Range	140 km (75 nm)

Sources: Textron Systems 2020b
Key: kg - kilogram; lb - pound; ft - feet; m - meter; km - kilometer; nm - nautical mile; mph - miles per hour

The Aerosonde is a small UAS designed for expeditionary land- and sea-based operations manufactured by Textron Systems. As shown in **Table B-3**, the UAS can operate for 14 hours at altitudes of up to 15,000 feet. The Aerosonde is a single system with automated launch (pneumatic launcher) and recovery (net recovery) features. The system navigates using an internal GPS navigation device which relays information to a ground control station (Textron Systems 2020b). The Aerosonde can be used for day-and-night imaging, communications relay, and signals intelligence (Textron Systems 2020b). Power for the UAS is supplied by Lycoming's EL-005 single-cylinder, air-cooled, heavy-fuel engine of 4 horsepower, which uses jet fuel (Textron Systems 2020a).

The Aerosonde, when at the operator position, produces approximately 46 dB of noise and is considered to be quieter than tactical UASs of the same size (Wash 2020). Air emissions profiles are not available for the Aerosonde. However, an operational (engine) comparison between the Aerosonde, the Heron-1, and the Cessna 172S provides a reasonable surrogate assessment and estimation of emissions that system may generate. The Aerosonde is powered by a Lycoming EL-005 engine producing 4 horsepower.

As explained in **Section B.2,** the Cessna 172S is a manned aircraft powered by a Lycoming IO-360-L2A engine that produces 180 horsepower. Because the Aerosonde engine operates at

around 4 percent horsepower of the Heron-1 and at around 2 percent horsepower of the Cessna 172S (Textron 2020b), it is assumed that air emissions quantities generated by the small UAS would be negligible.

B.5. Small UAS – BirdEye 650D

Source: RSAF 2021

Table B-4. BirdEye 650D Specifications

Technical Details	
Maximum take-off weight	30 kg (66 lb)
Maximum payload weight	5.5 kg (12 lb)
Wingspan	4 m (13 ft)
Maximum speed	80 knots (92 mph)
Maximum altitude	4572 m (15,000 ft)
Maximum flight time	24 hours
Operational radius	50 km (27 nm)

Source: RSAF 2021, IAI 2021
Key: kg - kilogram; lb - pound; m - meter; ft - feet; km - kilometer; nm - nautical mile; mph - miles per hour

The BirdEye 650 D is a long endurance small tactical UAS manufactured by Israel Aerospace Industries. The BirdEye 650D can operate for up to 24 hours at altitudes up to 15,000 feet. The system is launched from a pneumatic catapult and retrieved by a parachute and airbag housed inside the UAS. The BirdEye 650D can participate in a range of missions including reconnaissance, urban operations, counter-terrorism, patrol and convoy escort, radio relay, mapping, and rapid surveillance procedures.

Technical specifications for the UAS are listed in **Table B-4** (RSAF 2021, IAI 2021). The BirdEye 650D is powered by a small gasoline combustion engine (RSAF 2021, IAI 2021). Noise and air emissions profiles are not available.

B.6. Small UAS – Hermes 45

Source: Elbit Systems 2021

Table B-5. Hermes 45 Specifications

Technical Details	
Take-off weight	70 kg (154 lb)
Maximum payload	20 kg (44 lb)
Maximum altitude	5486 m (18,000 ft)
Maximum flight time	22 hours
Maximum flight range	200 km (108 nm)

Source: Elbit Systems 2021
Key: kg - kilogram; lb – pound; ft - feet; m - meter; km – kilometer; nm - nautical mile

The Hermes 45 is a small tactical UAS manufactured by Elbit Systems. The Hermes 45 can operate for up to 22 hours at altitudes of up to 18,000 feet. The system is launched from a short onboard platform rail and is recovered by an automated spot landing system. The Hermes 45 is used to support high-level tactical, intelligence, target acquisition, and reconnaissance missions, and is ideal for long endurance operations (Elbit Systems 2021).

Technical specifications for the UAS are listed in **Table B-5**. The engine employed by the Hermes 45 has not been disclosed and noise and air emissions profiles are not available.

B.7. Small UAS – Orbiter 4

Source: RSAF 2021

Table B-6. Orbiter 4 Specifications

Technical Details	
Maximum payload weight	12 kg (26 lb)
Maximum take-off weight	50 kg (110 lb)
Wingspan	5.4 m (18 ft)
Maximum speed	70 knots (81 mph)
Maximum altitude	5486 m (18,000 ft)
Maximum flight time	24 hours
Maximum transmission range	150 km (81 nm)

Source: RSAF 2021, Aeronautics 2018
Key: kg - kilogram; lb – pound; m - meter; ft - feet; km – kilometer; mph - miles per hour; nm - nautical mile

The Orbiter 4 is a small tactical UAS manufactured by Aeronautics Group. The Orbiter 4 can operate for up to 24 hours at altitudes of up to 18,000 feet. The system is launched from a catapult launcher and is designed for capture using a net or precision landing on maritime vessels. Sensors, radars, and scanners that may be employed by the UAS can share data with the operator in real-time through a direct data link (Aeronautics 2018). The system has been designed for a variety of operations including land and maritime reconnaissance, artillery fire management, target acquisition, communications intelligence, and emergency response (RSAF 2021).

Technical specifications for the UAS are provided in **Table B-6**. The Orbiter 4 uses a spark ignition, fuel-based propulsion engine with multi-fuel capability (Aeronautics 2018). Noise and air emissions profiles are not available.

B.8. Small UAS – RQ-21 Blackjack

Source: RSAF 2021

Table B-7. RQ-21 Blackjack Specifications

Technical Details	
Empty weight	37 kg (81 lb)
Maximum take-off weight	61 kg (135 lb)
Wingspan	4.9 m (16 ft)
Length	2.5 m (8 ft)
Maximum speed	90 knots (100 mph)
Cruise speed	55 knots (63 mph)
Maximum altitude	5,900 m (19,500 ft)
Maximum flight time	16 hours
Range	93 km (50 nm)

Source: RSAF 2021
Key: kg - kilogram; lb - pound; m - meter; ft - feet; mph - miles per hour; km - kilometer; nm - nautical mile
Note: 2 bladed propellers, 1 x EFI Piston Engine (8 hp/6.0 kW).

The RQ-21 Blackjack is a small tactical UAS manufactured by Insitu Incorporated, which is a subsidiary of The Boeing Company. The RQ-21 Blackjack can operate for up to 16 hours at altitudes of up to 19,500 feet. The system is launched by a rail and recovered by a skyhook recovery system. The UAS is used in tactical missions and employs an encrypted command and control data link with electromagnetic shielding to support customized communications (Insitu 2021). Noise profiles are not available.

The RQ-21 Blackjack is powered by an 8-horsepower reciprocating engine with electronic fuel injection, which uses JP-5 and JP-8 jet fuels. Air emissions profiles are not available for the UAS; however, an operational (engine) comparison between the RQ-21 Blackjack, the Heron-1, and the Cessna 172S provides a reasonable surrogate assessment and estimation of emissions that system may generate. As explained in **Section B.2,** the Cessna 172S is a manned aircraft powered by a Lycoming IO-360-L2A engine that produces 180 horsepower. Because the RQ-21 Blackjack engine operates at approximately 8 percent of the horsepower of the Heron-1 and at around 4 percent horsepower of the Cessna 172S (Textron 2020b), it is assumed that air emissions quantities generated by the small UAS would be negligible.

B.9. Miniature UAS – Parrot ANAFI Drone

Source: Goldman 2020
Note: The above images are examples of an ANAFI drone. The ANAFI drone variant used during Forging Sabre exercises may be slightly different from the surrogate depicted.

Table B-8. ANAFI Drone Specifications

Technical Details	
Weight	320 g (11 oz)
Unfolded size	175 x 240 x 65 mm (7 x 9 x 3 in)
Wingspan	240 mm (9 in)
Folded size	244 x 57 x 65 mm (10 x 2 x 3 in)
Maximum horizontal speed	15 mps (34 mph)
Maximum vertical speed	4 mps (9 mph)
Maximum altitude	4,500 m ASL (14,764 ft ASL)
Maximum flight time	25 minutes
Maximum transmission range	4 km (2 nm)

Source: Parrot 2020b
Key: g - gram; mm - millimeter; m - meter, km - kilometer; mps - meters per second; ft - feet; ASL - above sea level; oz - ounce; in - inches; mph - miles per hour

The ANAFI drone is a multi-purpose reconnaissance miniature UAS manufactured by Parrot. As presented in **Table B-8**, the UAS weighs 320 grams (0.7 pounds), has a wingspan of 240 millimeters (9.4 inches), and can reach altitudes of up to 3,500 meters (11,482 feet) above sea level in a variety of conditions. The UAS is equipped with a camera that can view objects as far as 5 kilometers (3.1 miles) away and can continuously follow a defined point of interest during flight. The UAS can be charged via a USB-C cable in 1.5 hours and has a maximum flying time of 25 minutes, at which point it is programmed to automatically return to its starting point. The UAS is flown using a controller and an application on a mobile device, which wirelessly connects to the on-board computer (Parrot 2020a, Parrot 2020b).

The ANAFI drone, when hovering, produces 64 decibels of noise at a few feet away and is considered to be a very quiet drone by Parrot and consumers (Ackerman 2018). Because the UAS is battery-powered, it does not produce any air emissions.

Parrot also manufactures other small UASs including the ANAFI USA and ANAFI Thermal drones, which are similar in size and capability, and are used for a variety of reconnaissance purposes.

B.10. Micro UAS – Mosquito

Source: Airforce Technology 2020
Note: The above images are examples of an ANAFI drone. The micro UAS variant used during Forging Sabre exercises may be different from the surrogate depicted.

Table B-9. Mosquito UAS Technical Specifications

Technical Details	
Weight	500 g (1 lb)
Maximum flight time	40 minutes
Wingspan	35 cm (1 ft)
Length	35 cm (1 ft)
Maximum speed	25 knots (29 mph)
Maximum altitude	152 m (492 ft)
Range	3 km (2 nm)

Source: Airforce Technology 2020
Key: cm - centimeter; m - meter; km – kilometer; lb - pound; ft - foot; mph - miles per hour; nm - nautical mile

The Mosquito is a microscopic UAS manufactured by the Israel Aerospace Industries Military Aircraft Group. The approximately 1-pound UAS is a tactical surveillance device used to gather field intelligence and is small enough (see **Table B-9**) that it can be hand-launched via a harpoon mechanism in various scenarios, including through narrow windows or from moving vehicles. Two Mosquito UASs, the command and control device, and a communications package can fit into a single briefcase. The device is battery-powered; therefore, it does not produce any air emissions. The Mosquito was designed to operate discretely and is considered to produce ambient noise levels (Ratzlav-Katz 2009).

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C

Special Use Airspace

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Appendix C: Special Use Airspace

C.1. Operational Airspaces

Table C-1. Operational Details for MHAFB, OCTC, and UTTR Special Use Airspaces

SUA	Controlling Agency	Vertical Limits	Time of Use	Airspace Boundaries
Mountain Home AFB Range Complex (MHRC) **User Agency: USAF, 366 Fighter Wing MHAFB**				
MHRC MOAs				
Paradise North	FAA, Salt Lake ARTCC	3,000 ft AGL or 10,000 ft MSL (whichever is higher) to 17,999 ft MSL	0730-2200 mountain time Monday-Friday; other times by NOTAM (expected use 230 days/year, 12 hours/day)	Beginning at lat. 42º45'00"N., long. 117º00'00"W.; to lat. 42º00'00"N., long. 117º00'00"W.; to lat. 42º00'00"N., long. 117º44'38"W.; to lat. 42º25'00"N., long. 117º42'00"W.; to lat. 42º45'00"N., long. 117º09'00"W.; to the point of beginning.
Paradise South	FAA, Salt Lake ARTCC	3,000 ft AGL or 10,000 ft MSL (whichever is higher) to 17,999 ft MSL	0730-2200 mountain time Monday-Friday; other times by NOTAM (expected use 230 days/year, 12 hours/day)	Beginning at lat. 42º00'00"N., long. 117º00'00"W.; to lat. 41º20'00"N., long. 117º00'00"W.; to lat. 41º20'00"N., long. 117º15'00"W.; to lat. 41º47'00"N., long. 117º46'00"W.; to lat. 42º00'00"N., long. 117º44'38"W.;to the point of beginning.
Owyhee North	FAA, Salt Lake ARTCC	100 ft AGL to 17,999 ft MSL	0730-2200 mountain time Monday-Friday; other times by NOTAM (expected use 230 days/year, 12 hours/day)	Beginning at lat. 42°45'00"N., long. 116°00'00"W.; to lat. 42°00'00"N., long. 116°00'00"W.; to lat. 42°00'00"N., long. 117°00'00"W.; to lat. 42°45'00"N., long. 117°00'00"W.; to the point of beginning. Excluding that airspace 500 feet AGL and below encompassed by the coordinates beginning at lat. 42°45'00"N., long. 116°40'00"W.; to lat. 42°45'00"N., long. 116°00'00"W.; to lat. 42°39'00"N., long. 116°00'00"W.; to lat. 42°30'00"N., long. 116°21'15"W.; to lat. 42°32'45"N., long. 116°28'45"W.; to the point of beginning.
Owyhee South	FAA, Salt Lake ARTCC	3,000 ft AGL or 10,000 ft MSL (whichever is	0730-2200 mountain time Monday-Friday; other times by NOTAM (expected use 230 days/year, 12 hours/day)	Beginning at lat. 42°00'00"N., long. 116°00'00"W.; to lat. 41°26'12"N., long. 116°00'00"W.; to lat. 41°20'00"N., long. 116°14'00"W.; to lat. 41°20'00"N., long. 117°00'00"W.; to lat. 42°00'00"N., long. 117°00'00"W.; to the point of beginning.

SUA	Controlling Agency	Vertical Limits	Time of Use	Airspace Boundaries
		higher up) to 17,999 ft MSL		
Jarbidge North	FAA, Salt Lake ARTCC	100 ft AGL to 17,999 ft MSL	0730-2200 mountain time Monday-Friday; other times by NOTAM (expected use 230 days/year, 12 hours/day)	Beginning at lat. 42°53’00”N., long. 115°24’15”W.; to lat. 42°53’00”N., long. 115°23’00”W.; to lat. 42°39’50”N., long. 115°02’00”W.; to lat. 42°00’00”N., long. 115°02’00”W.; to lat. 42°00’00”N., long. 116°00’00”W.; to lat. 42°45’00”N., long. 116°00’00”W.; to lat. 42°45’00”N., long. 115°42’20”W.; to lat. 42°36’00”N., long. 115°42’20”W.; to lat. 42°36’00”N., long. 115°24’15”W.; to the point of beginning. Excluding that airspace (1) 1,500 feet AGL and below within a 3 NM radius of the Grasmere Airport, ID centered at lat. 42°22’00”N., long. 115°53’03”W.; (2) 2000 feet AGL and below beginning at lat. 42°07’00”N., long. 115°02’00”W.; to lat. 42°00’00”N., long. 115°02’00”W.; to lat. 42°00’00”N., long. 115°26’00”W.; to lat. 42°04’00”N., long. 115°26’00”W.; to lat. 42°07’00”N., long. 115°20’00”W.; to the point of beginning (3) 500 feet AGL and below beginning at lat. 42°45’00”N., long. 116°00’00”W.; to lat. 42°45’00”N., long. 115°46’40”W.; to lat. 42°39’00”N., long. 116°00’00”W.; to the point of beginning.
Jarbidge South	FAA, Salt Lake ARTCC	3,000 ft AGL or 10,000 ft MSL (whichever is higher) up to 17,999 ft MSL.	0730-2200 mountain time Monday-Friday; other times by NOTAM (expected use 230 days/year, 12 hours/day).	Beginning at lat. 42°00'00"N., long. 116°00'00"W.; to lat. 42°00'00"N., long. 115°02'00"W.; to lat. 41°47'00"N., long. 115°13'00"W.; to lat. 41°26'12"N., long. 116°00'00"W.; to the point of beginning.
MHRC-Saylor Creek Range (SCR) Restricted Areas				
R-3202 High	FAA, Salt Lake ARTCC	18,000 ft above MSL to 29,000 ft above MSL	0730-2200 local time, Monday through Friday, other times by NOTAM	Beginning at lat. 42°53'00"N., long. 115°42'20"W.; at lat. 42°53'00"N., long. 115°24'15"W.; at lat. 42°36'00"N., long. 115°24'15"W.; at lat. 42°36'00"N., long. 115°42'20"W.; to the point of beginning.
R-3202 Low	FAA, Salt Lake ARTCC	Surface up to (but not including) 18,000 ft above MSL	0730-2200 local time, Monday through Friday, other times by NOTAM	Beginning at lat. 42°53'00"N., long. 115°42'20"W.; at lat. 42°53'00"N., long. 115°24'15"W.; at lat. 42°36'00"N., long. 115°24'15"W.; at lat. 42°36'00"N., long. 115°42'20"W.; to the point of beginning.
MHRC-Juniper Buttes Range (JBR) Restricted Areas				

SUA	Controlling Agency	Vertical Limits	Time of Use	Airspace Boundaries
R-3204 A	FAA, Salt Lake ARTCC	Surface to 100 ft AGL	0730-2200 local time, Monday through Friday, other times by NOTAM	Beginning at lat. 42°20’00”N., long. 115°22’30”W.; at lat. 42°20’00”N., long. 115°18’00”W.; at lat. 42°19’00”N., long. 115°17’00”W.; at lat. 42°16’35”N., long. 115°17’00”W.; at lat. 42°16’35”N., long. 115°22’30”W.; to point of beginning.
R-3204 B	FAA, Salt Lake ARTCC	100 ft AGL up to (but not including) 18,000 ft above MSL	0730-2200 local time, Monday through Friday, other times by NOTAM.	The airspace within a 5 NM radius centered on lat. 42°18’00”N., long. 115°20’00”W.
R-3204C	FAA, Salt Lake City, ARTCC	FL180 up to FL 290	0730-2200 local time, Monday through Friday, other times by NOTAM	The airspace within a 5 NM radius centered on lat. 42°18'00"N., long. 115°20'00"W.
Orchard Combat Training Center (OCTC) ***User Agency: IDARNG***				
OCTC Restricted Areas				
R-3203 A	FAA, Salt Lake ARTCC	Surface up to 15,000 ft MSL	By NOTAM, 24 hours in advance	Beginning at lat. 43°17'00"N., long. 116°12'03"W.; to lat. 43°17'00"N., long. 116°05'03"W.; to lat. 43°15'00"N., long. 116°01'03"W.; to lat. 43°12'30"N., long.116°00'33"W.; to lat. 43°06'00"N., long. 116°07'18"W.; to lat. 43°10'00"N., long. 116°16'33"W.; to lat. 43°14'00"N., long. 116°16'33"W.; to the point of beginning.
R-3203 B	FAA, Salt Lake ARTCC	15,000 ft MSL up to and including 22,000 ft MSL	By NOTAM, 24 hours in advance	Beginning at lat. 43°17'00"N., long. 116°12'03"W.; to lat. 43°17'00"N., long. 116°05'03"W.; to lat. 43°15'00"N., long. 116°01'03"W.; to lat. 43°12'30"N., long.116°00'33"W.; to lat. 43°06'00"N., long. 116°07'18"W.; to lat. 43°10'00"N., long. 116°16'33"W.; to lat. 43°14'00"N., long. 116°16'33"W.; to the point of beginning.
R-3203 C	FAA, Salt Lake ARTCC	Surface up to and including 6,000 ft MSL	By NOTAM, 24 hours in advance	Beginning at lat. 43°12'30"N., long. 116°00'33"W.; to lat. 43°09'15"N., long. 116°00'03"W.; to lat. 43°06'00"N., long. 116°07'18"W.; to the point of beginning.
R-3203 D	Boise Air Traffic Control Center	Surface up to and including 22,000 ft MSL	As scheduled by NOTAM 24 hours in advance not to exceed three weeks annually	Beginning at lat. 43°14'00"N., long. 116°16'33"W.; at lat. 43°17'51"N., long. 116°16'25"W.; at lat. 43°19'02"N., long. 116°14'45"W.; at lat. 43°19'02"N., long.116°06'36"W.; at lat. 43°15'58"N., long. 116°01'12"W.; at lat. 43°15'00"N., long.

SUA	Controlling Agency	Vertical Limits	Time of Use	Airspace Boundaries
				116°01'03"W.; at lat. 43°17'00"N., long. 116°05'03"W.; at lat. 43°17'00"N., long. 116°12'03"W.; to the point of beginning.
Hill AFB Utah Test and Training Range (UTTR) ***User Agency of MOAs: 6501 Range Squadron (AFSC)*** ***User Agency of Restricted Areas: USAF, 388 Fighter Wing, ACC***				
MOAs				
Gandy	FAA, Salt Lake ARTCC	100 ft AGL up to but not including FL 180	0700-1000, Monday through Friday, and 0800-1700 Saturday; other times by NOTAM	Beginning at lat. 40°36'00"N., long. 114°27'03"W.; to lat. 40°36'00"N., long. 114°02'52"W.; to lat. 40°23'00"N., long. 114°15'03"W.; to lat. 39°40'00"N., long.114°15'03"W.; to lat. 39°23'00"N., long. 114°00'03"W.; to lat. 39°23'00"N., long. 114°27'03"W.; to the point of beginning.
Lucin A	FAA, Salt Lake ARTCC	100 ft AFL up to 9,000 ft MSL	0700-0000 mountain time Monday-Friday and 0800-1700 mountain time Saturday; other times by NOTAM.	Beginning at lat. 40°49'00"N., long. 113°40'03"W.; to lat. 40°59'30"N., long. 114°15'03"W.; to lat. 41°11'30"N., long. 114°15'03"W.; to lat. 41°14'13"N., long. 114°00'03"W.; to lat. 41°23'00"N., long. 114°00'03"W.; lat. 41º52'30"N., long. 113º15'03"W.; lat. 41º57'00"N., long. 113º27'03"W.; lat. 41º52'30"N., long. 113º55'23"W.; lat. 41º40'00"N., long. 114º30'03"W.; lat. 40º54'00"N., long. 114º26'03"W.; to the point of beginning.
Lucin B	FAA, Salt Lake ARTCC	100 ft AGL up to 7,500 ft MSL	0700-0000 mountain time Monday-Friday and 0800-1700 mountain time Saturday; other times by NOTAM.	Beginning at lat. 41°14'13"N., long. 114°00'03"W.; to lat. 41°23'00"N., long. 114°00'03"W.; to lat. 41°52'30"N., long. 113°15'03"W.; to lat. 41°12'35"N., long.113°00'16"W.; to lat. 41°16'00"N., long. 113'50'03"W.; to the point of beginning.
Lucin C	FAA, Salt Lake ARTCC	100 feet AGL to 6,500 feet MSL	0700-0000 mountain time Monday-Friday and 0800-1700 mountain time Saturday; other times by NOTAM.	Beginning at lat. 40°53'00"N., long. 114°17'03"W.; to lat. 40°36'00"N., long. 114°17'03"W.; to lat. 40°36'00"N., long. 114°26'03"W.; to lat. 40°54'00"N., long.114°26'03"W.; to the point of beginning.
Lucin D	FAA, Salt Lake ARTCC	9,001 feet MSL to but not including FL 180	0700-0000 Monday-Thursday; 0700-1800 Friday; By NOTAM, 0800-1700 one Saturday per month	Beginning at lat. 41°54'00"N., long. 113°46'24"W.; to lat. 41°44'40"N., long. 113°34'45"W.; to lat. 41°42'20"N., long. 113°30'39"W.; to lat. 41°23'00"N., long. 114°00'03"W.; to lat. 41°14'13"N., long. 114°00'03"W.; to lat. 41°11'30"N., long. 114°15'03"W.; to lat. 40°59'30"N., long. 114°15'03"W.; to lat. 40°49'00"N., long. 113°40'03"W.; to lat. 40°54'00"N., long.

SUA	Controlling Agency	Vertical Limits	Time of Use	Airspace Boundaries
				114°26'03"W.; to lat. 41°40'00"N., long. 114°30'03"W.; to lat. 41°52'30"N., long. 113°55'23"W.; to the point of beginning.
Lucin E	FAA, Salt Lake ARTCC	7,501 feet MSL to but not including FL 180	0700-0000 Monday-Thursday; 0700-1800 Friday; By NOTAM, 0800-1700 one Saturday per month	Beginning at lat. 41°42'20"N., long. 113°30'39"W.; to lat. 41°29'00"N., long. 113°06'12"W.; to lat. 41°12'35"N., long. 113°00'16"W.; to lat. 41°16'00"N., long. 113°50'03"W.; to lat. 41°14'13"N., long. 114°00'03"W.; to lat. 41°23'00"N., long. 114°00'03"W.; to the point of beginning.
Sevier A	FAA, Salt Lake ARTCC	100 feet AGL to 14,500 feet MSL	0700-0000 Monday-Friday and 0800-1700 Saturday; other times by NOTAM	Beginning at lat. 39°23'00"N., long. 114°03'03"W.; to lat. 39°23'00"N., long. 113°19'03"W.; to lat. 39°39'50"N., long. 113°02'37"W.; to lat. 39°34'00"N., long.112°55'03"W.; to lat. 39°00'00"N., long. 113°22'03"W.; to lat. 39°00'00"N., long. 113°59'03"W.; to the point of beginning
Sevier B	FAA, Salt Lake ARTCC	100 feet AGL to 9,500 feet MSL	0700-0000 Monday-Friday and 0800-1700 Saturday; other times by NOTAM	Beginning at lat. 38°30'00"N., long. 113°36'03"W.; to lat. 38°43'00"N., long. 113°56'03"W.; to lat. 39°00'00"N., long. 113°59'03"W.; to lat. 39°00'00"N., long.113°22'03"W.; to lat. 39°34'00"N., long. 112°55'03"W.; to lat. 39°39'50"N., long. 113°02'37"W.; to lat. 40°00'00"N., long. 112°43'03"W.; to lat. 40°16'00"N., long. 112°43'03"W.; to lat. 40°25'00"N., long. 112°50'03"W.; to lat. 40°34'25"N., long. 112°56'38"W.; to lat. 40°31'00"N., long. 112°37'03"W.; to lat. 39°59'00"N., long. 112°32'03"W.; to lat. 39°47'00"N., long. 112°36'03"W.; to lat. 38°42'00"N., long. 113°04'03"W.; to the point of beginning.
Sevier C	FAA, Salt Lake ARTCC	14,500 feet MSL to but not including FL 180	By NOTAM 6 hours in advance	Beginning at lat. 39°23'00"N., long. 114°03'03"W.; to lat. 39°00'00"N., long. 113°59'03"W.; to lat. 39°00'00"N., long. 113°22'03"W.; to lat. 39°34'00"N., long.112°55'03"W.; to lat. 39°39'50"N., long. 113°02'37"W.; to lat. 39°23'00"N., long. 113°19'03"W.; to the point of beginning.
Sevier D	FAA, Salt Lake ARTCC	9,500 feet MSL to but not including FL 180	By NOTAM 6 hours in advance	Beginning at lat. 39°00'00"N., long. 113°59'03"W.; to lat. 38°43'00"N., long. 113°56'03"W.; to lat. 38°30'00"N., long. 113°36'03"W.; to lat. 38°42'00"N., long.113°04'03"W.; to lat. 39°47'00"N., long. 112°36'03"W.; to lat. 39°59'00"N., long. 112°32'03"W.; to lat. 40°31'00"N., long. 112°37'03"W.; to lat. 40°34'25"N., long. 112°56'38"W.; to lat. 40°25'00"N., long. 112°50'03"W.; to lat. 40°16'00"N., long. 112°43'03"W.; to lat. 40°00'00"N., long. 112°43'03"W.; to lat. 39°39'50"N., long. 113°02'37"W.; to lat. 39°34'00"N., long.112°55'03"W.; to lat. 39°00'00"N., long. 113°22'03"W.; to the point of beginning.

SUA	Controlling Agency	Vertical Limits	Time of Use	Airspace Boundaries
Restricted Areas				
R-6402 A Dugway Proving Ground	FAA, Salt Lake ARTCC	Surface up to FL 580	Continuous	Beginning at lat. 40°25'00"N., long. 112°56'03"W.; to lat. 40°25'00"N., long. 113°07'03"W.; to lat. 40°20'20"N., long. 113°07'03"W.; to lat. 40°20'20"N., long.113°20'05"W.; to lat. 39°55'00"N., long. 113°26'43"W.; to lat. 39°52'00"N., long. 113°27'03"W.; to lat. 39°49'00"N., long. 113°08'03"W.; to lat. 39°44'00"N., long. 113°08'03"W.; to lat. 39°46'00"N., long. 112°56'03"W.; to lat. 40°00'00"N., long. 112°43'03"W.; to lat. 40°13'00"N., long. 112°43'03"W.; to the point of beginning.
R-6402 B Dugway Proving Ground	FAA, Salt Lake ARTCC	100 ft AGL up to FL 580	Continuous	Beginning at lat. 40°13'00"N., long. 112°43'03"W.; to lat. 40°16'00"N., long. 112°43'03"W.; to lat. 40°25'00"N., long. 112°50'03"W.; to lat. 40°25'00"N., long. 112°56'03"W.; to the point of beginning.
R-6404 A	FAA, Salt Lake ARTCC	Surface to FL 580	Continuous	Beginning at lat. 41°11'30"N., long. 112°45'33"W.; to lat. 41°16'00"N., long. 113°50'03"W.; to lat. 41°08'30"N., long. 114°02'33"W.; to lat. 40°55'30"N., long.114°02'33"W.; to lat. 40°55'00"N., long. 114°00'03"W.; to lat. 40°55'00"N., long. 112°50'33"W.; to lat. 41°01'00"N., long. 112°39'03"W.; to lat. 41°07'00"N., long. 112°39'03"W.; to the point of beginning.
R-6404 B	FAA, Salt Lake ARTCC	Surface up to 13,000 feet MSL	Continuous	Beginning at lat. 40°55'00"N., long. 112°50'33"W.; to lat. 40°55'00"N., long. 114°00'03"W.; to lat. 40°49'00"N., long. 113°40'03"W.; to lat. 40°52'00"N., long.112°57'03"W.; to the point of beginning.
R-6404 C	FAA, Salt Lake ARTCC	Surface up to FL 280	Continuous	Beginning at lat. 41°l6'00"N., long. 113°50'03"W.; to lat. 41°11'30"N., long. 114°15'03"W.; to lat. 40°59'30"N., long. 114°15'03"W.; to lat. 40°55'30"N., long.114°02'33"W.; to lat. 41°08'30"N., long. 114°02'33"W.; to the point of beginning.
R-6404 D	FAA, Salt Lake ARTCC	13,000 ft MSL up to FL 250	By NOTAM	Beginning at lat. 40°55'00"N., long. 112°50'33"W.; to lat. 40°55'00"N., long. 114°00'03"W.; to lat. 40°49'00"N., long. 113°40'03"W.; to lat. 40°52'00"N., long.112°57'03"W.; to the point of beginning.
R-6405 Wendover	FAA, Salt Lake ARTCC	100 ft AFL up to FL 580	Continuous	Beginning at lat. 40°39'00"N., long. 114°00'03"W.; to lat. 40°23'00"N., long. 114°15'03"W.; to lat. 39°40'00"N., long. 114°15'03"W.; to lat. 39°23'00"N., long.114°00'03"W.; to lat. 39°23'00"N., long. 113°19'03"W.; to lat. 39°46'00"N., long. 112°56'33"W.; to lat. 39°44'00"N., long. 113°08'03"W.; to lat.

SUA	Controlling Agency	Vertical Limits	Time of Use	Airspace Boundaries
				39°49'00"N., long. 113°08'03"W.; to lat. 39°52'00"N., long. 113°27'03"W.; to lat. 39°55'00"N., long. 113°26'43"W.; to lat. 39°55'00"N., long. 113°48'03"W.; to lat. 40°00'00"N., long. 113°48'03"W.; to lat. 40°00'00"N., long.114°00'03"W.; to the point of beginning.
R-6406 A	FAA, Salt Lake ARTCC	Surface up to FL 580	Continuous	Beginning at lat. 40°39'00"N., long. 113°00'03"W.; to lat. 40°39'00"N., long. 114°00'03"W.; to lat. 40°17'00"N., long. 114°00'03"W.; to lat. 40°20'20"N., long.113°49'03"W.; to lat. 40°20'20"N., long. 113°07'03"W.; to lat. 40°25'00"N., long. 113°07'03"W.; to lat. 40°25'00"N., long. 112°56'03"W.; to lat. 40°29'00"N., long. 113°00'03"W.; to the point of beginning.
R-6406 B	FAA, Salt Lake ARTCC	100 ft AGL up to FL 580	Continuous	Beginning at lat. 40°39'00"N., long. 113°00'03"W.; to lat. 40°29'00"N., long. 113°00'03"W.; to lat. 40°25'00"N., long. 112°56'03"W.; to lat. 40°25'00"N., long.112°50'03"W.; to the point of beginning.
R-6407	FAA, Salt Lake ARTCC	Surface up to FL 580	Continuous	Beginning at lat. 40°20'20"N., long. 113°20'05"W.; to lat. 39°55'00"N., long. 113°26'43"W.; to lat. 39°55'00"N., long. 113°48'03"W.; to lat. 40°00'00"N., long.113°48'03"W.; to lat. 40°00'00"N., long. 114°00'03"W.; to lat. 40°17'00"N., long. 114°00'03"W.; to lat. 40°20'20"N., long. 113°49'03"W.; to the point of beginning.

Source: FAA Order JO 7400.10B (effective February 16, 2020)
https://www.faa.gov/regulations_policies/orders_notices/index.cfm/go/document.information/documentID/1037155
Key: MHAFB – Mountain Home Air Force Base; MHRC – Mountain Home Range Complex; OCTC – Orchard Combat Training Center; JBR – Juniper Butte Range; SCR – Saylor Creek Range; UTTR - Utah Test and Training Range; MOA – Military Operation Area; SUA – special use airspace; FAA – Federal Aviation Administration; USAF – U.S. Air Force; IDARNG – Idaho Army National Guard; ACC – Air Combat Control; AFSC – Air Force Sustainment Center; ARTCC – Air Route Traffic Control Center; NOTAM – Notice to Airmen; MSL – mean sea level; AGL – above ground level; ft – feet; FL – flight level; NM – nautical mile

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D

Public and Agency Coordination

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Appendix D: Public and Agency Coordination

D.1. Public and Stakeholder Coordination List

Federal and State Agency Contacts

Bureau of Land Management

Bureau of Reclamation

Federal Aviation Administration

U.S. Environmental Protection Agency, Region 10

U.S. Department of Agriculture Forest Service

U.S. Fish and Wildlife Service

U.S. Army Corps of Engineers-Boise Regulatory Office

USDA Natural Resources Conservation Service

Idaho Army National Guard

Idaho Council on Indian Affairs

Idaho Department of Agriculture

Idaho Department of Commerce

Idaho Department of Environmental Quality

Idaho Department of Fish & Game

Idaho Department of Lands

Idaho Department of Parks & Recreation

Idaho Department of Transportation

Idaho Department of Water Resources

Idaho State Department of Agriculture

Idaho State Historical Society, State Historic Preservation Officer

State of Idaho Special Assistant for Military Affairs

Federal Political Representatives

Idaho Senators

Idaho Representative, 1st and 2nd Districts

State Political Representatives

Governor of Idaho

Idaho House of Representatives, District 23

Idaho Senate, District 23

Idaho House of Representatives Resources and Conservation Committee

Idaho Legislature Joint Economic Outlook and Revenue Assessment Committee

Idaho State Senate Resources and Environment Committee

Tribes

Burns Paiute Tribe

Northwestern Band of the Shoshone Nation

Paiute-Shoshone Tribes of Fort McDermitt

Shoshone-Bannock Tribes

Shoshone-Paiute Tribes of Duck Valley

Local Agencies and Officials

Ada County Board of Commissioners

Ada County Commission

Ada County Highway District

Boise City Council

City of Boise

City of Burley

City of Glenns Ferry

City of Grand View

City of Kuna

City of Marsing

City of Mountain Home

City of Nampa

City of Twin Falls

Elmore County Board of Commissioners

Grand View City Council

Kuna City Council

Mountain Home City Council Owyhee County Board of Commissioners

Twin Falls County Board of Commissioners

Boise Metro Chamber of Commerce

Glenns Ferry Chamber of Commerce

Mountain Home Chamber of Commerce

Twin Falls Chamber of Commerce

Non-Governmental Organizations

Birds of Prey National Conservation Area Partnership

Boise State University Raptor Research Center

Conservation Lands Foundation

Golden Eagle Audubon Society

Idaho Conservation League

Idaho Outdoor Association

Idaho Power Company

Idaho Rivers United

Idaho Wildlife Federation

Intermountain Bird Observatory

Permittees

Sierra Club

Soulen Livestock Company

The Nature Conservancy

The Peregrine Fund

The Wilderness Society

Trout Unlimited

Western Watersheds Project

Wildlands Defense

Advocates for the West

Gowen Strong

Idaho Cattle Association

Idaho Farm Bureau Federation

Sierra Club Middle Snake Group

Libraries

Boise Public Library

Mountain Home Air Force Base Library

Mountain Home Public Library

D.2 Example IICEP Notification Letter to Stakeholders

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 366TH FIGHTER WING (ACC)
MOUNTAIN HOME AIR FORCE BASE IDAHO

19 November 2020

Sheri Robertson
Chief, Environmental Management
366 FW/A7IE
1100 Liberator Street Bldg 1297
Mountain Home AFB ID 83648

Memorandum for: **Federal, State, and Local Public Agencies**
Interested Parties
Members of the Public

Subject: Proposed Forging Sabre Biennial Exercises at Mountain Home Air Force Base (MHAFB), Idaho

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended, and its implementing regulations, the United States Air Force (USAF) has initiated development of an Environmental Assessment (EA) to evaluate the proposed Republic of Singapore Armed Forces Forging Sabre biennial exercises at MHAFB. With support from U.S. Armed Forces, including the 428th Fighter Squadron stationed at MHAFB under the 366th Fighter Wing, the biennial exercise would provide effective combat readiness for a strategic partner nation as part of a multinational force structure.

In accordance with Executive Order (EO) 12372, as amended to EO 12416, Intergovernmental Review of Federal Programs, we request your participation and review of the proposed action contained herein. **Attachment 1** lists the agencies and stakeholders contacted for this review. Your comments will help develop the scope of the environmental review. The USAF anticipates publishing the Draft EA for review in early spring 2021.

In summary, the project proposal is to prepare for, and conduct, coordinated air and land exercises from MHAFB over a two-week period, beginning in 2021 and occurring every other year. Components of each Forging Sabre exercise would include facility modifications, personnel increases, aircraft operations, ground operations, and munitions use. For the 2-week duration of the exercises, daily operations would be conducted between 7 am and 10:30 pm beginning each day with administrative meetings, training pre-briefs, and operational coordination prior to flight training operations.

Preparations before and during exercises would consist of installing temporary facilities on previously disturbed land at MHAFB (see **Attachment 2**), interior modifications to Building 1361 at MHAFB, a temporary increase of up to 1,300 personnel in the region, and coordination with FAA to establish a special operations temporary flight restriction for unmanned aircraft systems utilizing approved airspace between existing military restricted.

Aircraft operations would include takeoffs and landings at existing military airports by manned and unmanned aircraft; the launch of small unmanned aircraft within existing military ranges; and use of existing and approved airspace by manned and unmanned aircraft. Unmanned aircraft systems would be operated during the exercises to surveil, track, identify, and locate on-ground threats (e.g., targets/target points on the ranges) and communicate that information back to command and control stations that would employ air or ground firing operations, as appropriate. Ground operations could include, for example, use of lasers and rocket launchers, foot and vehicle maneuvers, and sniper operations, with assistance from U.S. Army and USAF operators (administrators, air and ground support personnel), as needed. Administrative and control personnel (e.g., medical, safety) would be present within each military range being utilized during ground operations. Air and ground training with only inert munitions expenditures would occur within the Mountain Home Range Complex.

The proposed exercise training activities described in the preceding paragraph would be consistent with the type, conduct, and level of current operations and within the scope of existing NEPA documentation that addresses training. Therefore, the forthcoming EA will focus on installing temporary facilities and modifications to Building 1361 on MHAFB, temporary increases in personnel, and activation of the temporary flight restriction.

We look forward to your participation in this process and would greatly appreciate receipt of any questions or comments within 30 days from receipt of this correspondence. To provide any questions or comments, please contact Ms. Noelle Shaver at noelle.shaver@us.af.mil or by postal mail at: Noelle Shaver, 366 FW A7IE, 1100 Liberator Street, Mountain Home AFB, ID 83648. Thank you for your assistance.

Sincerely,

SHERI L. ROBERTSON
Chief, Environmental Management

Attachments:
1. Distribution List
2. Figure 1. Proposed Temporary Facility Locations

Public and Stakeholder Distribution List

Federal and State Agency Contacts

Bureau of Land Management

Bureau of Reclamation

Federal Aviation Administration

U.S. Environmental Protection Agency, Region 10

U.S. Department of Agriculture Forest Service

U.S. Fish and Wildlife Service

U.S. Army Corps of Engineers-Boise Regulatory Office

USDA Natural Resources Conservation Service

Idaho Army National Guard

Idaho Council on Indian Affairs

Idaho Department of Agriculture

Idaho Department of Commerce

Idaho Department of Environmental Quality

Idaho Department of Fish & Game

Idaho Department of Lands

Idaho Department of Parks & Recreation

Idaho Department of Transportation

Idaho Department of Water Resources

Idaho State Department of Agriculture

Idaho State Historical Society, State Historic Preservation Officer

State of Idaho Special Assistant for Military Affairs

Federal Political Representatives

Idaho Senators

Idaho Representative, 1st and 2nd Districts

State Political Representatives

Governor of Idaho

Idaho House of Representatives, District 23

Idaho Senate, District 23

Idaho House of Representatives Resources and Conservation Committee

Idaho Legislature Joint Economic Outlook and Revenue Assessment Committee

Idaho State Senate Resources and Environment Committee

Local Agencies and Officials

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Ada County Commission

Ada County Highway District

Boise City Council

City of Boise

City of Burley

City of Glenns Ferry

City of Grand View

City of Kuna

City of Marsing

City of Mountain Home

City of Nampa

City of Twin Falls

Elmore County Board of Commissioners

Grand View City Council

Kuna City Council

Mountain Home City Council

Mountain Home News

Owyhee County Board of Commissioners

Local Agencies and Officials, Continued

Twin Falls County Board of Commissioners

Boise Metro Chamber of Commerce

Glenns Ferry Chamber of Commerce

Mountain Home Chamber of Commerce

Twin Falls Chamber of Commerce

Non-Governmental Organizations

Birds of Prey National Conservation Area Partnership

Boise State University Raptor Research Center

Conservation Lands Foundation

Golden Eagle Audubon Society

Idaho Conservation League

Idaho Outdoor Association

Idaho Power Company

Idaho Rivers United

Idaho Wildlife Federation

Intermountain Bird Observatory

Permittees

Sierra Club

Soulen Livestock Company

The Nature Conservancy

The Peregrine Fund

The Wilderness Society

Trout Unlimited

Western Watersheds Project

Wildlands Defense

Advocates for the West

Gowen Strong

Idaho Cattle Association

Idaho Farm Bureau Federation

Sierra Club Middle Snake Group

Libraries

Boise Public Library

Bruneau District Library

Glenns Ferry Public Library

Eastern Owyhee County Public Library

Mountain Home Air Force Base Library

Mountain Home Public Library

Twin Falls Public Library

Figure 1. Proposed Temporary Facility Locations

D.3. Example Government-to-Government Consultation Letter

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 366TH FIGHTER WING (ACC)
MOUNTAIN HOME AIR FORCE BASE IDAHO

12 November 2020

Colonel Richard A. Goodman
Commander
366 Gunfighter Avenue Ste 2031
Mountain Home AFB ID 83648

Mr. Cecil Dick
Chairman
Burns Paiute Tribe
100 Pasigo Street
Burns OR 97720-2442

Subject: Proposed Forging Sabre Biennial Exercises at Mountain Home Air Force Base (MHAFB), Idaho

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended, and its implementing regulations, the United States Air Force (USAF) has initiated development of an Environmental Assessment (EA) to evaluate the proposed Republic of Singapore Armed Forces Forging Sabre biennial exercise at MHAFB. With support from U.S. Armed Forces, including the 428th Fighter Squadron stationed at MHAFB under the 366th Fighter Wing, the biennial exercise would provide effective combat readiness for a strategic partner nation as part of a multinational force structure.

In accordance with Executive Order 13175, *Consultation and Coordination With Indian Tribal Governments*, we respectfully invite your participation in the evaluation and preparation of the EA, as your comments will help develop the scope of the environmental review. The USAF anticipates publishing the Draft EA for review in early spring 2021.

In summary, the project proposal is to prepare for, and conduct, coordinated air and land exercises from MHAFB over a two-week period, beginning in 2021 and occurring every other year. Components of each Forging Sabre exercise would include facility modifications, personnel increases, aircraft operations, ground operations, and munitions use. For the two week duration of the exercise, daily operations would be conducted between 7:00 am and 10:30 pm beginning each day with administrative meetings, training pre-briefs, and operational coordination prior to flight training operations.

Preparations before and during exercises would consist of installing temporary facilities on previously disturbed land at MHAFB (see **Attachment 2**), interior modifications to building 1361 at MHAFB, a temporary increase of up to 1,300 personnel in the region, and coordination with FAA to establish a special operations temporary flight restriction for unmanned aircraft systems utilizing approved airspace between existing military restricted airspaces.

Aircraft operations would include takeoffs and landings at existing military airports by manned and unmanned aircraft, the launch of small unmanned aircraft within existing military ranges, and use of existing and approved airspace by manned and unmanned aircraft. Unmanned aircraft systems would be operated during the exercises to surveil, track, identify, and locate on-ground threats (e.g., targets/target points on the ranges) and communicate that information back to command and control stations that would employ air or ground firing operations, as appropriate. Ground operations could include, for example, use of lasers and rocket launchers, foot and vehicle maneuvers, and sniper operations, with assistance from U.S. Army and USAF operators (administrators, air and ground support personnel), as needed. Air and ground training with only inert munitions expenditures would occur within the Mountain Home Range Complex.

The proposed exercise training activities described in the preceding paragraph would be consistent with the type, conduct, and level of current operations and within the scope of existing NEPA documentation. Therefore, the forthcoming EA will focus on installing temporary facilities and modifications to building 1361 on MHAFB, temporary increases in personnel, and activation of the temporary flight restriction.

We look forward to your participation in this process and would greatly appreciate receipt of any questions or comments within 30 days from receipt of this correspondence. To provide comments, please contact my Installation Tribal Liaison Officer, Ms. Barbara Hurt, at [Barbara.Hurt@us.af.mil] or by postal mail at: Ms. Barbara Hurt, 366 FW Tribal Liaison Officer, 366 Gunfighter Avenue, Suite 2031, Mountain Home AFB, ID 83648. Do not hesitate to call me at (208) 828-2366 to arrange dates and times to discuss or meet at your convenience. Thank you for your assistance.

Respectfully,

RICHARD A. GOODMAN, Colonel, USAF

Attachment:
1. Map, Proposed Temporary Facility Locations

D.4. Stakeholder and Tribal IICEP Responses

Idaho Department of Fish and Game

From: Pozzanghera, Casey <casey.pozzanghera@idfg.idaho.gov>
Sent: Monday, December 21, 2020 1:10 PM
To: SHAVER, NOELLE C GS-12 USAF ACC 366 A6 7/A7IE <noelle.shaver@us.af.mil>
Subject: [Non-DoD Source] RE: Forging Sabre Exercises EA scoping letter

Dear Ms. Shaver,

The Idaho Department of Fish and Game's (IDFG) mission is to preserve, protect, perpetuate, and manage fish and wildlife for the public interest (Idaho Code § 36-103). Accordingly, IDFG has reviewed the US Air Force's (USAF) 19 November 2020 proposal to prepare an Environmental Assessment (EA) per the National Environmental Policy Act for the Forging Sabre Biennial Exercises (Exercises) at Mountain Home Air Force Base (MHAFB). IDFG's technical comments are intended to inform decision-making about potential effects of the proposed Exercises and options to avoid or mitigate adverse effects.

MHAFB and surrounding areas (e.g., Morley Nelson Snake River Birds of Prey Conservation Area; and Bruneau, Owyhee, and Jack's Creek canyons) support a diversity of native wildlife and rare plants. The Exercises' proposed activities (e.g., increased personnel, aircraft, and ground operations) could alter existing disturbance levels and habitat conditions for key wildlife and rare plants inhabiting affected areas. IDFG therefore recommends that the EA comprehensively analyze potential adverse effects and corresponding mitigation options (e.g., alternative Exercise activity timing and intensities) for the following resources:

- Greater sage-grouse.
- Big game including bighorn sheep.
- Bats.
- Migratory birds including raptors,
- Slickspot peppergrass.
- Small mammals including pygmy rabbits.

To aid EA preparation, the Idaho Fish and Wildlife Information System (IFWIS) is available online for requesting species data (https://fishandgame.idaho.gov/species/request-data). Additional wildlife management plans and reports are also available on IDFG's website (https://idfg.idaho.gov/).

Thank you for the opportunity to provide input. Please contact me with questions or for additional information.

Casey Pozzanghera
Staff Biologist, Southwest Region
Idaho Department of Fish and Game
15950 N Gate Blvd
Nampa, ID 83687
(208) 854-8947

https://idfg.idaho.gov

From: SHAVER, NOELLE C GS-12 USAF ACC 366 A6 7/A7IE <noelle.shaver@us.af.mil>
Sent: Monday, November 30, 2020 1:47 PM

To: Pozzanghera, Casey <casey.pozzanghera@idfg.idaho.gov>
Subject: RE: Forging Sabre Exercises EA scoping letter

Good afternoon Ms. Pozzanghera,

Thank you for responding to the request for comment.

Analysis in the EA will focus on construction of temporary facilities on MHAFB and associated exercise preparation efforts - particularly required temporary personnel increases. The enclosed figure shows the locations of temporary facilities that would be constructed on the installation. More information will be provided in the Draft EA, currently anticipated in Spring 2021.

Sincerely,

Noelle Shaver M.A., RPA
EIAP/Cultural Resources Programs Manager
366 FW/A7IE
1100 Liberator St., Bldg. 1297
Mountain Home AFB 83648
(208) 828-8003/DSN 728-8003

From: Pozzanghera, Casey <casey.pozzanghera@idfg.idaho.gov>
Sent: Wednesday, November 25, 2020 11:23 AM
To: SHAVER, NOELLE C GS-12 USAF ACC 366 A6 7/A7IE <noelle.shaver@us.af.mil>
Subject: [Non-DoD Source] Forging Sabre Exercises EA scoping letter

Dear Ms. Shaver,

The Idaho Department of Fish and Game, Southwest Regional Office has received the attached letter with notice of a forthcoming Environmental Assessment for the proposed Forging Sabre Military Exercises. IDFG appreciates the opportunity to be part of the review process leading up to the EA. We would like to request further information and clarification, pertaining to the forthcoming EA and the comment request in the attached letter. The letter appears to request scoping comments for the upcoming EA, yet the project description was quite brief and we found no scoping package with further details or maps. Is there further documentation available regarding this forthcoming EA that will assistant IDFG in providing meaningful scoping comments?
Thank you for any additional information you can provide. Have a happy Thanksgiving,

Casey Pozzanghera

Casey Pozzanghera
Staff Biologist, Southwest Region
Idaho Department of Fish and Game
15950 N Gate Blvd
Nampa, ID 83687
(208) 854-8947

https://idfg.idaho.gov

State of Idaho Department of Environmental Quality

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1445 N Orchard Street, Boise, ID 83706
(208) 373-0550

Brad Little, Governor
Jess Byrne, Director

December 4, 2020

By e-mail: noelle.shaver@us.af.mil

Noelle Shaver
366 FW A7IE
1100 Libertor St.
Mountain Home AFB, Idaho 83648

Subject: Proposed Forging Sabre Biennial Exercises at Mountain Home Air Force Base (MHAFB), Idaho

Dear Ms. Shaver:

Thank you for the opportunity to respond to your request for comment. While DEQ does not review projects on a project-specific basis, we attempt to provide the best review of the information provided. DEQ encourages agencies to review and utilize the Idaho Environmental Guide to assist in addressing project-specific conditions that may apply. This guide can be found at: deq.idaho.gov/assistance-resources/environmental-guide-for-local-govts.

The following information does not cover every aspect of this project; however, we have the following general comments to use as appropriate:

1. **AIR QUALITY**

   - Please review IDAPA 58.01.01 for all rules on Air Quality, especially those regarding fugitive dust (58.01.01.651), trade waste burning (58.01.01.600-617), and odor control plans (58.01.01.776).

     For questions, contact David Luft, Air Quality Manager, at (208) 373-0550.

   - IDAPA 58.01.01.201 requires an owner or operator of a facility to obtain an air quality permit to construct prior to the commencement of construction or modification of any facility that will be a source of air pollution in quantities above established levels. DEQ asks that cities and counties require a proposed facility to contact DEQ for an applicability determination on their proposal to ensure they remain in compliance with the rules.

     For questions, contact the DEQ Air Quality Permitting Hotline at 1-877-573-7648.

2. **WASTEWATER AND RECYCLED WATER**

   - DEQ recommends verifying that there is adequate sewer to serve this project prior to approval. Please contact the sewer provider for a capacity statement, declining balance report, and

willingness to serve this project.

- IDAPA 58.01.16 and IDAPA 58.01.17 are the sections of Idaho rules regarding wastewater and recycled water. Please review these rules to determine whether this or future projects will require DEQ approval. IDAPA 58.01.03 is the section of Idaho rules regarding subsurface disposal of wastewater. Please review this rule to determine whether this or future projects will require permitting by the district health department.
- All projects for construction or modification of wastewater systems require preconstruction approval. Recycled water projects and subsurface disposal projects require separate permits as well.
- DEQ recommends that projects be served by existing approved wastewater collection systems or a centralized community wastewater system whenever possible. Please contact DEQ to discuss potential for development of a community treatment system along with best management practices for communities to protect ground water.
- DEQ recommends that cities and counties develop and use a comprehensive land use management plan, which includes the impacts of present and future wastewater management in this area. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.

For questions, contact Valerie Grecar, Water Quality Engineering Manager at (208) 373-0550.

3. WASTEWATER AND RECYCLED WATER

- DEQ recommends verifying that there is adequate water to serve this project prior to approval. Please contact the water provider for a capacity statement, declining balance report, and willingness to serve this project.
- IDAPA 58.01.08 is the section of Idaho rules regarding public drinking water systems. Please review these rules to determine whether this or future projects will require DEQ approval.
- All projects for construction or modification of public drinking water systems require preconstruction approval.
- DEQ recommends verifying if the current and/or proposed drinking water system is a regulated public drinking water system (refer to the DEQ website at: deq.idaho.gov/water-quality/drinking-water.aspx). For non-regulated systems, DEQ recommends annual testing for total coliform bacteria, nitrate, and nitrite.
- If any private wells will be included in this project, we recommend that they be tested for total coliform bacteria, nitrate, and nitrite prior to use and retested annually thereafter.
- DEQ recommends using an existing drinking water system whenever possible or construction of a new community drinking water system. Please contact DEQ to discuss this project and to explore options to both best serve the future residents of this development and provide for protection of ground water resources.
- DEQ recommends cities and counties develop and use a comprehensive land use management plan which addresses the present and future needs of this area for adequate, safe, and sustainable drinking water. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.

For questions, contact Valerie Greear, Water Quality Engineering Manager at (208) 373-0550.

4. SURFACE WATER

- A DEQ short-term activity exemption (STAE) from this office is required if the project will involve de-watering of ground water during excavation and discharge back into surface water, including a description of the water treatment from this process to prevent excessive sediment and turbidity from entering surface water.
- Please contact DEQ to determine whether this project will require a National Pollution Discharge Elimination System (NPDES) Permit. A Construction General Permit from EPA may be required if this project will disturb one or more acres of land, or will disturb less than one acre of land but are part of a common plan of development or sale that will ultimately disturb one or more acres of land.
- If this project is near a source of surface water, DEQ requests that projects incorporate construction best management practices (BMPs) to assist in the protection of Idaho's water resources. Additionally, please contact DEQ to identify BMP alternatives and to determine whether this project is in an area with Total Maximum Daily Load stormwater permit conditions.
- The Idaho Stream Channel Protection Act requires a permit for most stream channel alterations. Please contact the Idaho Department of Water Resources (IDWR), Western Regional Office, at 2735 Airport Way, Boise, or call (208) 334-2190 for more information. Information is also available on the IDWR website at: https://idwr.idaho.gov/streams/stream-channel-alteration-permits.html
- The Federal Clean Water Act requires a permit for filling or dredging in waters of the United States. Please contact the US Army Corps of Engineers, Boise Field Office, at 10095 Emerald Street, Boise, or call 208-345-2155 for more information regarding permits.

For questions, contact Lance Holloway, Surface Water Manager, at (208) 373-0550.

5. HAZARDOUS WASTE AND GROUND WATER CONTAMINATION

- **Hazardous Waste.** The types and number of requirements that must be complied with under the federal Resource Conservations and Recovery Act (RCRA) and the Idaho Rules and Standards for Hazardous Waste (IDAPA 58.01.05) are based on the quantity and type of waste generated. Every business in Idaho is required to track the volume of waste generated, determine whether each type of waste is hazardous, and ensure that all wastes are properly disposed of according to federal, state, and local requirements.
- No trash or other solid waste shall be buried, burned, or otherwise disposed of at the project site. These disposal methods are regulated by various state regulations including Idaho's Solid Waste Management Regulations and Standards, Rules and Regulations for Hazardous Waste, and Rules and Regulations for the Prevention of Air Pollution.
- **Water Quality Standards.** Site activities must comply with the Idaho Water Quality Standards (IDAPA 58.01.02) regarding hazardous and deleterious-materials storage, disposal, or accumulation adjacent to or in the immediate vicinity of state waters (IDAPA 58.01.02.800); and the cleanup and reporting of oil-filled electrical equipment (IDAPA 58.01.02.849); hazardous materials (IDAPA 58.01.02.850); and used-oil and petroleum releases (IDAPA 58.01.02.851 and

852).

- Petroleum releases must be reported to DEQ in accordance with IDAPA 58.01.02.851.01 and 04. Hazardous material releases to state waters, or to land such that there is likelihood that it will enter state waters, must be reported to DEQ in accordance with IDAPA 58.01.02.850.
- **Ground Water Contamination.** DEQ requests that this project comply with Idaho's Ground Water Quality Rules (IDAPA 58.01.11), which states that "No person shall cause or allow the release, spilling, leaking, emission, discharge, escape, leaching, or disposal of a contaminant into the environment in a manner that causes a ground water quality standard to be exceeded, injures a beneficial use of ground water, or is not in accordance with a permit, consent order or applicable best management practice, best available method or best practical method."

  For questions, contact Albert Crawshaw, Waste & Remediation Manager, at (208) 373-0550.

6. ADDITIONAL NOTES

- If an underground storage tank (UST) or an aboveground storage tank (AST) is identified at the site, the site should be evaluated to determine whether the UST is regulated by DEQ. EPA regulates ASTs. UST and AST sites should be assessed to determine whether there is potential soil and ground water contamination. Please call DEQ at (208) 373-0550, or visit the DEQ website deq.idaho.gov/waste-mgmt-remediation/storage-tanks.aspx for assistance.
- If applicable to this project, DEQ recommends that BMPs be implemented for any of the following conditions: wash water from cleaning vehicles, fertilizers and pesticides, animal facilities, composted waste, and ponds. Please contact DEQ for more information on any of these conditions.

We look forward to working with you in a proactive manner to address potential environmental impacts that may be within our regulatory authority. If you have any questions, please contact me, or any of our technical staff at (208) 373-0550.

Sincerely,

Aaron Scheff
Regional Administrator
DEQ-Boise Regional Office

EDMS#: 2020AEK279

Ada County Highway District

From: Bruce Wong <bwong@achdidaho.org>
Sent: Wednesday, November 25, 2020 10:42 AM
To: SHAVER, NOELLE C GS-12 USAF ACC 366 A6 7/A7IE <noelle.shaver@us.af.mil>
Subject: [Non-DoD Source] Forging Saber

Ms. Robertson. Thank you for recent letter regarding Forging Saber. The Ada County Highway District has no questions nor concerns

Bruce S. Wong, Colonel USAF (Ret)
Director Ada County Highway District

Idaho State Historical Society, Idaho State Historic Preservation Office

IDAHO STATE HISTORICAL SOCIETY

8 December 2020

Brad Little
Governor of Idaho

Janet Gallimore
Executive Director
State Historic
Preservation Officer

Administration:
2205 Old Penitentiary Rd.
Boise, Idaho 83712
208.334.2682
Fax: 208.334.2774

Idaho State Museum:
610 Julia Davis Dr.
Boise, Idaho 83702
208.334.2120

Idaho State Archives and State Records Center:
2205 Old Penitentiary Rd.
Boise, Idaho 83712
208.334.2620

State Historic Preservation Office:
210 Main St.
Boise, Idaho 83702
208.334.3861

Old Idaho Penitentiary and Historic Sites:
2445 Old Penitentiary Rd.
Boise, Idaho 83712
208.334.2844

HISTORY.IDAHO.GOV

Noelle Shaver
EIAP/Cultural Resources Programs Manager
366 FW/A71E
1100 Liberator Street, Building 1297
Mountain Home AFB ID 83648
noelle.shaver@us.af.mil

Via Email

RE: Proposed Forging Sabre Biennial Exercises at Mountain Home Air Force Base (MHAFB), Idaho / SHPO Rev. No. 2021-140

Dear Ms. Shaver:

Thank you for contacting our office about the above referenced project. It is our understanding that the scope of the project will include biennial exercises by the Republic of Singapore Armed Forces Forging Sabre at MHAFB.

The State Historic Preservation Office (SHPO) is providing comments to the Department of Defense (DOD) pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR § 800. Consultation with the SHPO is not a substitution for consultation with Tribal Historic Preservation Offices, other Native American tribes, local governments, or the public. Please keep in mind, while the Section 106 documentation may be folded into National Environmental Policy Act (NEPA) document, Section 106 is a separate law and thus follows the process laid out in 36 CFR § 800.

Based on the information received 27 November 2020, in order for the DOD to be in compliance with Section 106 of the National Historic Preservation Act (as outlined in 36 CFR § 800), DOD will need to initiate consultation under Section 106 and identify historic properties, assess effects, and resolve any adverse effects. Effects to historic properties can including direct (including visual and auditory) and indirect effects, as well as reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative, as stated in 36 CFR 800.5(a)(1).

Preserving the past, enriching the future.

Thank you for the opportunity to comment. Please note that our response does not affect the review timelines afforded to other consulting parties. Additionally, information provided by other consulting parties may cause us to revise our comments. If you have any questions or the scope of work changes, please contact me via phone or email at 208.488.7463 or ashley.brown@ishs.idaho.gov.

Sincerely,

Ashley Brown, M.A.
Historical Review Officer
Idaho State Historic Preservation Office

Wildlands Defense

From: katie fite <katie@wildlandsdefense.org>
Sent: Saturday, December 12, 2020 3:55 PM
To: SHAVER, NOELLE C GS-12 USAF ACC 366 A6 7/A7IE <noelle.shaver@us.af.mil>
Subject: [Non-DoD Source] initial comment submission on Singapore Training in Idaho

Dear Ms. Shaver,

Here are initial concerns from WildLands Defense regarding the Singapore War game bouts proposed for the ID, OR, NV region.

An EIS is required to assess all direct indirect and cumulative adverse human health, ecological, and other effects.

Sadly Idaho, Oregon and Nevada lands and wildlife are in the military crosshairs of a new proposed intensive military HELL operation. It's all ostensibly to benefit Singapore. There are Singapore War Planes bedded down at Mountain Home Air Force base (which of course is because of the foreign military $$$ Singapore's purchase of War Planes and paying to use the "facilities" brings). They may also be used as kind of mercenaries to keep US hands "clean" in sneaky operations destabilizing other countries. Now the Air Force is using these Singapore War Planes as an excuse for hellacious land and air two-week "training" bouts. 1300 war personnel would be brought in, and the activities would include:

"Takeoffs and landings at approved military airports by manned and unmanned aircraft, unmanned aircraft systems would be operated during the exercises to surveil, track, identify, and locate on-ground threats Ie.e targets/target points on the ranges) and communicate that information back to command and control stations that would employ air and ground firing operations. Ground operations could include ... use of lasers and rocket launchers, foot and vehicle maneuvers and sniper operations, with assistance from US Army and USAF operators .. Admin and control personnel would be present within each military range being utilized during operations .. air and ground training with inert munitions within the MHAFB complex".

This raises many questions. Since the Idaho National Guard uses the Boise Airport, does that make the Boise airport "an approved military airport"? If so, will Boise residents face incessant noise during this exercise from all the different types of War Planes that may be involved? Won't this be like the Urban CAS/War game EA which was stuck down inc out for its lack of NEPA?

While the Air Force's extremely harmful Idaho Urban War Game proposal has been struck down in federal court, will part of these Singapore "exercises" include Urban War like ground and air-based military personnel infesting Boise and other Idaho towns? Will it be justified by the AF because those actions were 'approved" in a military document even though that document is now overturned? We don't trust the military not to twist words, and to deceive us, given MHAFB's track record in Idaho.

WHAT levels of noise and disturbance will 1300 additional personnel and all the War Plane noise, use of chaff, flares, lasers, etc from who knows how many OTHER planes such as F-35s or Growlers from all over and whatever else will be involved - inflict on wildlife, recreational activities and other public values across the Owyhee Canyonlands and the tri-state region where the military airspace sprawls? Plus there are flight routes (MTRs) and a small airspace range in the Boise Forest country too.

Just what will the Army people be doing? Will this also involve the Orchard Training area in the Snake River Birds of Prey Area?

We recall that 3 or 4 years ago the Air Force conducted an alarming little-publicized EA that authorized blocking off Highway 78 and the Bruneau Desert road for military War maneuvers south of Bruenau, and scrambling GPS's and other actions - including for "convoy training". This all sounds like "convoy training" and much more. is that the case?

It is outrageous to sacrifice the US's public lands and our wildlife for War Games that benefit a foreign military - no matter how many Singapore $$$ pour in to keep Mountain Home pawn shops in business.

We urge you to quickly abandon this scheme. There is no need for it.

Katie Fite

WildLands Defense

PO Box 125

Boise ID 83701

City of Boise

From: Kathy Griesmyer <kgriesmyer@cityofboise.org>
Sent: Tuesday, December 15, 2020 9:25 AM
To: SHAVER, NOELLE C GS-12 USAF ACC 366 A6 7/A7IE <noelle.shaver@us.af.mil>
Subject: [Non-DoD Source] City of Boise response re: EA Proposed Forging Sabre Biennial Exercises

Ms. Shaver –

Thank you for reaching out to the City of Boise and for providing us the opportunity to respond to your Environmental Assessment regarding the proposed forging Sabre biennial exercises at the Mountain Home Air Force Base.

Upon reviewing the described the proposal, it does not appear to have an impact on Boise and therefore we have no objection to the proposed exercises. Moving forward, we would like to be kept on the list to provide feedback on future environmental studies.

If you any questions about our position, please do not hesitate to reach out. My contact information is listed below.

Thanks,
Kathy

Kathy Griesmyer
Government Affairs Director
Office of the Mayor
Office: (208) 972-8522
Cell: (208) 890-3800
kgriesmyer@cityofboise.org
cityofboise.org

Creating a city for everyone.

Owyhee County Board of Commissioners

OWYHEE COUNTY BOARD OF COMMISSIONERS
COURTHOUSE P.O. BOX 128 MURPHY, ID 83650-0128
TELEPHONE (208) 495-2421

District 1 – Chairman – Jerry Hoagland – P.O. BOX 128 MURPHY, ID 83650-0128
District 2 – Kelly Aberasturi – P.O. BOX 128 MURPHY, ID 83650-0128
District 3 – Joe Merrick – P.O. BOX 128 MURPHY, ID 83650-0128

December 7, 2020

Ms. Noelle Shaver
366 FW A 7IE,
1100 Liberator Street
Mountain Home AFB, ID 83648

Re: Owyhee County Comment on Forging Sabre Exercise

This document will be delivered electronically to noelle.shaver@us.af.mil and by US Mail as addresssed

Dear Ms. Shaver:

We provide this comment in response to Ms. Robertson's November 19, 2020 letter and do so in support of the proposed exercise plan.

Owyhee County has been a long-time supporter of our military and of the training and exercising that is at the heart of an effective military force. We want our military service members to be well prepared for any and all of the challenges they may face in defense of our people and our nation.

We also recognize that it is essential for US Military Forces to train with our partners from other nations as that is how we fight in current war situations and it is undoubtedly how we will fight in future conflicts.

We fully support the plan outlined in your letter in regard to modifications of structures located on the base and the temporary increase of personnel required for the exercises. We also support the proposed actions on lands within the range complex within Owyhee County.

As the exercise plan becomes more developed and specific, we would like to be kept apprised of those specifics. We do on occasion get questions and comments from our citizens in regard to

actions on the range complex and having as much information as possible allows us to accurately reply to queries.

Sincerely,

Jerry L. Hoagland
Chairman

Approved via Zoom
Kelly Aberasturi
Commissioner

Joe Merrick
Commissioner

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E

Supplemental Information for Resource Assessments

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Appendix E: Supplemental Information for Resource Assessments

This appendix continues with acronym and abbreviations that have been used in the main volume of the document. See inside cover sheet for acronyms and abbreviations. References cited in this appendix are included in **Section 6: References** of the main document.

E.1. Resources Not Carried Forward for Analysis

Based on known information for the construction and preparation activities and temporary increases in RSAF personnel associated with the Proposed Action, the rationale for not conducting analyses on airspace, land use, utilities and infrastructure, geological resources, transportation, and environmental justice resources is as follows:

Airspace. The construction, preparation, and personnel increases associated with the Proposed Action do not include any proposals for new or permanently reconfigured airspace, nor do they include changes to the manner in which the existing airspace is used. Under the Proposed Action, all aircraft would conduct operations within existing airspace and training areas currently authorized for the proposed operations. NOTAMs would be issued in advance of the training to provide awareness and enable flight planning by civilian users in the region. Therefore, impacts on airspace management and users are not expected.

Land Use. The Proposed Action does not include any proposed changes to existing land use at MHAFB or within the confines of MHRC, UTTR, OCTC. All proposed activities, including aircraft operations and munitions use, would take place within areas currently authorized, utilized, and/or previously analyzed for the same activities. All proposed construction and facility modifications would take place at MHAFB within the existing developed cantonment and airfield areas. Impacts on land use from aircraft operations are not expected as noise from operations within the Military Training Routes and Military Operations Areas would be indistinguishable from current conditions and would be completely compatible with all land uses. Therefore, impacts on land use are not expected.

Utilities and Infrastructure. The Proposed Action would not require upgrades or additions to utilities and infrastructure to accommodate the proposed facility additions and renovations. The total number of installation personnel under the Proposed Action would be consistent with the historical population of the installation. Therefore, perceptible increases or changes to use of on- or off-installation utilities and infrastructure are not anticipated. The Proposed Action does not include any changes to infrastructure or utilities use at MHRC, Boise Airport, UTTR, or OCTC. Therefore, impacts on utilities and infrastructure are not expected.

Geology**.** The Proposed Action would include construction only in developed and maintained areas of MHAFB, and no construction would take place at MHRC. Any excavation to support construction of new facilities would occur within developed areas and the surface soils and would not require disturbance of the bedrock. All proposed construction would incorporate use of erosion and sediment control BMPs in accordance with USAF guidance and an Erosion and

Sediment Control Plan to be developed for the project, and adhere to the requirements of the installation's SWPPP. The Proposed Action would not temporarily or permanently disturb the geology beneath the surface soils. The lithology (i.e., the character of a rock formation); stratigraphy (i.e., the layering of sedimentary rocks), topography (i.e., the general shape and arrangement of a land surface), geological structures that control groundwater quality, distribution of aquifers and confining beds, and groundwater availability would not be disturbed by any component of the Proposed Action. Therefore, impacts on geological resources are not expected.

Transportation. The Proposed Action would not include construction or modification of any roads or transportation networks. The total number of installation personnel under the Proposed Action would be less than the historic population of the installation and the existing transportation network is capable of supporting this population size, as noted in the *2007 Final Environmental Assessment for Republic of Singapore Air Force F-15SG Beddown, Mountain Home AFB*. Therefore, the Proposed Action identified in this EA would not have the potential to adversely impact traffic patterns within and access to MHAFB. Therefore, impacts on transportation networks on installation or within the community are not expected.

Environmental Justice. Under the Proposed Action, changes in noise levels represent the only possible factor relevant to potential environmental justice impacts. However, no impacts on environmental justice communities are anticipated because no residents live within 800 feet of the proposed construction sites, and areas immediately surrounding the installation and underlying associated SUA where aircraft would be operated are unoccupied or are sparsely occupied. As the noise analysis demonstrates, construction noise would be within the installation's property boundary and would be conducted in the context of an active USAF installation where aircraft and other types of noise are typical. Noise levels around the installation and under the training airspace would be indistinguishable from current conditions (see **Section 3.2.2** for additional information on noise impacts). Low altitude training flights would generally occur within installation boundaries or restricted areas where similar flight activities already occur. MRTT transit flights between the installations and Boise Airport would be few (13 take-offs and landings over a two-week training period), short in duration (approximately 20 minutes per leg), and once leaving Boise Airport departure/landing zones, conducted at an altitude too high for aircraft noise to appreciably affect underlying communities. Noise impacts from Heron-1 UAS transit flights would be negligible because the Heron-1 engine generates noise levels that are approximately half of those generated by a small, single-engine manned aircraft (see details in **Appendix B**). The Heron-1 UAS transit flights would be relatively few (30 take-offs and landings total over a two-week training period), short in duration (approximately 15 minutes per flight), and between take-off and landing from MHAFB, conducted at altitudes too high for noise to appreciably change the existing sound environment. Additionally, flight activities would end each day at 10:30 PM for the duration of the proposed exercises (see **Section 2.1**), reducing the potential for noise impacts on sleep.

E.2. Resources Analyzed in the EA

E.2.1. Noise

E.2.1.1. Definition of the Resource

Sound is a physical phenomenon consisting of vibrations that travel through a medium, such as air, and are sensed by the human ear. Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise intrusive. Human response to noise varies depending on the type and characteristics of the noise, distance between the noise source and the receptor, receptor sensitivity, and time of day. Noise is often generated by activities essential to a community's quality of life, such as aircraft operations, construction, or vehicular traffic.

Sound varies by both intensity and frequency. Sound pressure level, described in dB, is used to quantify sound intensity. The dB is a logarithmic unit that expresses the ratio of a sound pressure level to a standard reference level. Hertz are used to quantify sound frequency. The human ear responds differently to different frequencies. "A-weighing", measured in dBA, approximates a frequency response expressing the perception of sound by humans. Sounds encountered in daily life and their sound levels are provided in **Table E-1**.

Table E-1. Common Sounds and Their Levels

Outdoor	Sound Level (dBA)	Indoor
Jet flyover at 1,000 feet	100	Rock band
Gas lawnmower at 3 feet	90	Food blender at 3 feet
Downtown (large city)	80	Garbage disposal
Heavy traffic at 150 feet	70	Vacuum cleaner at 10 feet
Normal conversation	60	Normal speech at 3 feet
Quiet urban daytime	50	Dishwasher in next room
Quiet urban nighttime	40	Theater, large conference room

Source: Harris 1998
Key: dBA – A-weighted decibel

The sound pressure level noise metric describes steady noise levels, although very few noises are, in fact, constant; therefore, additional noise metrics have been developed to describe noise including:

- Maximum Sound Level (L_{max}) – L_{max} is the maximum sound level in decibels.
- Equivalent Sound Level (L_{eq}) – L_{eq} is the average sound level in decibels of a given event or period of time.
- Sound Exposure Level (SEL) – SEL is a measure of the total energy of an acoustic event. It represents the level of a 1-second-long constant sound that would generate the

same energy as the actual time-varying noise event such as an aircraft overflight. SEL provides a measure of the net effect of a single acoustic event, but it does not directly represent the sound level at any given time.

- Day-night Sound Level (DNL) – DNL is the average sound energy in a 24-hour period with a penalty added to the nighttime levels. Due to the potential to be particularly intrusive, noise events occurring between 10:00 p.m. and 7:00 a.m. are assessed a 10 dB penalty when calculating DNL. DNL is a useful descriptor for aircraft noise because: (1) it averages ongoing yet intermittent noise, and (2) it measures total sound energy over a 24-hour period. DNL provides a measure of the overall acoustical environment, but as with SEL, it does not directly represent the sound level at any given time. For well-distributed sound, L_{eq} is approximately 6.4 dBA lower than DNL.

The military noise environment typically consists primarily of three types of noise: transportation noise from aircraft and vehicles, noise from firing at small-arms ranges, and impulsive noise from large-caliber weapons firing and demolition operations. Army Regulation 200-1 defines recommended noise limits from ARNG activities for established uses of land with respect to environmental noise (**Table E-2**). Three noise zones are defined in the regulation:

- Noise Zone I: Relatively quiet noise environment. Acceptable for housing, schools, medical facilities, and other noise-sensitive land uses.
- Noise Zone II: Moderately loud noise environment. Normally not recommended for housing, schools, medical facilities, and other noise-sensitive land uses.
- Noise Zone III: Loud noise environment. Not recommended for housing, schools, medical facilities, and other noise-sensitive land uses.

Table E-2. Noise Limits and Noise Zones for Land Use Planning

Noise Zone	General Level of Noise	Small-Arms (dBP)	Aircraft (ADNL)	Large-Caliber Weapons and Demolition (CDNL)	Recommended Uses
I	Low	< 87 dBP	< 65 dBA	< 62 dBC	noise-sensitive land uses acceptable
II	Moderate	87–104 dBP	65–75 dBA	62–70 dBC	noise-sensitive land uses normally not recommended
III	High	> 104 dBP	> 75 dBA	> 70 dBC	noise-sensitive land uses not recommended

Source: US Army 2007
Key: ADNL- A- weighted day night sound level; CDNL - C-weighted day night sound level

The use of explosives and large-caliber weapons are common causes of complaint among people living near military installations. Community annoyance due to noise is generally assessed by averaging levels over a protracted period using DNL. However, this approach can be misleading because it does not assess community noise effects due to infrequent, yet loud, impulsive noise events. For example, for a demolition range at which several hundred charges

are detonated each year, peak sound levels can exceed 140 dB in areas where annual DNL values indicate that noise levels are recommended (i.e., within the Noise Zone I) for residential land use. Peak noise contours provide the absolute maximum sound level for the loudest acoustical event, not an average over several events or over a long period like the DNL. Although not a good descriptor of the overall noise environment like the DNL, peak levels better indicate the possibility of complaints among people living near the boundary of an installation after an individual event. **Table E-3** outlines risk of noise complaints guidelines using peak noise levels for impulsive noise.

Table E-3. Risk of Noise Complaints by Level of Noise

Risk of Noise Complaints	General Description of Individual Demolition Event	Large-caliber Weapons and Demolition (dBP)
Low	Audible and distant	< 115 dBP
Medium	Clearly audible	115–130 dBP
High	Loud	130–140 dBP

Source: US Army 2007

E.2.1.2. Regulatory Overview

The Noise Control Act of 1972 (Public Law [PL] 92-574) directs federal agencies to comply with applicable federal, state, and local noise control regulations. Neither the State of Idaho nor Elmore County have noise control regulations, but the City of Mountain Home does maintain a nuisance noise ordinance which exempts construction activities between 8:00 a.m. and 10:00 p.m. (City of Mountain Home Code §7 Noise).

E.2.2. Air Quality

E.2.2.1. Definition of the Resource

Air pollution is the presence in the atmosphere of one or more contaminants (e.g., dust, fumes, gas, mist, odor, smoke, vapor) such as to be injurious to human, plant, or animal life. Air quality as a resource incorporates several components that describe the levels of overall air pollution within a region, sources of air emissions, and regulations governing air emissions. The following sections include a discussion of the existing conditions, a regulatory overview, and a summary of climate and greenhouse gases.

E.2.2.2. Regulatory Overview

USEPA Region 10 and IDEQ regulate air quality in Idaho. The Clean Air Act (CAA) (42 United States Code [USC] § 7401-7671q), as amended, assigns USEPA responsibility to establish the primary and secondary NAAQS (40 CFR § 50) that specify acceptable concentration levels of six criteria pollutants: particulate matter (measured as both particulate matter less than 10 microns in diameter [PM_{10}] and particulate matter less than 2.5 microns in diameter [$PM_{2.5}$]), sulfur dioxide (SO_2), carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), and lead (Pb) (see **Table E-4)**.

Short-term NAAQS (1-, 8-, and 24-hour periods) have been established for pollutants contributing to acute health effects, while long-term NAAQS (annual averages) have been established for pollutants contributing to chronic health effects. Each state has the authority to adopt standards stricter than those established under the federal program. The State of Idaho has accepted the federal standards.

Table E-4. National Ambient Air Quality Standards

Pollutant	Air Quality Standard	
	Level	Averaging Period
CO		
1-hour (ppm)	35	Not to be exceeded more than once per year
8-hour (ppm)	9	
NO_2		
1-hour (ppb)	100	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
O_3		
8-hour (ppm)	0.070	3-year average of the fourth highest daily maximum
SO_2		
1-hour (ppm)	75	98th percentile, averaged over 3 years
3-hour (ppb)	0.5	Not to be exceeded more than once per year
$PM_{2.5}$		
24-hour ($\mu g/m^3$)	35	98th percentile, averaged over 3 years
Annual mean ($\mu g/m^3$)	12	Averaged over 3 years
PM_{10}		
24-hour ($\mu g/m^3$)	150	Not to be exceeded more than once per year over 3 years
Lead (Pb)		
Rolling 3-month average ($\mu g/m^3$)	0.15	Not to be exceeded

Source: USEPA 2020a
Key: ppm - parts per million; ppb - parts per billion; $\mu g/m^3$ - micrograms per cubic meter; Pb – lead; CO - carbon monoxide; PM_{10} – particulate matter less than 10 microns; $PM_{2.5}$ – particulate matter less than 2.5 microns; NO_2 – nitrous dioxide; SO_2 – sulfur dioxide; O_3 - ozone

Climate and Greenhouse Gases. Historically, Mountain Home, Idaho's, average high temperature is 91.7 degrees Fahrenheit (°F) in the hottest month of July, and the average low temperature is 20.3°F in the coldest month of December. Mountain Home has average annual precipitation of 10.6 inches per year. The wettest month of the year is December with an average rainfall of 1.4 inches (Idcide 2020). EO 13693, Planning for Federal Sustainability in the Next Decade, outlines policies intended to ensure that federal agencies evaluate climate-

change risks and vulnerabilities and manage the short- and long-term effects of climate change on their operations and mission. The EO specifically requires agencies within the DoD to measure, report, and reduce their GHG emissions from both their direct and indirect activities.

E.2.3. Cultural Resources

E.2.3.1. Definition of the Resource

Cultural resources are sites, buildings, structures, objects or districts considered important to a culture, subculture, or community for scientific, traditional, religious, or other purposes. They include archaeological resources, historic architectural or engineering resources, and traditional cultural resources.

The NHPA defines historic properties as buildings, structures, sites, districts, or objects listed in or eligible for listing in the NRHP. Historic properties are generally 50 years of age or older, are historically significant, and retain sufficient integrity to convey their historic significance. Archaeological resources comprise areas where human activity has measurably altered the earth or where deposits of physical remains are found (e.g., projectile points and bottles) but standing structures do not remain. Architectural resources include standing buildings, structures (such as bridges and dams), landscapes, and districts composed of one or more of those resource types. Generally, architectural resources must be more than 50 years old to warrant consideration for the NRHP; resources constructed more recently may meet the criteria for designation if they are of exceptional importance or have the potential to gain significance in the future.

Resources of traditional, religious, or cultural significance can include archaeological resources, sacred sites, structures, districts, prominent topographic features, habitat, plants, animals, or minerals considered essential for the preservation of traditional culture (NPS 1997).

MHAFB is consulting with the SHPO and other identified consulting parties regarding compliance with Section 106 of the NHPA for this Proposed Action. MHAFB is also conducting government-to-government consultation with Indian Tribes in accordance with the NHPA and EO 13175, *Consultation and Coordination with Indian Tribal Governments* to identify sites of traditional, religious, or cultural significance to Tribes. The USAF sent letters on November 20, 2020 describing the undertaking and requesting participation in government-to-government consultation to the Shoshone-Paiute Tribes of Duck Valley Indian Reservation, Shoshone Bannock Tribes, Paiute-Shoshone Tribes of Fort McDermitt, Burns Paiute Tribe, and Northwestern Band of the Shoshone Nation. To date, no responses have been received.

E.2.3.2. Regulatory Overview

Several federal laws and regulations govern protection of cultural resources, including the NHPA (1966), the Archeological 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). In addition, MHAFB is required to comply with USAF regulations and instructions, including the Mountain Home Air Force Base Integrated Cultural Resources Management Plan (MHAFB 2020b); AFMAN 32-7003,

Environmental Conservation; and Department of the Air Force Instruction 90-2002, *Interactions with Federally Recognized Tribes*.

E.2.4. Health and Safety

E.2.4.1. Definition of the Resource

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. Health and safety addresses workers' and the public's health and safety during a specific activity such as construction, military operations, or mechanical operation.

E.2.4.2. Regulatory Overview

There are a number of DoD and USAF documents that outline construction site safety requirements that aim to reduce the risks of illness, injury, death, and property damage. The health and safety of on-site military and civilian personnel is also safeguarded by the federal OSHA, AFOSH, USEPA, and state and regional occupational health and safety agencies. Standards specified in documents and by agencies include the amount and type of training required for participation in industrial and construction activities, the required use of PPE, administrative controls, engineering controls, and permissible exposure limits for workplace stressors. The following documents provide guidelines for the health and safety of personnel:

- ***AFI 91-202 The US Air Force Mishap Prevention Program*** establishes a deputy chief of staff logistics, engineering and force protection, whose job it is to ensure that USAF civil engineering procedures, operations, technical publications, and designs for new construction meet or exceed OSHA and AFOSH guidance, as well as other criteria. AFI 91-202 also requires installation civil engineers to ensure an environmental review and coordination of new construction, facility modification projects, or work requests with installation safety, fire protection, environmental management and bioenvironmental engineering officials (USAF 2020c).

- ***AFI 91-207 The US Air Force Traffic Safety Program*** established traffic safety programs and vehicle operator requirements for on-installation traffic and transport activities. Some protections include the use of all vehicle safety features such as seatbelts and lighting/signaling components, use of highly visible clothing, and safe traffic management procedures for construction actions (USAF 2019b).

- ***AFMAN 91-203 Air Force Occupational Safety, Fire, and Health Standards*** provides specific work procedures for a safe and healthful workplace and details safety components of construction work, including but not limited to, civil engineering activities, communications systems, motor vehicles operations and maintenance, materials handling, mishap prevention signage, welding, confined spaces, flammable and combustible materials, pipe systems labeling, electrical safety, fire prevention, and tools and machinery operations (USAF 2018b).

Health and safety hazards pertaining to the Proposed Action may include transportation, construction, maintenance and repair activities, high dB of noise, or potential fire hazards.

Proper operation, maintenance, and repair of vehicles, equipment, and facilities can greatly reduce health and safety risks. Contractors and personnel who perform construction or demolition activities are required to follow ground safety regulations and participate in worker compensation programs. Construction activities must be completed in a manner that does not pose any risk to workers or personnel, and all safety standards must be met.

The CAA Amendments of 1990, Section 112r, regulate chemical accident prevention at facilities using substances that pose the greatest risk of harm from accidental releases. These regulations were built upon existing industry codes and standards and require companies of all sizes that use certain listed regulated flammable and toxic substances to develop a risk management program. The Emergency Planning and Community Right-to-Know Act was passed in 1986 in response to concerns regarding the environmental and safety hazards posed by the storage and handling of toxic chemicals. These requirements covered emergency planning and "Community Right-to-Know" reporting on hazardous and toxic chemicals. The Emergency Planning and Community Right-to-Know Act provisions help increase the public's knowledge and access to information on chemicals at individual facilities, their uses, and releases into the environment. States and communities, working with facilities, can use the information to improve chemical safety and protect public health and the environment.

E.2.5. Socioeconomics

E.2.5.1. Definition of the Resource

Socioeconomics refers to the basic attributes and resources associated with the human environment and the economy. There are several indicators of economic conditions for a specific geographic area and they include such attributes as demographics, employment, and economic impact. Demographics and employment data help identify population levels and population-level fluctuations, and can be used to identify a region’s characteristics.

This analysis considers impacts beyond the physical project area where construction and operation would occur; the term ROI is used to describe the complete geographic scope of potential consequences for socioeconomics. The ROI is identified as MHAFB and Elmore and Ada counties, whose regional economies are influenced by the economic activity at MHAFB. Information regarding population and economic activity, including employment and housing, for Elmore and Ada counties is compared with the state of Idaho data to characterize baseline conditions and regional trends. Because there would be no increases in permanent personnel for the Proposed Action, this socioeconomics section will not discuss community components such as education or public services.

E.2.5.2. Regulatory Overview

Under NEPA (42 USC § 4321), a federal lead agency must consider social and economic effects if they are related to a proposed project’s natural or physical effects. The CEQ Regulations for *Implementing the Procedural Provisions of the National Environmental Policy Act* (40 CFR §§ 1500–1508) defined ‘effects’ to include economic and social factors, whether direct or indirect (40 CFR § 1508.8).

E.2.6. Biological Resources

E.2.6.1. Definition of the Resource

Biological resources include native or naturalized plants and animals and the habitats (e.g., grasslands, forests, wetlands) in which they exist. Protected and sensitive biological resources include ESA-listed species (threatened or endangered), those proposed for ESA-listing as designated by the USFWS (terrestrial and freshwater organisms), and migratory birds. Migratory birds are protected species under the Migratory Bird Treaty Act (MBTA). Sensitive habitats include those areas designated or proposed by USFWS as critical habitat protected by the ESA, and as sensitive ecological areas designated by state or other federal rulings. Sensitive habitats also include wetlands, plant communities that are unusual or limited in distribution, and important seasonal use areas for wildlife (e.g., migration routes, breeding areas, crucial summer and winter habitats).

E.2.6.2. Regulatory Overview

The ESA (16 USC § 1531 et seq.) establishes a federal program to protect and recover imperiled species and the ecosystems upon which they depend. The ESA requires federal agencies, in consultation with USFWS, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species. Under the ESA, "jeopardy" occurs when an action is reasonably expected, directly or indirectly, to diminish numbers, reproduction, or distribution of a species so that the likelihood of survival and recovery in the wild is appreciably reduced. An "endangered species" is defined by the ESA as any species in danger of extinction throughout all or a significant portion of its range. A "threatened species" is defined by the ESA as any species likely to become an endangered species in the foreseeable future. The ESA also prohibits any action that causes a "take" of any listed animal. "Take" is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." Listed plants are not protected from take, although it is illegal to collect or maliciously harm them on federal land.

Critical habitat is designated if USFWS determines that the habitat is essential to the conservation of a threatened or endangered species. Federal agencies must ensure that their activities do not adversely modify designated critical habitat to the point that it will no longer aid in the species' recovery.

The MBTA of 1918 (16 USC 703–712), as amended, and EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, require federal agencies to minimize or avoid impacts on migratory birds. Unless otherwise permitted by regulations, the MBTA makes it unlawful to (or attempt to) pursue, hunt, take, capture, or kill any migratory bird, nest, or egg. Federal agencies with activities that could have measurable negative impacts on migratory birds are directed by EO 13186 to develop and implement a memorandum of understanding with USFWS to promote the conservation of migratory bird populations.

Bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) are protected under the Bald and Golden Eagle Protection Act, which prohibits the "take" of bald or golden

eagles in the United States without a 50 CFR § 22.26 permit. the Bald and Golden Eagle Protection Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb." For purposes of these guidelines, "disturb" means "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause: (1) injury to an eagle; (2) a decrease in its productivity by substantially interfering with normal breeding, feeding, or sheltering behavior; or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death, or nest abandonment.

The Federal Noxious Weed Act (PL 93-629) mandates control of noxious weeds by limiting possible weed seed transport from infested areas to noninfested sites. EO 13112, *Invasive Species* and EO 13571, *Safeguarding the Nation from the Impacts of Invasive Species* requires all federal agencies to prevent the introduction of invasive species; provide for their control; and minimize their economic, ecological, and human health impacts. Under EO 13112, installations shall not, to the extent practicable, authorize, fund, or carry out management actions that are likely to cause the introduction or spread of invasive species.

E.2.7. Water Resources

E.2.7.1. Definition of the Resource

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 MHAFB's location in Idaho include groundwater, surface water, floodplains, wetlands, and geothermal reservoir (part of the earth crust with hot water or steam). Evaluation of water resources examines the quantity and quality of the resource and its demand for various purposes.

Groundwater. Groundwater is water that exists in the saturated zone beneath the ground surface. It is an essential resource that functions to recharge surface water and can be used for drinking, irrigation, and industrial processes. Groundwater typically can be described in terms of depth from the surface, aquifer or well capacity, aquifer properties, water quality, recharge rate, and surrounding geologic formations.

The Elmore Ground Water Quality Improvement and Drinking Water Source Protection Plan outlines information for decision making associated with water quality-related activities and provides strategies for local land management entities to protect water supplies in Elmore County. Additional to measures implemented per the county's plan, MHAFB prepared and implements a Drinking Water Source Protection Plan that prevents potential contamination sources from being located over critical groundwater recharge areas and well head protection areas.

Surface Water and Stormwater. Surface water resources generally consist of lakes, rivers, streams, and wetlands. Surface water is important for its contribution to the economic, ecological, recreational, and human health of a community or locale.

Stormwater is an important component of surface water systems because of its potential to introduce sediment and other contaminates 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 has 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.

All construction sites are required to meet NPDES stormwater permit non-numeric effluent limitations and design, install, and maintain effective erosion and sedimentation controls, including the following:

- control stormwater volume and velocity to minimize erosion
- control stormwater discharges, including both peak flow rates and total stormwater volume
- provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal, and maximize stormwater infiltration where feasible (e.g., silt fences)
- minimize erosion at outlets and downstream channel and stream bank erosion
- minimize soil compaction and preserve topsoil where feasible.

In addition, construction site owners and operators that disturb 1 or more acres of land are required to use BMPs to ensure that soil disturbed during construction activities does not pollute nearby water bodies. Construction site owners and operators that disturb 10 or more acres of land are required to monitor discharges to ensure compliance with effluent limitations. Permittees can select management practices or technologies that are best suited for site-specific conditions. Construction activities disturbing a total of 20 or more acres at one time must comply with the numeric effluent limitation for turbidity in addition to the non-numeric effluent limitations. Construction or demolition activities that disturb 20 or more acres would need to comply with the maximum daily turbidity limitation of 280 nephelometric turbidity units as outlined in the Clean Water Act (CWA) Final Rule. Turbidity limitations and monitoring requirements could be avoided if construction or demolition activities are phased to reduce acreages disturbed simultaneously to less than 20 and 10 acres, respectively.

Floodplains. Floodplains are areas of low-level ground present along rivers, stream channels, or coastal waters. The living and nonliving parts of natural floodplains interact with each other to create dynamic systems in which each component helps to maintain the characteristics of the environment that support it. Floodplain ecosystem functions include natural moderation of floods, flood storage and conveyance, groundwater recharge, nutrient cycling, water quality maintenance, and diversification of plants and animals. Floodplains provide a broad area to spread out and temporarily store floodwaters. This reduces flood peaks and velocities and the potential for erosion. In their natural vegetated state, floodplains slow the rate at which the incoming overland flow reaches the main water body (FEMA 2020).

***Wetlands*.** 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. Jurisdictional wetlands must meet three criteria; hydric vegetation, hydrology and soils. Wetlands that do not meet jurisdictional criteria are protected as a subset of the waters of the United States under Section 404 of the CWA. The U.S. Army Corps of Engineers (USACE) defines wetlands as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (USACE 1987).

E.2.7.2. Regulatory Overview

Groundwater. The IDEQ is responsible for protecting the quality of groundwater in Idaho and relies on a combination of programs to protect groundwater from pollution, clean up degraded groundwater, and monitor and assess groundwater quality.

Surface Water and Stormwater. Waters of the United States are defined within the CWA, as amended, and jurisdiction is addressed by USEPA and USACE. Jurisdictional waters of the United States are areas that convey water, exhibit an "ordinary high-water mark," and do not meet the three parameter criteria for wetlands. USACE recognizes three distinct types of drainage features: ephemeral drainages, intermittent drainages, and perennial drainages. Section 404 of the CWA authorizes USACE to issue permits for the discharge of dredge or fill into waters of the United States, including wetlands. The CWA also mandated the NPDES program, which regulates the discharge of point (end of pipe) and nonpoint (stormwater) sources of water pollution and requires a permit under Section 402 for any discharge of pollutants into waters of the United States. Per Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity, including but not limited to constructing or operating facilities that could result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the state in which the discharge originates or will originate.

Management and oversight of the NPDES program in Idaho is in the process of being phased over from the USEPA to IDEQ. Beginning July 1, 2021, permits for stormwater discharges will be under the Idaho Pollutant Discharge Elimination System permit application process.

Construction activities such as clearing, grading, trenching, and excavating disturb soils and sediment. If not managed properly, disturbed soils and sediments can easily be washed into nearby water bodies during storm events, where water quality is reduced. Section 438 of the EISA established stormwater design requirements for federal construction projects that disturb a footprint of greater than 5,000 square feet of land. EISA Section 438 requirements are independent of stormwater requirements under the CWA. 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 shall be modeled or calculated using recognized tools and must include site-specific factors such as soil type, ground cover, and ground slope. Site design shall

incorporate stormwater retention and reuse technologies such as bioretention areas, permeable pavements, cisterns/recycling, and green roofs to the maximum extent technically feasible. Post-construction analyses shall be conducted to evaluate the effectiveness of the as-built stormwater reduction features. These regulations were incorporated into applicable DoD United Facilities Criteria in April 2010, which stated that low impact development features would need to be incorporated into new construction activities to comply with the restrictions on stormwater management promulgated by EISA Section 438. 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* (USEPA 2009).

Floodplains. The 1977 EO 11988 provides guidance on floodplain management. This EO instructs federal agencies to ensure that an actions potential effects in a floodplain are evaluated and any procedures or existing regulations amended appropriately. Additionally, the federal agency's budgetary requests and planning programs need to reflect consideration of floodplain and flood hazard management. The AFMAN 32-7003, *Environmental* Conservation*,* provides guidance for floodplain management on Air Force properties as a sub-analysis of the NEPA process.

Wetlands. Wetlands are a special category of waters of the United States and are subject to regulatory authority under Section 404 of the CWA and EO 11990, *Protection of Wetlands*. EO 11990 requires federal agencies minimize or avoid the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. Jurisdictional wetlands are those defined by the USACE and USEPA as meeting all the criteria defined in USACE's *Wetlands Delineation Manual* (USACE 1987) and fall under the jurisdiction of USACE.

Section 401 of the CWA requires state certification for any permit or license issued by a federal agency for an activity that may result in a discharge into waters of the United States. This requirement allows each state to have input into federally approved projects that may affect its waters (rivers, streams, lakes, and wetlands) and to ensure the projects will comply with state water quality standards and any other water quality requirements of state law. Any Section 401 certification in Idaho also ensures that the project will not adversely impact impaired waters (waters that do not meet water quality standards) and that the project complies with applicable water quality improvement plans (total maximum daily loads). The IDEQ issues and enforces CWA Section 401 certification for construction actions requiring an NPDES permit.

E.2.7.3. Supporting Information

According to the *2007 MHAFB Wetland Delineation and Request for Jurisdictional Determination Report*, MHAFB had three Palustrine Emergent Marsh wetlands totaling 1.66 acres. None of the three wetlands noted in this report qualified as jurisdictional wetlands. USACE Arid West Supplement requires three indicators be present for jurisdictional designation: hydrophytic vegetation, hydric soils, and wetland hydrology. There were also two playas, which lack defined vegetation, totaling 2.63 acres recorded (USACE 2007).

The non-jurisdictional wetlands were all associated with installation ditches. Wetland 1 is located along the northern part of MHAFB along 0.18-acres of the McCalley Ditch. The wetland boundaries were delineated based on topography, hydrology, and wetland vegetation, which consists of one emergent vegetative layer. The soil classification is Minidoka-Minveno silt loam, with saturation within 5 inches of the soil. Wetland 2 is 0.04-acres on the east end of the Burn Ditch and also contains one emergent vegetative layer, soils are mapped as Bahem silt loam, and there are 3 inches of surface inundation from stormwater and other runoff sources. However, Wetland 3 with 1.44-acres along Hush House Ditch, was redesigned to facilitate water movement, and the wetland vegetation was removed during the redesign process; this feature is no longer defined as a wetland (USACE 2007, MHAFB 2019a).

The 2019 Integrated Natural Resources Management Plan describes one playa, and states there are 11 “very small playas” that are not further described. Playa 2 is less than 0.01-acre and is along the western side of MHAFB, was dry when investigated and had less than three percent of the 0.01-acre area which was vegetated. None of the vegetation included wetland species (MHAFB 2019a).

E.2.8. Hazardous Materials and Wastes

E.2.8.1. Definition of the Resource

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 § 173.

E.2.8.2. Regulatory Overview

Hazardous wastes are defined by the 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.” Idaho Water Quality Standards, IDAPA 58.01.02, include requirements for hazardous and deleterious-materials storage, disposal, or accumulation adjacent to or in the immediate vicinity of state waters (IDAPA 58.01.02.800); the cleanup and reporting of oil-filled electrical equipment (IDAPA 58.01.02.849); hazardous materials (IDAPA 58.01.02.850); and used-oil and petroleum releases (IDAPA 58.01.02.851 and 852).

A toxic substance is a chemical or mixture of chemicals that may present an unreasonable risk of injury to health or the environment. Toxic substances are addressed separately from other hazardous substances. Toxic substances ACMs, LBP, and PCBs, which are typically found in building and utility infrastructure. USEPA is given the authority to regulate these substances by the Toxic Substances Control Act (15 USC § 53). USEPA has established that any material containing more than one percent asbestos by weight is considered an ACM. ACMs are generally found in building materials such as floor tiles, mastic, roofing materials, pipe wrap, and

wall plaster. USEPA implemented bans on various ACMs between 1973 and 1990. LBP was commonly used in building construction prior to its ban in 1978. PCBs are man-made chemicals that persist in the environment and were widely used in building materials (e.g., caulk) and electrical products prior to its ban in 1979.

Radon is a naturally occurring odorless and colorless radioactive gas found in soils and rocks that can lead to the development of lung cancer. Radon tends to accumulate in enclosed spaces, usually those that are below ground and poorly ventilated (e.g., basements). USEPA established a guidance radon level of 4 picocuries per liter in indoor air for residences, and radon levels above this amount are considered a health risk to occupants.

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 IRP and MMRP are components of the ERP. The IRP requires each DoD installation to identify, investigate, and clean up hazardous waste disposal or release sites. MMRP addresses 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).

F

ACAM Report

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Appendix F: Air Conformity Applicability Model (ACAM) Report

F1. ACAM REPORT

F.1.1 RECORD OF AIR ANALYSIS (ROAA)

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 Manual 32-7002, Environmental Compliance and Pollution Prevention; 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: MOUNTAIN HOME AFB
State: Idaho
County(s): Elmore
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: MHAFB Forging Sabre

c. Project Number/s (if applicable): MHAFB Forging Sabre

d. Projected Action Start Date: 1 / 2021

e. Action Description:

MHAFB Forging Sabre

f. Point of Contact:
Name: TLL
Title: x
Organization: x
Email: x
Phone Number: x

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the General Conformity Rule are:

_____ applicable
__X__ not applicable

Total net direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the start of the action through achieving "steady state" (i.e., net gain/loss upon action fully implemented) emissions. The ACAM analysis used the latest and most accurate emission estimation techniques available; all algorithms, emission factors, and methodologies used are described in detail in the USAF Air Emissions Guide for Air Force Stationary Sources, the USAF Air Emissions Guide for Air Force Mobile Sources, and the USAF Air Emissions Guide for Air Force Transitory Sources.

"Insignificance Indicators" were used in the analysis to provide an indication of the significance of potential impacts to air quality based on current ambient air quality relative to the National Ambient Air Quality Standards (NAAQSs). These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold for actions occurring in areas that are "Clearly Attainment" (i.e., not within 5% of any NAAQS) and the GCR *de minimis* values (25 ton/yr for lead and 100 ton/yr for all other criteria pollutants) for actions occurring in areas that are "Near Nonattainment" (i.e., within 5% of any NAAQS). These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutant is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQSs. For further detail on insignificance indicators see chapter 4 of the Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide, Volume II - Advanced Assessments.

The action's net emissions for every year through achieving steady state were compared against the Insignificance Indicator and are summarized below.

Analysis Summary:

2021

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.049	250	No
NOx	1.309	250	No
CO	11.514	250	No
SOx	0.008	250	No
PM 10	0.043	250	No
PM 2.5	0.040	250	No
Pb	0.000	25	No
NH3	0.060	250	No
CO2e	1057.3		

2022 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000	250	No
NOx	0.000	250	No
CO	0.000	250	No
SOx	0.000	250	No
PM 10	0.000	250	No
PM 2.5	0.000	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	0.0		

None of estimated annual net emissions associated with this action are above the insignificance indicators, indicating no significant impact to air quality. Therefore, the action will not cause or contribute to an exceedance on one or more NAAQSs. No further air assessment is needed.

TLL, x DATE

F.1.2. DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

1. General Information

- Action Location
Base: MOUNTAIN HOME AFB
State: Idaho
County(s): Elmore
Regulatory Area(s): NOT IN A REGULATORY AREA

- Action Title: MHAFB Forging Sabre

- Project Number/s (if applicable): MHAFB Forging Sabre

- Projected Action Start Date: 1 / 2021

- Action Purpose and Need:
MHAFB Forging Sabre

- Action Description:
MHAFB Forging Sabre

- Point of Contact
Name: TLL
Title: x
Organization: x
Email: x
Phone Number: x

- Activity List:

Activity Type		Activity Title
2.	Construction / Demolition	Construction and Renovation
3.	Personnel	Temporary Personnel

Emission factors and air emission estimating methods come from the United States Air Force's Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and Air Emissions Guide for Air Force Transitory Sources.

2. Construction / Demolition

2.1 General Information & Timeline Assumptions

- Activity Location
County: Elmore
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Construction and Renovation

- Activity Description:
30 Temporary Trailers
2 Temporary Clamshell Hangers
36 Temporary Shipping Containers (not included)
Minor Renovations (not included)

- Activity Start Date
Start Month: 1
Start Month: 2021

- Activity End Date
Indefinite: False
End Month: 12
End Month: 2021

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.072670
SO_x	0.001247
NO_x	0.422757
CO	0.520202
PM 10	0.016800

Pollutant	Total Emissions (TONs)
PM 2.5	0.016741
Pb	0.000000
NH_3	0.000429
CO_2e	120.7

2.1 Building Construction Phase

2.1.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2021

- Phase Duration
Number of Month: 6
Number of Days: 0

2.1.2 Building Construction Phase Assumptions

- General Building Construction Information
Building Category: Office or Industrial
Area of Building (ft^2): 15000
Height of Building (ft): 12
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

2.1.3 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	0.0845	0.0013	0.6033	0.3865	0.0228	0.0228	0.0076	128.82
Forklifts Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0293	0.0006	0.1458	0.2148	0.0056	0.0056	0.0026	54.462
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0407	0.0007	0.2505	0.3606	0.0112	0.0112	0.0036	66.890

- 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	000.316	000.002	000.241	003.506	000.009	000.008		000.023	00320.042
LDGT	000.378	000.003	000.413	004.709	000.011	000.010		000.024	00411.658
HDGV	000.691	000.005	001.080	015.443	000.024	000.021		000.044	00752.986
LDDV	000.131	000.003	000.136	002.381	000.004	000.004		000.008	00308.501
LDDT	000.266	000.004	000.387	004.046	000.007	000.006		000.008	00437.634
HDDV	000.538	000.013	005.426	001.822	000.169	000.155		000.029	01481.841
MC	002.411	000.003	000.857	013.650	000.027	000.024		000.054	00397.874

2.1.4 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 (ft^2)
BH: Height of Building (ft)
(0.42 / 1000): Conversion Factor ft^3 to trips (0.42 trip / 1000 ft^3)
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 (ft^2)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft^3 to trips (0.38 trip / 1000 ft^3)
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. Personnel

3.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Elmore
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Temporary Personnel

- Activity Description:
1300 Temporary Personnel

- Activity Start Date
Start Month: 6
Start Year: 2021

- Activity End Date
Indefinite: No
End Month: 9
End Year: 2021

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.976449
SO_x	0.006525
NO_x	0.886187
CO	10.993346
PM 10	0.026192

Pollutant	Total Emissions (TONs)
PM 2.5	0.023614
Pb	0.000000
NH_3	0.060015
CO_2e	936.6

3.2 Personnel Assumptions

- Number of Personnel
Active Duty Personnel: 1300
Civilian Personnel: 0
Support Contractor Personnel: 0
Air National Guard (ANG) Personnel: 0
Reserve Personnel: 0

- Default Settings Used: Yes

- Average Personnel Round Trip Commute (mile): 20 (default)

- Personnel Work Schedule
Active Duty Personnel: 5 Days Per Week (default)
Civilian Personnel: 5 Days Per Week (default)
Support Contractor Personnel: 5 Days Per Week (default)
Air National Guard (ANG) Personnel: 4 Days Per Week (default)
Reserve Personnel: 4 Days Per Month (default)

3.3 Personnel On Road Vehicle Mixture

- On Road Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	37.55	60.32	0	0.03	0.2	0	1.9
GOVs	54.49	37.73	4.67	0	0	3.11	0

3.4 Personnel Emission Factor(s)

- On Road Vehicle Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.316	000.002	000.241	003.506	000.009	000.008		000.023	00320.042
LDGT	000.378	000.003	000.413	004.709	000.011	000.010		000.024	00411.658
HDGV	000.691	000.005	001.080	015.443	000.024	000.021		000.044	00752.986
LDDV	000.131	000.003	000.136	002.381	000.004	000.004		000.008	00308.501
LDDT	000.266	000.004	000.387	004.046	000.007	000.006		000.008	00437.634
HDDV	000.538	000.013	005.426	001.822	000.169	000.155		000.029	01481.841
MC	002.411	000.003	000.857	013.650	000.027	000.024		000.054	00397.874

3.5 Personnel Formula(s)

- Personnel Vehicle Miles Travel for Work Days per Year

$VMT_P = NP * WD * AC$

VMT_P: Personnel Vehicle Miles Travel (miles/year)
NP: Number of Personnel
WD: Work Days per Year
AC: Average Commute (miles)

- Total Vehicle Miles Travel per Year

$VMT_{Total} = VMT_{AD} + VMT_C + VMT_{SC} + VMT_{ANG} + VMT_{AFRC}$

VMT_{Total}: Total Vehicle Miles Travel (miles)
VMT_{AD}: Active Duty Personnel Vehicle Miles Travel (miles)
VMT_C: Civilian Personnel Vehicle Miles Travel (miles)
VMT_{SC}: Support Contractor Personnel Vehicle Miles Travel (miles)
VMT_{ANG}: Air National Guard Personnel Vehicle Miles Travel (miles)
VMT_{AFRC}: Reserve Personnel Vehicle Miles Travel (miles)

- Vehicle Emissions per Year

$V_{POL} = (VMT_{Total} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{Total}: Total Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Personnel On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

G

NHPA Section 106 Consultation Documentation

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Appendix G: NHPA Section 106 Consultation Documentation

G.1 NHPA Section 106 Consultation Initiation

DEPARTMENT OF THE AIR FORCE
366TH CIVIL ENGINEER SQUADRON (ACC)
MOUNTAIN HOME AIR FORCE BASE IDAHO

18 December 2020

Ms. Ashley Brown
Historic Preservation Review Officer
Idaho State Historic Preservation Office
210 Main Street
Boise ID 83702

SUBJECT: Initiation of Section 106 Consultation and Request for Concurrence on the Determination of No Adverse Effect for the Forging Sabre Biennial Exercise at Mountain Home Air Force Base (MHAFB), Idaho

Dear Ms. Brown,

The Republic of Singapore Armed Forces (SAF) is proposing to conduct a binneal large force exercise based at Mountain Home AFB (MHAFB) beginning in the Fall of 2021 and continuing every other year. Supporting this exercise would require minor, temporary construction on MHAFB as well as relocation and expansion of three firing points (FP) located on Saylor Creek Range (SCR) (undertaking).

Because the the action meets the definition of an undertaking with the potential to adversely affect historic properties [36 CFR 800.16(y)], and because the undertaking does not meet the definition of an undertaking eligible for streamlined review as outlined in Section I (c) of the installation Programmatic Agreement (PA) for alternative compliance with 36 CFR 800, 366FW A7IE is initiating consultation and respectfully requests concurrence with the agency's determination of *No Adverse Effect* for the undertaking in accordance with 36 CFR 800.5(b).

MHAFB defined two undertaking Area of Potential Effects (APE) in accordance with 36 CFR 800.16(d):

APE 1

This APE includes locations for installing and operating sixty-eight (68) temporary facilities on approximately four (4) acres of land across MHAFB. The temporary facilities would include: approximately 30 temporary trailers to serve as office space for exercise personnel, approximately 30 temporary shipping containers to house supplies and equipment for exercise personnel, six temporary shipping containers on existing gravel pads near the Air Traffic Control Tower to serve as the Ground Control Stations, and two temporary clamshell hangers to house aircraft participating in exercises (see Attachment 1). These locations have either been utilized for similar purposes and/or were previously developed. Construction activities would require
minor ground disturbance (clearing and leveling) and gravel placement. No digging or grading would be required as existing utilities infrastructure would be capable of supporting the temporary facilities and utilities extensions would not be required.

Additionally, SAF is proposing to renovate the interior of Building 1361 to serve as the exercise Command Post. Building 1361 would not be renovated until after the 2021 exercise is complete. Renovations are anticipated to focus on the interior of the facility to reorganize office and storage space

and would not require exterior modifications. 366FW A7IE CRM previously evaluated Building 1361 for historic significance and received SHPO concurrence on a determination of ineligibility for listing in the NRHP (SHPO# 2018-333).

MHAFB (Main Base) has been previously intensively surveyed for archaeological resources. Archaeological sites identified on base consist of prehistoric and historical isolates and historic period refuse deposits, generally associated with the ranching period (see Table 1). The majority have been determined not eligible for listing in the NRHP, with only one historical archaeological site (10-EL-984) determined NRHP-eligible. This site is well outside of the APE and would not be adversely affected by the proposed undertaking (see Attachment 1).

Table 1. Previously Identified Archaeological Sites on MHAFB

Trinomial	Site Type	NRHP Eligibility Status	Misc
10-EL-980	Historic sheep camp	Not Eligible	Site
10-EL-981	Historic sheep camp	Not Eligible	Site
10-EL-982	Historic sheep camp	Not Eligible	Site
10-EL-983	Historic sheep camp	Not Eligible	Site
10 EL 984*	Historic refuse scatter	Eligible	Site
10 EL 989	Prehistoric Ignimbrite Flake	Not Eligible	Isolate
10 EL 990	Historic Hole in top can	Not Eligible	Isolate
10 EL 991	Historic tobacco can	Not Eligible	Isolate
10 EL 992	Historic Hole in top can	Not Eligible	Isolate
10 EL 993	Historic Hole in top can	Not Eligible	Isolate
10 EL 994	Historic Glass	Not Eligible	Isolate
10 EL 995	Historic Hole in top can	Not Eligible	Isolate
10 EL 996	Historic Hole in top can	Not Eligible	Isolate
10 EL 997	Historic Hole in top can	Not Eligible	Isolate
10 EL 998	Historic Hole in top can	Not Eligible	Isolate
10 EL 999	Historic Hole in top can	Not Eligible	Isolate
10 EL 1543	Prehistoric Desert Side-notched projectile point	Not Eligible	Isolate

APE 2

This APE includes the relocation and expansion of three firing points within the Joint Use Land Portion (JUL) on SCR. In 2017, six new firing points were analyzed on SCR as part of the Environmental Assessment for Operational Changes and Range Improvement in the Mountain Home Range Complex. The firing points were anticipated to be used for intert mortars/rockets/HIMARS to target within the Exclusive Use Area (EUA). The firing points were designed as 50 ft. x 50 ft. (¼ acre) gravel pads with a surrounding one-acre fire prevention buffer that would be mowed in advance of use. Because SCR has been entirely surveyed for archaeological resources, all six of the firing points locations were situated in portions of the range previously determined devoid of archaeological resources. 366th FW A7IE received SHPO concurrence on a determination of *No Historic Properties Affected* for the undertaking (SHPO# 2016-670).

To date, three of the original firing point locations have been constructed. The current undertaking proposes to relocate and expand the three undeveloped firing points to better accommodate use of multiple High Mobility Artillery Rocket Systems (HIMARS) during the proposed SAF training exercises (see Attachments 2 and 3). HIMARS is a light-weight MLRS that is mounted on a five ton

medium tactical vehicle. The firing points would be expanded to one-acre each, consist of three gravel pads spaced 50m apart, with graded access roads to each that extend from existing two-track roads. Additionally, while only inert munitions would be utilized, consistent with the original undertaking analyzed in the 2017 EA, a one-acre area buffer around each site would be mowed to reduce fire potential.

FP1 was previously surveyed by SAIC (1990). No archaeological sites were identified within the FP or within a ¼ mile of the proposed location. FP 2, located on the north side of Castleford Road, was previously surveyed by the BLM (1980) and AMEC (2000). No archaeological resources were identified within the FP. Two sites are located within ¼ mile of the FP (10-OE-8037, 10-OE-8038). Both historic period refuse scatters have received SHPO concurrence on the determination of ineligibility for listing in the NRHP. FP 3 was previously surveyed by Ogden (1999) and AMEC (2000). No archaeological sites were identified within the FP footprint. One NRHP-eligible prehistoric lithic scatter (10-OE-2239) was identified within ¼ of a mile north of the FP footprint.

366FW A7IE CRM conducted an intensive survey of the new firing point/access road locations on December 9, 2020 (see Attachment 4). No archaeological resources were identified. Castleford Road (10-OE-9518) is an NRHP-eligible, historic period, dirt road that is routinely utilized by military and non-military parties for access into the joint use land portion of the range. In 2019, the CRM applied the installation PA to the maintenance of Castleford Road (undertaking), including placement of gravel to avoid ruts and overall deterioration, as reported on in the annual report to SHPO. Continued use of the road for transportion would not result in adverse effect to this historic property.

In accordance with the NHPA and Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments*, the United States Air Force (USAF) sent letters on November 20, 2020 describing the undertaking and requesting participation in government-to-government consultation to the Shoshone-Paiute Tribes of Duck Valley Indian Reservation, Shoshone Bannock Tribes, Paiute-Shoshone Tribes of Fort McDermitt, Burns Paiute Tribe, and Northwestern Band of the Shoshone Nation. To date, no responses have been received.

Pursuant to 36 CFR § 800.5(b), the 366th FW respectfully requests concurrence with the determination of *No Adverse Effect* for undertaking within 30 days from receipt of this correspondence. If you have any questions or need additional information, please contact me at (208) 828-8003 or noelle.shaver@us.af.mil.

Sincerely,

Noelle C.S. Shaver

NOELLE SHAVER M.A., RPA
366FW A7IE Cultural Resources Manager

Attachments: 1. APE 1 Map Installation
2. APE 2 Aerial Map of Firing Points/Archaeological Resources
3. APE 2 Topographic Map of Firing Points/Archaeological Resources
4. Photo Log

G.2 NHPA Section 106 Consultation SHPO Concurrence

IDAHO STATE HISTORICAL SOCIETY

January 12, 2021

Noelle Shaver
EIAP/Cultural Resources Programs Manager
366FW/A71E
1100 Liberator St., Bldg. 1297
Mountain Home AFB, ID 83648

RE: Forging Sabre Biennial Exercise at Mountain Home Air Force Base, Idaho

Section 106 Evaluation

X	The field work and documentation presented in this report meet the Secretary of the Interior's Standards.
X	No additional investigations are recommended; project can proceed as planned.
	Additional information is required to complete the project review. (See comments.)
	Additional investigations are recommended. (See comments.)

Identification of Historic Properties (36 CFR 800.4):

	No historic properties were identified within the project area.
X	Properties are not eligible. (see attached)
	Property is listed in National Register of Historic Places.
X	Properties are eligible for listing in the National Register of Historic Places. (see attached)
	No historic properties will be affected within project area.

Assessment of Adverse Effects (36 CFR 800.5):

X	Project will have *no adverse effect* on historic properties.
	Project will have an *adverse effect* on historic properties; further consultation is recommended.

If you have any questions, feel free to contact me at 208-488-7466 or travis.pitkin@ishs.idaho.gov.

Comments:

Travis Pitkin, M.S.
Curator of Archaeology

Brad Little
Governor of Idaho

Janet Gallimore
Executive Director
State Historic
Preservation Officer

Administration:
2205 Old Penitentiary Rd.
Boise, Idaho 83712
208.334.2682
Fax: 208.334.2774

Idaho State Museum:
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Idaho State Archives and State Records Center:
2205 Old Penitentiary Rd.
Boise, Idaho 83712
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State Historic Preservation Office:
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Boise, Idaho 83702
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Old Idaho Penitentiary and Historic Sites:
2445 Old Penitentiary Rd.
Boise, Idaho 83712
208.334.2844

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Site Eligibility Table for the Forging Sabre Biennial Exercise at Mountain Home Air Force Base, Idaho Project. SHPO Rev# 2021-140

Site	Eligibility
10EL980	Not Eligible
10EL981	Not Eligible
10EL982	Not Eligible
10EL983	Not Eligible
10EL989	Not Eligible
10EL990	Not Eligible
10EL991	Not Eligible
10EL992	Not Eligible
10EL993	Not Eligible
10EL994	Not Eligible
10EL995	Not Eligible
10EL996	Not Eligible
10EL997	Not Eligible
10EL998	Not Eligible
10EL999	Not Eligible
10EL1543	Not Eligible
10EL8037	Not Eligible
10EL8038	Not Eligible
10EL984	Eligible
10OE2239	Eligible
10OE9518	Eligible

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