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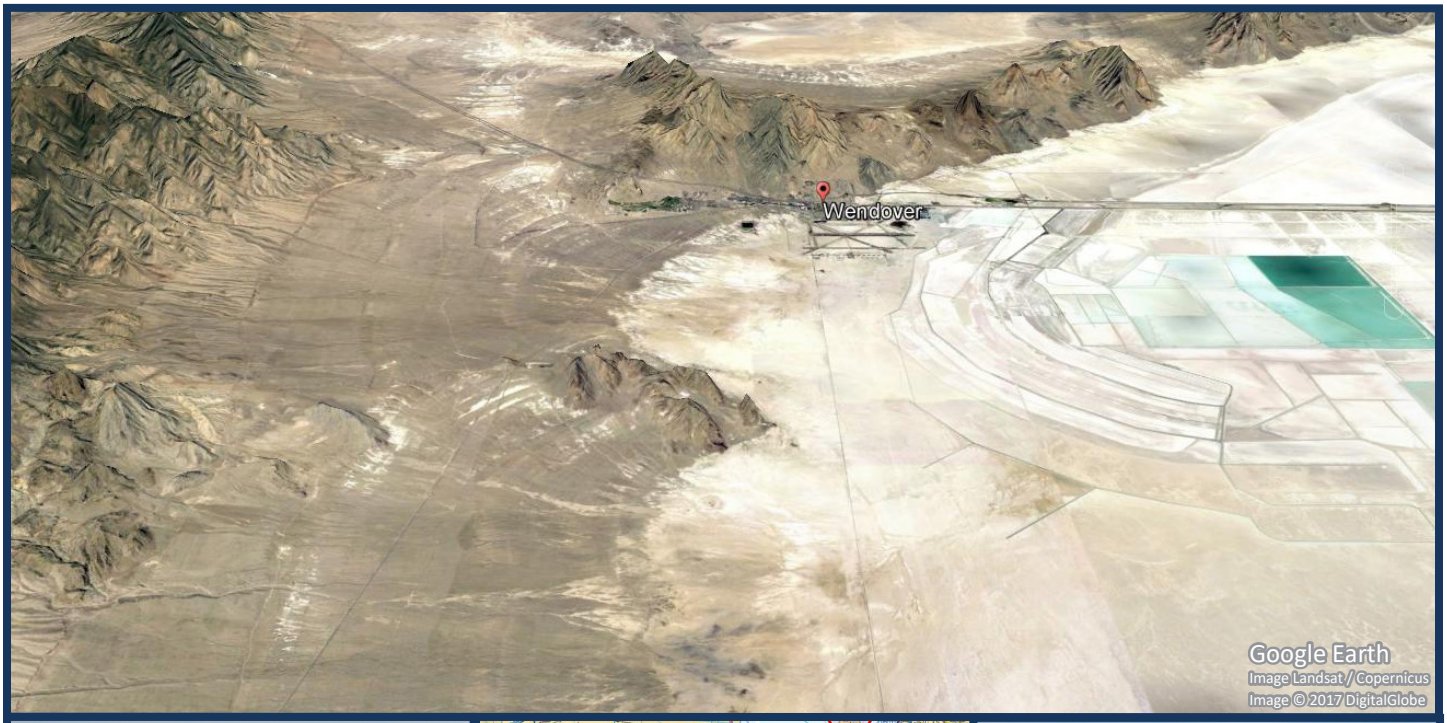
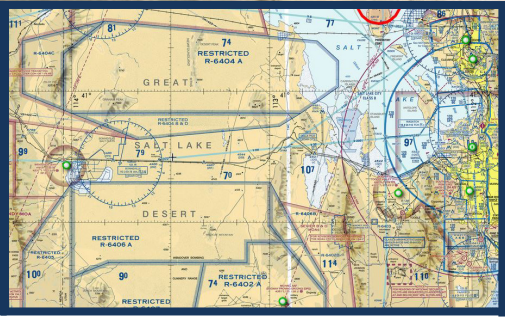
ENVIRONMENTAL ASSESSMENT FOR SUB-SCALE AERIAL TARGET LAUNCH, CONTROL, AND RECOVERY AT THE UTAH TEST AND TRAINING RANGE





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Prepared for:
U.S. Army Corps of Engineers, Mobile District
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October 2020

PRIVACY ADVISORY

Public comments on the Draft Environmental Assessment (EA) are requested. Letters or other written comments provided to the U.S. Air Force (USAF) during scoping for this EA are included in this Draft EA. As required by law, substantive comments will be addressed in the Final EA and made available to the public. Any personal information provided to the USAF is used only to identify your intent to make a comment or to fulfill requests for copies of the Final EA or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the Final EA. However, only the names of the individuals making comments and their specific comments have been disclosed. Private address information has not been published in this EA or released for any purpose unless required by law.

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UTAH TEST AND TRAINING RANGE (ACC)
HILL AIR FORCE BASE UTAH

29 September 2020

Mr. Michael Shane
UTTR/RSE
5948 Southgate Ave; Bldg. 1A
Hill AFB, UT 84056-5003

SUBJECT: Notification of the Draft Environmental Assessment (DEA) for Sub-Scale Aerial Target Launch, Control, and Recovery at the Utah Test and Training Range

Dear Reader,

The U.S. Air Force (USAF) is accepting comments from the public on a Draft Environmental Assessment (Draft EA) for the relocation of the Sub-Scale Aerial Target (SSAT) launch, control, recovery, and maintenance operations from Dugway Proving Ground to the Wendover Site. The Wendover Site is located South of the Wendover Airport on Department of Defense land. SSATs are unmanned aircraft that are used to provide realistic live-fire training for USAF pilots flying at the Utah Test and Training Range (UTTR). Moving these operations would result in approximately 40 full-time personnel working at the Wendover Site.

In 2019, the USAF, in cooperation with the Federal Aviation Administration (FAA), published a Draft EA for the creation of Restricted Area (RA) R-6401 and the launch, control, and recovery of SSATs from the Wendover Site at Wendover, Utah. During the 30-day Draft EA public comment period, the FAA determined that, due to the evolution and normalization of Unmanned Aircraft (UA) in the national airspace, the creation of new RA is not required for the launch, control, and recovery of SSATs. The FAA indicated that these activities would be possible under a Certificate of Authorization (COA). As a result, the USAF has prepared a separate Draft EA that does not include the creation of RA.

A Memorandum of Agreement (MOA) between the FAA Salt Lake City Air Route Traffic Control Center (ZLC) and UTTR Clover Control allows Clover Control to maintain control of the airspace around Wendover. Clover Control would control all SSAT launch and recovery operations at the Wendover Site and would provide real time deconfliction with all flights into and out of Wendover Airport. In addition, visual observers would be present between launch and entry of the SSATs into the existing RA. To allow for uninterrupted operations at Wendover Airport, all civilian flights into and out of Wendover Airport would receive priority over all SSAT operations. Clover Control would hold all SSAT launches from the Wendover Site during all aircraft departures and landings at Wendover Airport.

The proposed action for this EA includes construction activities at the Wendover Site and the launch, control, and recovery of SSATs from this site. SSAT launches and recoveries would occur during twenty-four (24) 1-week periods per year, Monday through Thursday, 6 hours per day. SSAT sorties (i.e., launches and recoveries) would be conducted during approximately 96 days per year, with up to 12 sorties conducted per day. No SSAT launches would occur after 10:00 P.M.

The Draft EA has been prepared in compliance with the Air Force Environmental Impact Assessment Process Regulations at 32 *CFR* 989, and Air Force Instruction (AFI) 32-7061. The 30-day Draft EA public comment period extends from 2 October 2020 through 2 November 2020. Based on the results of the Draft EA, construction of the new facilities and operation of the SSATs at the Wendover Site would not have significant impacts on the human environment or any of the environmental resources described in the Draft EA. The Air Force, therefore, proposes a Finding of No Significant Impact (FONSI) for the proposed project actions and has determined that an Environmental Impact Statement (EIS) is unnecessary for this action.

Due to the COVID-19 Pandemic, the Wendover library is offering curb service only. Printed copies of the Draft EA are available at the Wendover, Nevada City Hall located at 1111 North Gene L. Jones Way, West Wendover, Nevada and at the Wendover Airport at 345 Airport Apron, Wendover. The Draft EA is also available on the internet at:

www.hill.af.mil/Portals/58/documents/Environmental/Air ForceDraftEAWendover.pdf

The USAF looks forward to your participation in the National Environmental Policy Act (NEPA) process for this action. Please provide written comments by November 2, 2020, to Mr. Michael Shane, UTTR/RSE, 5948 Southgate Avenue Building 1A, Hill Air Force Base, Utah, 84056-5003 or Michael.shane.2@us.af.mil. If you need further information or have any questions, please contact Mr. Shane at 801-777-0183. Thank you for your assistance in this matter.

Sincerely,

Michael Shane

MICHAEL SHANE
HQ Utah Test and Training Range
Environmental Manager

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
53 WEG	53rd Weapons Evaluation Group
75 CEG/CEIE	75th Civil Engineer Group, Environmental Compliance
75 LRS/LGRM	75th Logistics Readiness Squadron, Materiel Management Flight
388 FW	388th Fighter Wing
ACAM	Air Conformity Applicability Model
ACC	Air Combat Command
AEDT	Aviation Environment Design Tool
AFB	Air Force Base
AFI	Air Force Instruction
AFOSH	Air Force Occupational Safety and Health
AFMAN	Air Force Manual
AGL	above ground level
ALTRV	Altitude Reservation
APE	Area of Potential Effect
Army	U.S. Army
ARTCC	Air Route Traffic Control Center
AST	aboveground storage tank
ATC	air traffic control
ATCAA	Air Traffic Control Assigned Airspace
BASH	bird/wildlife-aircraft strike hazard
BCC	Bird of Conservation Concern
BCR	Bird Conservation Region
BGEPA	Bald and Golden Eagle Protection Act
BIOTICS	Biodiversity Tracking and Conservation System
BMP	best management practice
CAA	Clean Air Act
CATEX	Categorical Exclusion
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	*Code of Federal Regulations*
CH_4	methane
cm	centimeter(s)
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COA	Certificate of Authorization
CSE	Comprehensive Site Evaluation
CWA	Clean Water Act
dB	decibel(s)
dBA	A-weighted decibel(s)
DNL	day-night average sound level
DNL_{mr}	onset-rate adjusted monthly day-night average sound level
DoD	U.S. Department of Defense
DoDD	Department of Defense Directive

ACRONYMS AND ABBREVIATIONS (Continued)

DPG	Dugway Proving Ground
EA	Environmental Assessment
EESOH-MIS	Enterprise Environmental, Safety, and Occupational Health – Management Information System
EIAP	Environmental Impact Analysis Process
EISA	Energy Independence and Security Act
EO	Executive Order
EOD	Explosive Ordnance Disposal
EPCRA	Emergency Planning and Community Right-to-Know Act
ERP	Environmental Restoration Program
ESA	Endangered Species Act
ESQD	explosive safety quantity-distance
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FL	Flight Level
FRP	Facility Response Plan
FSS	Federal Supply System
GHG	greenhouse gas
GLCM	Ground Launched Cruise Missile
GPS	Global Positioning System
GWP	global warming potential
HAP	hazardous air pollutant
HAZMART	Hazardous Materials Pharmacy
HDSC	Hazardous Material Distribution Service Center
HMMP	Hazardous Materials Management Process
HQ	Headquarters
I-	Interstate
ICP	Installation Contingency Plan
ICRMP	Integrated Cultural Resources Management Plan
IFR	Instrument Flight Rules
ILS-S	Integrated Logistics System – Supply
INRMP	Integrated Natural Resources Management Plan
Intrepid Potash	Intrepid Potash Wendover, LLC
IPaC	Information for Planning and Consultation
IR	Instrument Route
JLENS	Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System
kg	kilogram(s)
kW	kilowatt(s)
L_{eq}	equivalent sound level
LID	Low Impact Development
L_{max}	maximum sound level
LOA	Letter of Agreement
LQG	large quantity generator
MBTA	Migratory Bird Treaty Act
MEC	munitions and explosives of concern

ACRONYMS AND ABBREVIATIONS (Continued)

mm	millimeter(s)
MMRP	Military Munitions Response Program
MOA	Military Operations Area
MRNMAP	MOA Range NoiseMap
MRS	Munitions Response Site
MSL	mean sea level
MTR	Military Training Route
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAS	National Airspace System
NAVAID	Navigational Aid
NEI	National Emissions Inventory
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NM	nautical mile
NO_2	nitrogen dioxide
NOTAM	Notice to Airmen
NO_x	nitrogen oxides
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSN	National Stock Number
O_3	ozone
O&M	operations and maintenance
OSHA	Occupational Safety and Health Administration
Pb	lead
PCB	polychlorinated biphenyl
$PM_{2.5}$	particulate matter less than or equal to 2.5 micrometers in diameter
PM_{10}	particulate matter less than or equal to 10 micrometers in diameter
RA	Restricted Area
RATO	rocket-assisted takeoff
RCRA	Resource Conservation and Recovery Act
RF	radio frequency
ROI	Region of Influence
S56	Salt Lake City Terminal Radar Approach Control
SAA	Special Activity Airspace
SARA	Superfund Amendments and Reauthorization Act
SEL	sound exposure level
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SITLA	School and Institutional Trust Lands Administration
SLC	Salt Lake City International Airport
SO_2	sulfur dioxide
SPC	Species of Concern
SPCC	Spill Prevention, Control, and Countermeasures
SQG	small quantity generator

ACRONYMS AND ABBREVIATIONS (Continued)

SSAT	Sub-scale Aerial Target
SUA	Special Use Airspace
TFR	Temporary Flight Restriction
TSCA	Toxic Substances Control Act
UA	Unmanned Aircraft
UDWR	Utah Division of Wildlife Resources
UFC	Unified Facilities Criteria
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USC	*United States Code*
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UTTR	Utah Test and Training Range
VFR	Visual Flight Rules
VOC	volatile organic compound
VOR	Very High Frequency Omni-Directional Range
VR	Visual Route
VSQG	very small quantity generator
WSEP	Weapon Systems Evaluation Program
ZLC	FAA Salt Lake City ARTCC

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1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 INTRODUCTION

Headquarters (HQ) Utah Test and Training Range (UTTR), as the Range Operating Authority for the UTTR, supports test and training customers that include the 53rd Weapons Evaluation Group (53 WEG). The 53 WEG is responsible for the U.S. Air Force (USAF) air-to-ground and air-to-air Weapon Systems Evaluation Program (WSEP) and live-fire pilot training known as Combat Hammer and Combat Archer, respectively. These programs evaluate all phases of combat operations, from weapons loading to aircraft performance, aircrew performance, and weapons performance. The focus of this Environmental Assessment (EA) is specific to the Combat Archer program and does not include the Combat Hammer program.

A BQM-167 launches from a rail system at Tyndall Air Force Base (AFB), Florida. This SSAT is used for live weapon system evaluations and testing (U.S. Air Force photo/Sara Vidon).

Test and training units use a wide variety of different Unmanned Aircraft (UA) for test and training purposes. This EA evaluates the use of UA classified as Sub-Scale Aerial Targets (SSATs). SSATs are used to provide realistic live-fire pilot training.

HQ UTTR, in support of the various test and training units, needs to increase the capability and flexibility of training to meet expanding operational requirements of the WSEP and other U.S. Department of Defense (DoD) missions to respond to increasingly complex combat conditions. HQ UTTR currently launches, controls, and recovers SSATs from the former Ground Launched Cruise Missile (GLCM) site on Dugway Proving Ground (DPG), which is owned by the U.S. Army (Army) and within the airspace of the UTTR. The Army also uses this site for UA operations and artillery missions. Capacity is limited at the former GLCM site for both Army and USAF missions. The 53 WEG has limited access to the former GLCM site, including limitations on scheduling relative to the increasing Army UA operations and program and testing requirements. In addition, the HQ UTTR test and training program continues to grow and the demand for additional SSAT training missions is increasing.

Launching SSATs requires locating the support/maintenance functions in close proximity to the launch facilities to ensure rapid availability for training. Launch and recovery of the SSATs from the former GLCM site requires HQ UTTR to locate support/maintenance functions off-site from the launch location. This requires the support/maintenance functions to be assembled and disassembled before and after each launch series and delays the availability of SSATs.

This EA analyzes and documents the environmental consequences that could result from (1) relocating the SSAT launch and recovery mission from the former GLCM site on DPG to a consolidated new site (includes new construction) located south of Wendover, Utah (Wendover Site); and (2) launch, control, recovery, and maintenance of SSATs.

During the initial planning stages for the Wendover Site, the USAF presumed that launch, control, and recovery of SSATs could be authorized under a Temporary Flight Restriction (TFR) issued by the Federal Aviation Administration (FAA). Based on this understanding, the USAF evaluated the environmental impacts of various construction projects under Categorical Exclusions (CATEXs) A2.3.12, A2.3.13, and A2.3.14. Section 106 consultation was also completed for these projects. Once the CATEXs were approved and Section 106 consultation completed (see Appendix A), the USAF proceeded with construction of some of the infrastructure necessary to relocate the SSAT launch and

recovery mission to the Wendover Site. This construction included improving approximately 7 miles of an existing gravel road and installing a fiber optic line along the edge of the road. Building 625 at Wendover Airport was upgraded as the control room for all SSAT operations. For the maintenance facility, a maintenance building was constructed on a 156-foot by 250-foot gravel pad, and a 90-foot by 161-foot concrete pad was constructed on the gravel pad. For the launch facility, a concrete block building with three launch rails was constructed on a 165-foot by 55-foot concrete pad. A 30-foot radio-relay tower and a 55-foot by 165-foot concrete pad were also constructed on the gravel pad. The launch facility construction also included a 77-foot by 149-foot gravel pad adjacent to the access road. All of the pads were underlain with a geotextile fabric to preserve the integrity of native soils.

After this construction was complete, the FAA determined that the launch, control, and recovery of SSATs from the Wendover Site could not be conducted under a TFR; that new Restricted Area (RA) would be required; and that an EA would be needed to evaluate potential impacts of new RA and the remaining construction. Based on the FAA requirement, the FAA signed an agreement with the USAF to serve as a Cooperating Agency on the EA. The USAF and the FAA developed a Draft EA that was made available to agencies, Native American tribes, and the general public on 19 September 2019 (see Appendix B). During the 30-day Draft EA public comment period, the FAA determined that, due to the evolution and normalization of UAs in the national airspace, RA is not required for the launch, control, and recovery of SSATs from the Wendover Site. The FAA has indicated that these activities would be possible under a Certificate of Authorization (COA) (see FAA letter in Appendix B). As a result, the USAF is preparing this separate EA that does not include the creation of RA for SSAT launch, control, and recovery.

This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (40 *Code of Federal Regulations [CFR]* §§ 1500-1508) and implementing regulations issued by the President's Council on Environmental Quality (CEQ). Federal agencies have developed "agency-specific" procedures for implementing the NEPA. The NEPA procedures for the USAF are described in 32 *CFR* 989, *Environmental Impact Analysis Process (EIAP)*.

1.2 BACKGROUND

The UTTR is located approximately 80 miles southwest of Salt Lake City in Tooele and Box Elder Counties, Utah. Divided into the North and South Ranges, the UTTR consists of 2,624 square miles (1,982 square nautical miles) of DoD-owned land and 16,616 square miles (12,574 square nautical miles) of airspace. UTTR airspace consists of 6,010 square nautical miles of RA and 6,564 square nautical miles of Military Operations Areas (MOAs). The UTTR is used for test and evaluation of new weapon systems and platforms, and training. Range use averages 16,000 sorties per year for training and 300 sorties per year for testing.

HQ UTTR at Hill Air Force Base (AFB) has oversight of the UTTR (Hill AFB 2016a). As part of this mission, HQ UTTR is responsible for airspace management in the UTTR. The 388th Fighter Wing (388 FW) is the using agency for the RA airspace in the UTTR, and the FAA Salt Lake City Air Route Traffic Control Center (ARTCC) is the controlling agency (known as ZLC).

1.3 PURPOSE OF THE PROPOSED ACTION

The purpose of the proposed action is to increase operational flexibility and capability by providing the infrastructure necessary to accommodate the launch, control, and recovery of SSATs into and out of the existing (R-6405) RA airspace (Figure 1-1). The proposed action also includes maintenance activities associated with the launch and recovery of UA at the Wendover Site.

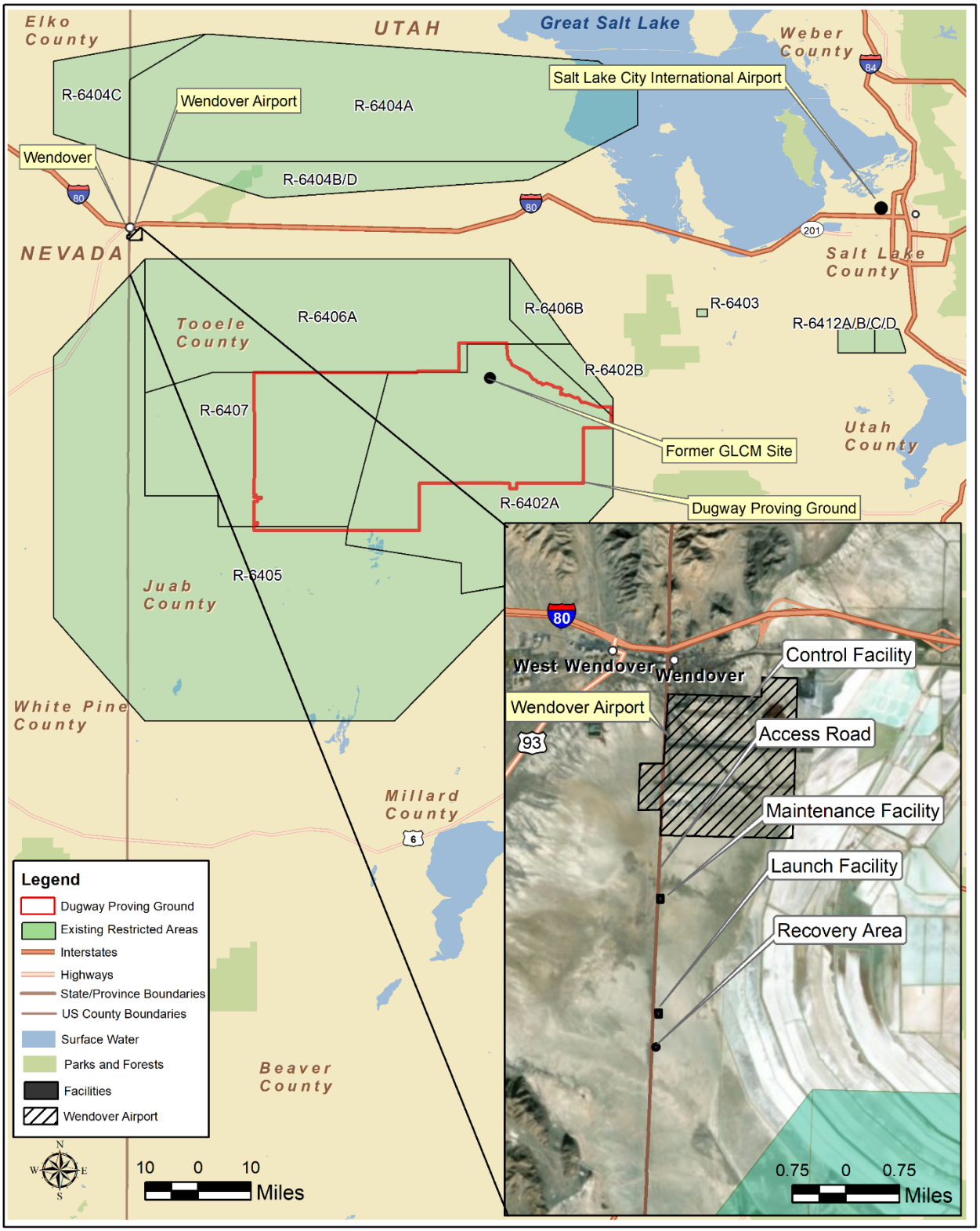


Figure 1-1. Regional Map of the Wendover Site

1.4 NEED FOR THE PROPOSED ACTION

Due to the increasing Army test and training operations at the former GLCM site and the continued growth of the HQ UTTR UA program, the USAF needs to relocate the SSAT program to a new site. The former GLCM site has no opportunity for expansion and no opportunities to increase weapon system evaluations. HQ UTTR has access and scheduling limitations at the former GLCM site that could negatively impact the Combat Archer mission by reducing the number of SSAT operations completed from the former GLCM site.

HQ UTTR needs to increase the capability and flexibility of test and training to meet expanding operational requirements to respond to increasingly complex combat conditions. Figure 1-1 illustrates the location of the Wendover Site relative to existing RA at the UTTR.

1.5 PUBLIC INVOLVEMENT AND AGENCY AND TRIBAL COORDINATION

Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, requires intergovernmental notifications prior to making any detailed statement of environmental consequences. Through the process of Interagency and Intergovernmental Coordination for Environmental Planning, the proponent must notify concerned federal, state, and local agencies and allow them sufficient time to evaluate potential environmental consequences of a proposed action. Comments from these agencies are subsequently incorporated into the environmental analysis.

The USAF encourages and invites public/agency, tribal, and other participation in the NEPA process. Consideration of the views and information of all interested persons promotes open communication and enables better decision making. All agencies, organizations, tribes, and members of the public with a potential interest in the proposed action were encouraged to participate in the decision-making process during the 30-day Draft EA public comment period.

Because the previous Draft EA that included the creation and use of new RA was never finalized, the USAF prepared a scoping letter regarding this EA. The scoping letter and a map were sent to the project mailing list, including the Native American Tribes and those that provided comments on the previous Draft EA. The scoping letter, map, and scoping comments are contained in Appendix C.

Public participation opportunities with respect to this EA and decision making on the proposed action are guided by 32 *CFR* 651. The Draft EA was made available to the public and others at local libraries for 30 days between _____ and _____. During the 30-day Draft EA public comment period, ____ comments were received.

1.6 SCOPE OF THE ENVIRONMENTAL ANALYSIS

The purpose of this EA is to inform decision makers of the potential environmental consequences that could result from implementation of the proposed action or the No Action Alternative. This EA identifies, documents, and evaluates the potential human and natural environmental effects of implementation of the proposed action at the UTTR. An interdisciplinary team of airspace specialists, environmental scientists, biologists, planners, economists, engineers, and archaeologists analyzed the proposed action relative to existing conditions and identified the potential impacts associated with implementation of the proposed action. Chapter 2 describes the proposed action, the No Action Alternative, and alternatives considered but not carried forward. Conditions existing as of 2020, considered the “baseline” conditions, are described in Chapter 3, Affected Environment. The expected effects of the proposed action are presented in Chapter 4, Environmental Consequences. Chapter 5 addresses the potential for cumulative effects, and mitigation measures are identified where appropriate.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 OVERVIEW

This chapter describes the proposed action, provides an explanation of the screening criteria that were used to identify and develop the proposed action from other alternatives, and describes the alternatives that were not carried forward for analysis. This chapter details the process the USAF followed to identify reasonable alternatives that met the purpose (as described in Section 1.3) and need (as described in Section 1.4) to formulate the proposed action. In accordance with CEQ regulations (40 *CFR* 9, Section 1502.14[d]), this chapter also includes a No Action Alternative that serves as a baseline against which environmental impacts of the proposed action are measured.

2.2 REQUIREMENTS FOR THE PROPOSED ACTION

The purpose of the proposed action is to increase operational flexibility and capability by providing the infrastructure necessary to accommodate the launch, control, recovery, and maintenance of SSATs. The infrastructure would permit HQ UTTR to have capability and flexibility to meet the operational test and training requirements of the DoD. HQ UTTR is currently expanding and is in need of a site that can accommodate the launch, control, recovery, and maintenance operations, along with the ability to access existing RA.

To facilitate the alternative development process, HQ UTTR developed three primary siting requirements for the SSAT mission. These requirements included: (1) a site large enough to accommodate the SSAT launch, control, recovery, and maintenance functions; (2) a site that is located within 125 miles of either the North or South Range and under or adjacent to existing RA; and (3) a site that is located near existing roadways and other support infrastructure to reduce infrastructure cost and minimize the environmental impact of additional new construction.

2.3 ALTERNATIVE DEVELOPMENT

HQ UTTR identified four potential alternative sites that meet the three siting requirements described in Section 2.2. The four alternative sites are described below and depicted on Figure 2-1.

<u>Alternative A, Wendover Site</u> – This alternative consists of a new SSAT launch, control, recovery, and maintenance operation near Wendover.

<u>Alternative B, Former JLENS Site</u> – This alternative includes the former Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) Site on the North Range.

<u>Alternative C, Former GLCM Site</u> – This alternative includes expanding the existing SSAT launch site on the former GLCM site at DPG.

<u>Alternative D, South Range Sites</u> – This alternative consists of two sites located farther south on DoD land in the UTTR and under the existing RA.

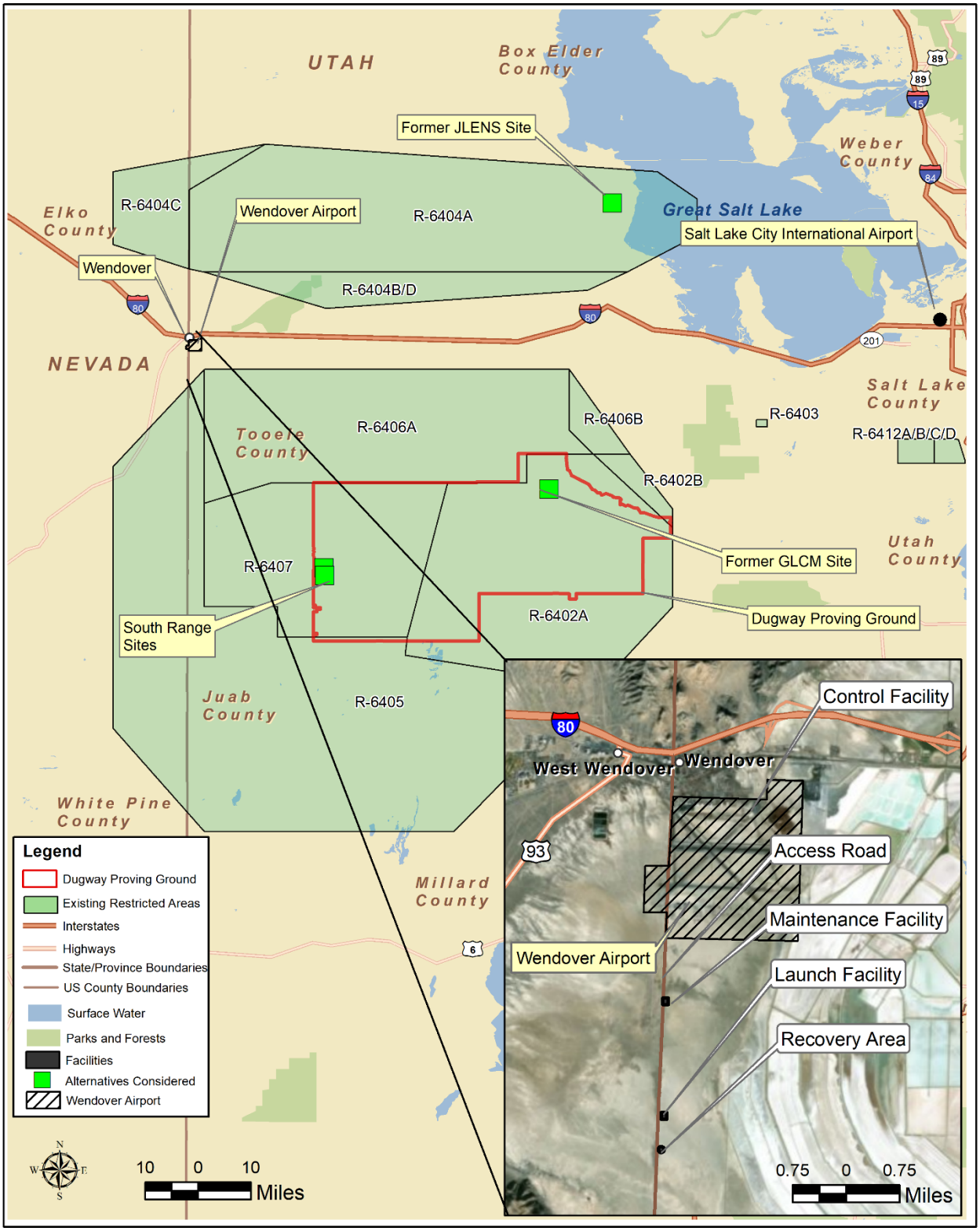


Figure 2-1. Potential Alternatives Relative to Existing Restricted Areas

2.4 ALTERNATIVE SCREENING CRITERIA

HQ UTTR developed screening criteria to define reasonable alternatives that could meet the functional and operational requirements of the SSAT mission. HQ UTTR determined that a reasonable alternative should meet the following seven criteria:

- **Criterion 1. Achieves Mission Requirements.** Alternatives should allow the SSAT system to be effectively operated such that pilots are able to train using the SSAT. This criterion meets the purpose and need for a consolidated site that could accommodate the launch, control, recovery, and maintenance of SSATs used for pilot training.
- **Criterion 2. Under or Adjacent to Existing RA.** Alternatives should maximize the use of existing military airspace. The USAF seeks to use existing military airspace to the maximum extent possible. Existing military airspace near the UTTR was reviewed to determine how the existing airspace could be utilized to meet the needs for launching and recovering SSATs. This criterion directly meets the project's requirement to be able to transition SSATs directly into existing airspace.
- **Criterion 3. Provides for Mission Flexibility.** Alternatives should maximize flexibility for mission requirements. Flexibility includes the ability to schedule and perform test and training missions without the potential for conflict with SSATs or other aircraft activities. In addition, alternatives should have sufficient space to prevent a requirement to assemble and disassemble SSATs at different facilities pre-launch and post-recovery. Flexibility also includes the ability to provide for future expansion of the HQ UTTR mission. Mission flexibility can best be accomplished by locating the site on existing USAF-owned property. This criterion directly meets the purpose and need of the project to find a site without the current scheduling conflicts imposed at the present location.
- **Criterion 4. Permits Colocation of Mission Support Facilities.** Alternatives to support SSAT launch, control, recovery, and maintenance activities should be capable of having all three facilities in close proximity. This criterion meets the purpose and need of the project (i.e., operational flexibility and capability, and a solution to the access and scheduling limitations currently experienced at the former GLCM site).
- **Criterion 5. Minimal Radio Frequency (RF) Interference.** Alternatives should avoid and/or minimize RF interference to protect communication and control of SSATs. This criterion applies directly to the purpose of the project to accommodate launch and recovery activities. Locations with high RF interference would not allow for safe and effective launch of SSATs.
- **Criterion 6. Provides for Accessibility.** Alternatives should be located near existing roadways and infrastructure to negate requirements for extensive new road construction and minimize potential environmental impacts. This criterion applies to the project's requirement to provide operational flexibility and capability, and a solution to the access and schedule limitations currently experienced at the former GLCM site.
- **Criterion 7. Avoids Civil Aviation Conflicts.** Alternatives should avoid, to the extent possible, potential conflicts with non-participating civil (i.e., commercial and civilian) air traffic. This criterion originally applied to the project's requirement to provide operational flexibility and capability, and to segregate non-participating air traffic from the hazardous activities associated with the SSAT launch, control, and recovery operations. The FAA has determined that the proposed action is not considered hazardous. Therefore, the criterion

to avoid civil aviation conflicts is still applicable, but no longer includes a requirement to create RA.

Table 2-1 provides a comparison of the four action alternatives against the seven screening criteria to determine which alternatives are considered reasonable and should be carried forward in the EA for analysis and evaluation.

2.5 IDENTIFICATION OF THE PROPOSED ACTION AND ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD

2.5.1 Alternative A, Wendover Site

Table 2-1 demonstrates that Alternative A, the Wendover Site, represents the only alternative to meet all seven of the screening criteria. The Wendover Site achieves mission requirements by allowing for the launch of SSATs to meet testing and training needs. The close proximity to existing RA will allow SSATs to be launched under a COA issued by the FAA, and all facilities exist on or could be constructed on USAF property. The site meets the requirements for co-located facilities without interference from other activities near the site. Coordination with Clover Control and the use of visual observers would allow the SSATs to be operated without interfering with flights at Wendover Airport. The proposed Wendover Site would meet the screening criteria identified in Section 2.4.

The alternatives considered but not carried forward are explained below.

2.5.2 Alternative B, Former JLENS Site

This alternative does not meet criteria 3, 4, or 7. Mission support facilities would not be co-located, and this location would require SSATs to traverse a high-traffic civilian airspace corridor (approach corridor from the west for Salt Lake City International Airport [SLC]). The former JLENS site would provide for infrastructure and launch facilities to be co-located. However, the operation of the SSATs over the Interstate (I)-80 corridor would not be allowed by the FAA due to the flightpath above a major highway and the need to delay or block civilian air traffic over the I-80 corridor during launch and recovery procedures. For these reasons and the ones explained in Table 2-1, this alternative was not carried forward for further evaluation.

2.5.3 Alternative C, Former GLCM Site

This alternative does not meet criteria 1, 3, 4, 5, or 6. As described, this location is not optimal due to the following limitations: inability to execute operations more than 1 week per year; no future growth potential; growing conflict with Army UA operations tempo and interferences with RF bandwidth from Army UA platforms. In addition, this site does not meet the needs of HQ UTTR. Although the former GLCM site provides the current operational site for launch and recovery operations, the ability and flexibility to utilize this site has passed its usefulness due to the increase in air operations at DPG. With numerous test operations on the UTTR requiring the use of SSATs and the ability to work within the existing RA over DPG, this site is no longer a feasible operational site. Therefore, this alternative was eliminated from further consideration.

Table 2-1. Summary of Screening Criteria to Alternative Selection

Alternative Considered	Criterion 1. Achieves Mission Requirements	Criterion 2. Under or Adjacent to Existing RA	Criterion 3. Provides for Mission Flexibility	Criterion 4. Permits Colocation of Mission Support Facilities	Criterion 5. Minimal RF Interference	Criterion 6. Provides for Accessibility	Criterion 7. Avoids Civil Aviation Conflicts
Alternative A, Wendover Site	Achieves testing and training.	Site is located adjacent to existing RA.	All facilities on USAF property; avoids mission conflicts; potential for future mission expansion.	Former control building in place; maintenance, launch, recovery, and support facilities co-located in close proximity.	Minor potential for interference based on the low population density and minimal industrial activity in the project area.	Site has no accessibility limitations.	Proposed launch site would not affect the approach corridor to SLC; scheduling and altitude provide for civil aviation.
Alternative B, Former JLENS Site	Achieves testing and training.	Site is located under existing RA.	Launches constrained by approach corridor to SLC; continued mission conflicts; no provision for future mission expansion.	Control, launch, recovery, and maintenance support facilities would not be co-located.	Unknown.	Site has no accessibility limitations.	Transit from the North Range to the South Range would not be allowed. Launches from this area would conflict with the approach corridor to SLC.
Alternative C, Former GLCM Site	Achieves testing and training with scheduling limitations.	Site is located under existing RA.	All facilities not on USAF property; continued mission conflicts; no provision for future mission expansion.	Control, launch, recovery, and maintenance support facilities not co-located. Army mission conflicts with current operations.	Outside entities encroach on the UA RF spectrum usage.	Site is only accessible through DPG.	No impact to civil aviation.
Alternative D, South Range Sites	Achieves testing and training.	Site is located under existing RA.	All facilities not on USAF property; continued mission conflicts; no provision for future mission expansion.	Control, launch, recovery, and maintenance support facilities would not be co-located.	No potential for RF interference.	Road and infrastructure work would be required for site accessibility.	No impact to civil aviation.

2.5.4 Alternative D, South Range Sites

This alternative does not meet criteria 3 or 6. These sites would be farther south than the proposed Wendover Site and would require construction and maintenance of new roads and infrastructure. These sites on the South Range are a long distance from any established infrastructure. Access to the sites would be further limited due to their proximity to current target arrays. Access would either be through DPG property, which would extend past numerous target arrays, or by utilizing the Pony Express National Historic Trail and entering the range from the west. The unimproved roads associated with both options would severely limit access, and therefore, transition, to the site. SSATs could potentially be damaged during transport over unimproved roads. The only way to avoid such damage would be to construct improved, paved roads. The commercial power in this remote area is a single-phase power that would be insufficient to operate the infrastructure required during flight operations. The colocation of the launch, control, and maintenance facilities would therefore require numerous generators and fuel tanks to maintain operations. For these reasons, this alternative was eliminated from further consideration.

2.6 DESCRIPTION OF THE PROPOSED ACTION

The proposed action is the relocation of the SSAT launch, control, recovery, and maintenance operations from the former GLCM site at DPG to the Wendover Site (Figure 2-1). The launch, control, recovery, and maintenance operations at the Wendover Site are anticipated to require approximately 40 full-time personnel. SSAT sorties (i.e., launches and recoveries) would occur during twenty-four (24) 1-week periods per year, Monday through Thursday, 6 hours per day. SSAT sorties would be conducted during approximately 96 days per year, with up to 12 sorties conducted per day. No SSAT launches would occur after 10:00 P.M. Airspace near the Wendover Site is controlled by ZLC and UTTR Clover Control. A memorandum of agreement between ZLC and Clover Control states that any time Clover Control is open they have control of the airspace. Clover Control would hold and control all SSAT operations at the Wendover Site and would provide real time deconfliction with all aircraft operations into and out of Wendover Airport. In addition, visual observers would be present between launch and RA entry. All civilian flights into and out of Wendover Airport would have priority over SSAT operations to allow for uninterrupted operations at Wendover Airport.

The BQM-34, BQM-167, and BQM-178 are the SSATs that would be launched from the Wendover Site. The BQM is a sub-scale jet aircraft that would be launched from a set of metal rails and used as an aerial target. While the BQM-34 and BQM-167 use a rocket-assisted takeoff (RATO) bottle for launch, the BQM-178 uses a pneumatic launch system without the need for a RATO bottle. All launches would occur in a southeasterly direction, and the SSAT would transition directly from the Wendover Site into the existing RA, R-6405. For the BQM-34 and BQM-167, the RATO bottle would drop off the SSAT at approximately 500 feet above ground level (AGL). The SSAT would be powered by its jet engine for the remainder of the flight time. RATO bottles would be retrieved by USAF personnel under agreements with adjacent landowners.

Recovery of the SSATs would occur on USAF property located approximately 0.5 mile south of the launch facility (Figure 2-2). Prior to recovery, weather balloons would be launched to calculate wind-drift information, which would be provided to the control facility. Flying a wind-corrected course, the SSAT would enter recovery at 2,500 feet AGL and descend under a recovery parachute. Following landing, the SSAT would be made safe by removing any unexpended chaff or flares. The parachute would then be collected, and the SSAT would be transported back to the maintenance facility. The average recovery distance would be less than 900 feet from the recovery area.

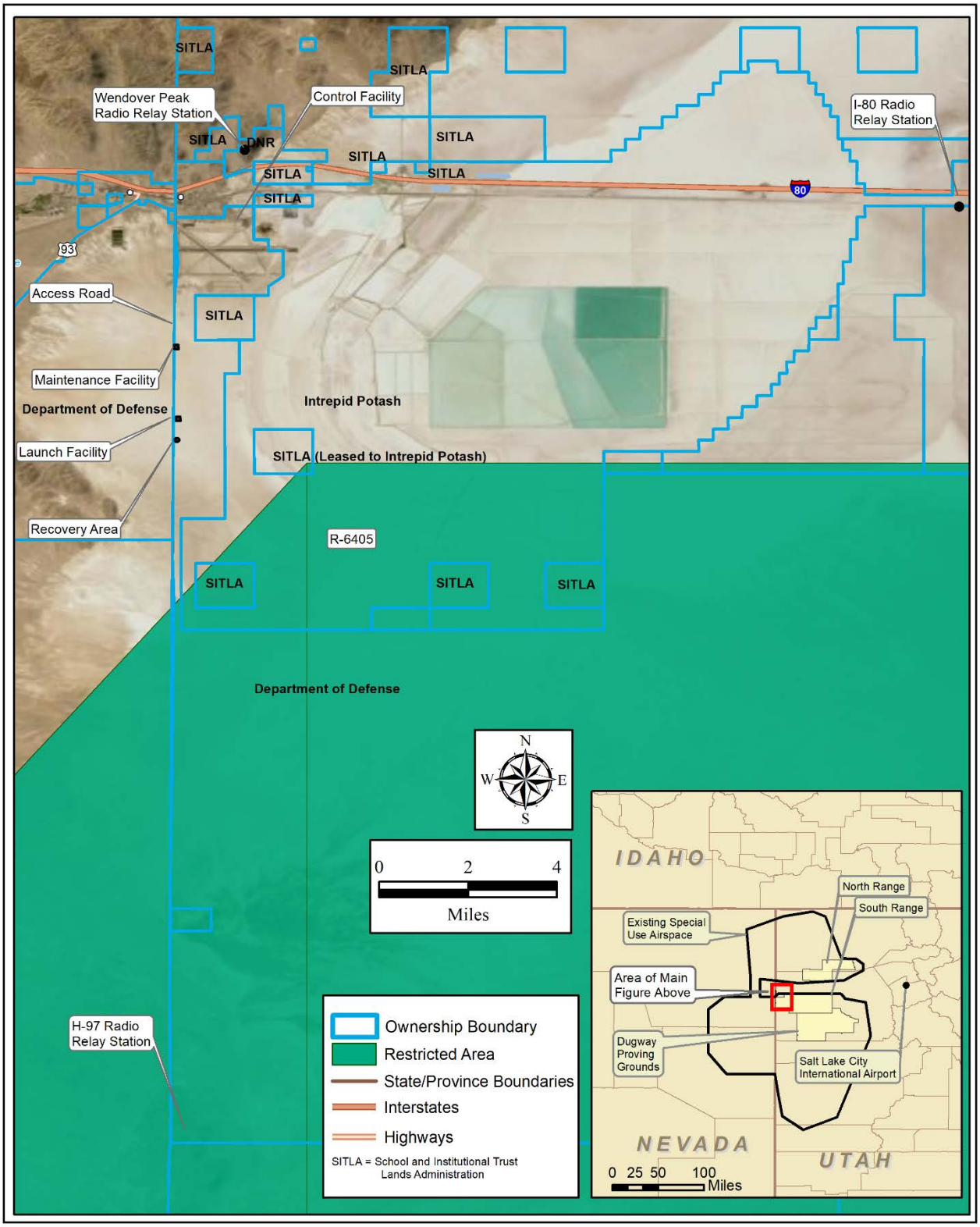


Figure 2-2. Proposed Facilities and Infrastructure

2.6.1 Facilities, Infrastructure, and Maintenance Operations

Three primary facilities would be required for this operation. These facilities consist of the launch, control, and maintenance facilities (Table 2-2). As described in Section 1.1, renovation of the control facility (Building 625) and partial construction of the maintenance and launch facilities was completed under a separate NEPA analysis using CATEXs.

Table 2-2. Launch, Control, and Maintenance Facility and Infrastructure Requirements

Existing[a]	Proposed
Control Facility and Function	
Control facility (Building 625) interior renovation	
Diesel backup generator	
Maintenance Facility and Function	
156-foot by 250-foot gravel pad covered by a 90-foot by 161-foot concrete pad	30-kilowatt (kW) diesel generator with 50-gallon tank
Maintenance building	Electric lifts, overhead hoists, and outdoor lighting
	Portable 500-gallon, double-wall, aboveground storage tank (AST) for jet fuel
	Portable 500-gallon, double-wall, AST for jet fuel recovery
	Boom truck
	Front-end loader, all-terrain vehicles
	Covered drum storage area
Launch Facility and Function	
198-foot by 250-foot gravel pad covered with a 55-foot by 165-foot concrete pad, three launch rails, and a concrete-block building	100-foot by 250-foot gravel pad extension covered by a 55-foot by 150-foot concrete pad with three additional launch rails, a concrete-block building, and a pre-cast concrete barricade
77-foot by 149-foot gravel pad adjacent to the access road	Four earthen-covered, explosive storage buildings to be constructed on the existing 77-foot by 149-foot gravel pad
30-foot radio-relay tower	30-foot radio-relay tower
	Electric lifts, overhead hoists and outdoor lighting
	100-kW diesel generator with 300-gallon tank
	Covered drum storage area
	Air compressors for starting the SSAT's jet engine
Other Infrastructure	
Improved approximately 7 miles of an existing gravel road	H-97 radio relay station
Installed fiber optic line along the edge of the road	I-80 radio-relay station
Wendover Peak radio-relay station	

[a] Previously evaluated under separate NEPA analysis.
Note: All gravel pads associated with the project have been constructed or will be constructed on a geotextile base.

In addition to the three primary facilities, three different radio-relay stations would be required for the control and operation of SSATs. The radio-relay stations consist of the radio-relay array, a lead acid battery, and a solar panel. The locations of the three radio-relay stations are shown on Figure 2-2. The I-80 radio-relay station would be located on an existing cellular tower along I-80 at mile marker 13. The H-97 radio-relay station would be located on DoD property on the peak of a mountain approximately 15 miles south of Wendover. Construction at the H-97 site would include the installation of four corner anchor points to hold the radio relay and solar panels in place during windy conditions. The Wendover Peak radio-relay station is an existing station located on Wendover Peak directly north of Wendover. The Wendover Peak radio-relay station is currently used for other missions. The three radio-relay stations would all require regular maintenance. The existing radio-relay station on Wendover Peak and the radio-relay station proposed for the cellular tower along I-80 would be accessed using existing roads. Due to its remote location, the proposed

H-97 radio-relay station would be accessed twice per year using a helicopter. No constructed landing zone is planned for helicopter use.

2.6.1.1 Maintenance Facility

The existing maintenance facility is located approximately 0.75 mile south of Wendover Airport, adjacent to the site access road. The maintenance facility consists of a 156-foot wide by 250-foot long gravel pad with a geotextile base and a 90-foot wide by 161-foot long concrete pad. A maintenance building was previously constructed on the concrete pad.

One 30-kilowatt (kW) diesel generator would supply power to the maintenance facility. For the purposes of the analysis, the generator was assumed to be in use 12 hours per day for up to 200 days during each calendar year. Generator use days were assumed to be greater than the 96 days allocated for SSAT sorties to account for USAF personnel working at the maintenance facility in the days prior to and after SSAT launches. The on-board 50-gallon diesel fuel tank would be the only fuel storage required for the generator. Fuel for the generator would be delivered to the site via semi-tractor trailer truck. Additional support equipment located at the maintenance facility would include electric lifts, overhead hoists, outdoor lighting, and a front-end loader. A covered drum storage area would also be constructed at the maintenance facility.

SSATs transported via semi-tractor trailer would arrive at the maintenance facility, where they would be removed from their shipping containers and assembled. New SSATs, along with recently recovered SSATs, would then enter a launch preparation phase. Launch preparation consists of lubrication and service, configuration, system checks, fueling, engine-run, refueling, and battery installation. The SSATs would be fueled at the maintenance facility with Jet-A from one 500-gallon, double-walled aboveground storage tank (AST) on a mobile trailer. An additional portable, 500-gallon, double-walled, AST would be required for de-fueling activities. Both tanks would have adequate secondary containment. Before operational missions, the SSATs would be transported to the launch facility.

2.6.1.2 Launch Facility

The existing launch facility is located approximately 1.5 miles south of the existing maintenance facility. The existing launch facility consists of a 198-foot wide by 250-foot long gravel pad with a geotextile base, covered by a 55-foot wide by 165-foot long concrete pad with three launch rails. A concrete-block building used to store equipment (generator, air compressor, etc.) is located on the concrete pad adjacent to the launch rails. A gravel pad that is approximately 77-foot wide by 149-foot long is located adjacent to the launch facility access road.

The existing launch facility consists of a concrete pad, three rails, and a block building.

The proposed action includes the construction of an extension (100-foot wide by 250-foot long) to the existing gravel pad, and an additional concrete pad (55-foot wide by 165-foot long) with three additional launch rails and a concrete block building protected by a pre-cast concrete barricade. A geotextile base will be installed under the proposed extension. Four earthen-covered, explosive storage buildings would be constructed on the existing 77-foot wide by 149-foot long gravel pad. Because the BQM-34 and BQM-167 would use RATO bottles and have the capability to carry chaff and flares, appropriate explosive storage facilities would be required to store the RATO bottles and the chaff and flares. All storage of RATO bottles, chaff, and flares would occur in these four storage buildings near the launch facility.

One 30-foot radio-relay tower would be constructed on the site along with outdoor lighting. Associated support equipment would be moved from the former GLCM site at DPG and installed at this location. The launch facility would include electric lifts and overhead hoists, and air compressors for starting the SSAT's engine. Smoke oil for the SSATs would be distributed from a 5-gallon can for daily operations and would be stored in 55-gallon drums with secondary containment for monthly operations. A covered area would be constructed for drum storage. One 100-kW diesel generator would be installed at the launch facility. An on-board diesel fuel tank of approximately 300 gallons would be the only fuel storage required for the generator. For the purposes of the analysis, it is assumed the generator would be in use 10 hours per day for up to 96 days during each calendar year.

2.7 NO ACTION ALTERNATIVE

Implementation of the No Action Alternative would result in no additional construction at the Wendover Site, and no SSAT operations would occur at the site. Analysis of the No Action Alternative provides a basis for comparing the environmental consequences of the proposed action in comparison to the existing (baseline) conditions, over time. Implementation of the No Action Alternative would require that training using SSATs be limited to what could be conducted from the former GLCM site at DPG. The former GLCM site does not have sufficient capacity to the meet test and training demand and has competing uses that restrict the availability of the site for full use.

2.8 ENVIRONMENTAL RESOURCE AREAS NOT CARRIED FORWARD FOR DETAILED ANALYSIS

Determining which environmental resource areas will be analyzed versus those not carried forward for detailed analysis is part of the EA scoping process. CEQ and USAF regulations (40 *CFR* §1501.7(a)(3) and 32 *CFR* 989.18 encourage project proponents to identify and eliminate from detailed study the environmental resource areas that are not important or have no potential to be impacted through implementation of their respective proposed actions.

The environmental justice resource area has no applicability to the proposed action, because there would be no potential for direct, indirect, or cumulative impacts. The nearest population centers are approximately 4.5 miles to the north of the Wendover Site. Because no schools, hospitals, or population centers would be affected by implementation of the proposed action, the environmental justice resource area is not carried forward for detailed analysis in the EA.

2.9 SUMMARY COMPARISON OF ENVIRONMENTAL CONSEQUENCES

Table 2-3 summarizes the potential environmental consequences from Chapter 4 where the project description from Chapter 2 is overlaid on the baseline conditions from Chapter 3. The consequences are presented for each environmental resource area and are described for the proposed action and the No Action Alternative. The range of civil aviation consequences described in the airspace management section of this table is related to the civil aviation flights occurring in the areas surrounding the UTTR.

Table 2-3. Summary Comparison of Environmental Consequences

Environmental Resource Area	Proposed Action	No Action
Airspace Resources	Implementation of the proposed action is not anticipated to result in significant impacts to airspace use or management near Wendover Airport. No Victor or Jet Routes would be affected. Jet Route 56, located north of the Wendover Site, would be useable and available for routing air traffic through the area. Airports situated in the Region of Influence (ROI) are currently under existing MOAs or in airspace subject to existing civilian and military air traffic control (ATC).	Implementation of the No Action Alternative would result in no changes to airspace. UTTR airspace would continue to be managed with no changes to airspace use.
Air Quality	Impacts resulting from implementation of the proposed action would amount to less than 1.5 percent of each of the criteria pollutants. Greenhouse gas (GHG) emissions would be minimal, representing 0.96 percent of the Tooele County baseline annual emissions. Although the project area is not within the nonattainment area of Tooele County, it should be noted that emissions of all criteria pollutants would be below their respective annual *de minimis* levels, so a formal conformity determination would not be required. Therefore, no significant impacts to local or regional air quality are anticipated from implementation of the proposed action.	Implementation of the No Action Alternative would result in no additional impacts to air quality beyond the scope of normal conditions and influences within the ROI.
Cultural Resources	Implementation of the proposed action is not anticipated to adversely impact any cultural resources.	No impacts.
Infrastructure	No impacts to potable water, wastewater and solid waste, electricity, or transportation infrastructure are anticipated.	No impacts.
Hazardous Materials and Hazardous Waste	Implementation of the proposed action would not increase the use or generation of hazardous materials or waste. No significant impacts to hazardous materials and waste management would result from implementation of the proposed action.	Implementation of the No Action Alternative would result in no impacts to management, use, or generation of hazardous materials and waste.
Land Use	No significant changes to land use would occur with implementation of the propose action. The launch and operation of SSATs from the Wendover Site would have no impact on private lands.	No impacts.
Noise	Construction related to the launch, maintenance, and control facilities would result in noise impacts similar to standard construction activities and would not increase noise levels above those that currently exist near Wendover Airport. The operation of ground vehicles and generators would also result in noise levels that are similar to existing conditions. Individual launch and recovery events would generate maximum sound levels (L_{max}) of 51 A-weighted decibels (dBA) or less at noise-sensitive locations. These events would be audible, but would not be expected to interfere with noise-sensitive activities such as conversation. SSAT launch and recovery noise (day-night average sound level [DNL] of 16 dBA) would be more than 10 dBA below baseline/No Action Alternative ambient noise levels at the nearest noise-sensitive locations (DNL of approximately 40 dBA), and would not result in any measurable increase in overall noise levels and therefore the FAA's significance threshold would not be met. Therefore, implementation of the proposed action would result in no significant noise impacts.	Implementation of the No Action Alternative would not change noise levels relative to existing conditions, and there would be no additional noise impacts.
Safety	No significant safety impacts would result from implementation of the proposed action if all applicable USAF Safety Program requirements continue to be implemented.	No impacts.

Table 2-3. Summary Comparison of Environmental Consequences (Continued)

Environmental Resource Area	Proposed Action	No Action
Socioeconomics	Construction activities and expenditures associated with the proposed action are expected to be minimal and would have no significant impact on direct, indirect, or induced employment and earnings in the local area surrounding the Wendover Site and proposed facilities. Operational activities and expenditures would result from the 40 personnel who would operate the various aircraft and would have minor benefits to the local economy.	No impacts.
Soil Resources	Minimal impacts would result from the assembly of the H-97 radio-relay station. A 100-foot by 250-foot gravel pad extension would be constructed to the southwest of the existing launch facility gravel pad. The pad would be constructed in the same manner as the existing pad was constructed. This would include the use of a geotextile fabric laid over the existing site soils. Other construction related to the proposed action would occur on existing gravel pads and would not impact underlying soils. Minor impacts to soils could occur from vehicles traveling into the range area to recover SSATs or RATO bottles.	No Impacts.
Biological Resources	No significant impacts to vegetation, wildlife, listed species, or migratory birds would result from implementation of the proposed action.	No Impacts.
Water Resources	No impacts to groundwater are anticipated and Utah's Storm Water General Permit would not apply. Operational impacts to surface waters could occur from vehicle traffic on the range. Vehicles would be used to pick up spent RATO bottles and recover SSATs. Vehicles crossing ephemeral streams could increase the erosion potential of those streams. No significant impacts to water resources are anticipated.	No Impacts.
Cumulative Effects	No significant cumulative impacts would result from implementation of the proposed action. The proposed action, combined with other past, present, and reasonably foreseeable projects in the area surrounding Wendover Airport, would not result in significant cumulative impacts.	No Impacts.

3.0 AFFECTED ENVIRONMENT

3.1 AIRSPACE RESOURCES

3.1.1 Definition of the Resource

Airspace management and air traffic control (ATC) consist of the direction, control, and coordination of flight operations in the "navigable airspace" that overlies the geopolitical borders of the United States and its territories. Airspace management considers how navigable airspace is designated, used, and administered to best accommodate the individual and common needs of military, commercial, and general aviation. Navigable airspace consists of airspace above the minimum altitudes of flight prescribed by *United States Code (USC)* Title 49, Subtitle VII, Part A, and includes airspace needed to ensure safety in the takeoff and landing of aircraft (49 *USC* § 40102). The U.S. government has exclusive sovereignty over all U.S. airspace extending from the ground surface to above 60,000 feet above mean sea level (MSL) (49 *USC* 40103(a)(1)).

Congress has assigned the FAA the responsibility to develop plans and policy for the use of the navigable airspace to ensure the safety of aircraft and efficient use of airspace (49 *USC* § 40103(b)). The FAA considers multiple and sometimes competing demands for aviation airspace relative to airport operations, federal airways, Jet Routes, military flight training activities, and other special needs to determine how the National Airspace System (NAS) can best be structured to address all user requirements. Special Use Airspace (SUA) identified by the FAA for military and other governmental activities is charted and published by the National Aeronautical Charting Office in accordance with FAA Order 7400.2M, *Procedures for Handling Airspace Matters,* and other applicable regulations and orders.

For the purposes of this airspace analysis, the Region of Influence (ROI) for the proposed action and No Action Alternative includes the UTTR South Range and the airspace surrounding Wendover Airport.

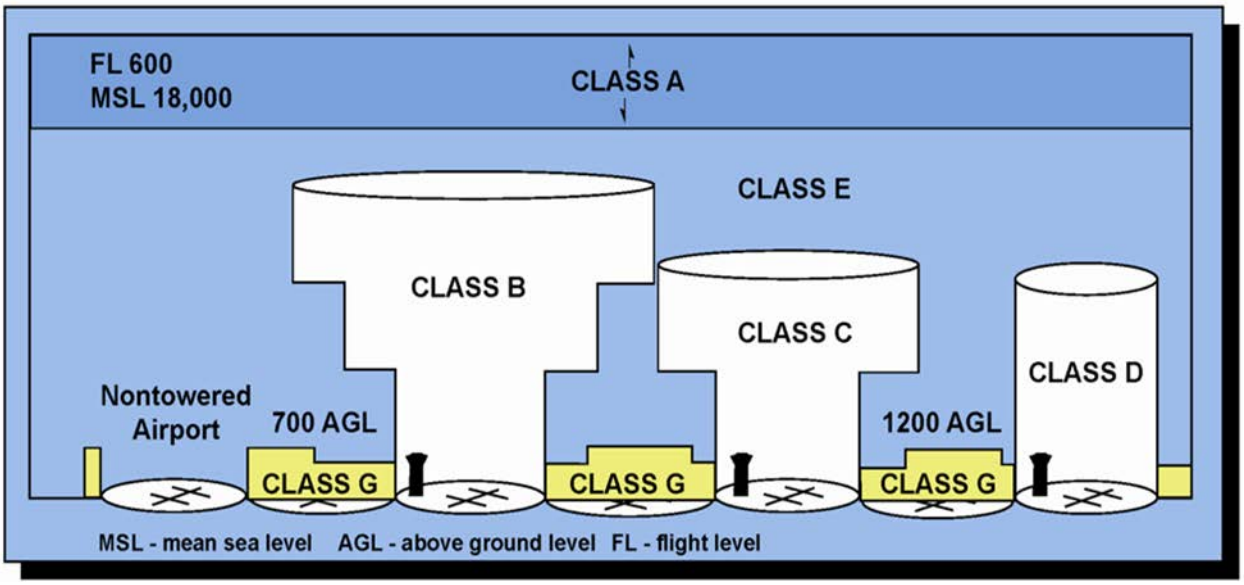
3.1.1.1 Airspace Categories

The FAA defines two categories of airspace: regulatory and non-regulatory. Within these two categories are four types of airspace: Controlled, Special Use, Other, and Uncontrolled. Controlled airspace is airspace of defined dimensions within which ATC service is provided to Instrument Flight Rules (IFR) and Visual Flight Rules (VFR) flights in accordance with the airspace classification (FAA 2017).

Controlled airspace is categorized into five separate classes: Classes A through E. The airspace classes are graphically shown on Figure 3-1. Classes A through E identify airspace that is controlled, airspace supporting airport operations, and designated airways affording en route transit from place to place. The classes also dictate pilot qualification requirements, rules of flight that must be followed, and the type of equipment necessary to operate within that airspace.

Class A airspace generally extends from 18,000 feet MSL up to and including Flight Level (FL) 600. FL 600 is equal to approximately 60,000 feet MSL. FLs are MSL altitudes based on the use of a directed barometric altimeter setting and are expressed in hundreds of feet.

Class B airspace generally extends from the surface to 10,000 feet MSL around the nation's busiest airports. The actual configuration of Class B airspace is individually tailored and consists of a surface area and two or more layers. Class B airspace is designed to contain all published instrument procedures (FAA 2017).



Source: U.S. Department of Transportation/FAA 2003

Figure 3-1. Controlled/Uncontrolled Airspace Schematic

Class C airspace generally extends from the surface up to 4,000 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower, are serviced by a radar approach control, and that have a certain number of IFR operations or passenger enplanements. Although the actual configuration of Class C airspace is individually tailored, it usually consists of a surface area with a 5-nautical mile (NM) radius, and an outer circle with a 10-NM radius that extends from 1,200 feet to 4,000 feet above the airport elevation (FAA 2017).

Class D airspace generally extends from the surface to 2,500 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower. The configuration of each Class D airspace area is individually tailored, and when instrument procedures are published, the airspace will normally be designed to contain the procedures. Arrival extensions for instrument approach procedures may be designated as Class D or E airspace (FAA 2017).

Class E airspace is controlled airspace that is not Class A, B, C, or D. Areas in which Class E airspace begins at either the surface or 700 feet AGL are used to transition to/from the terminal or en route environment (around non-towered airports). These areas are designated by VFR sectional charts. In most areas of the United States, Class E airspace extends from 1,200 feet AGL up to but not including 18,000 feet MSL, the lower limit of Class A airspace. No ATC clearance or radio communication is required for VFR flight in Class E airspace. VFR visibility requirements below 10,000 feet MSL are 3 statute miles visibility and cloud clearance of 500 feet below, 1,000 feet above, and 2,000 feet laterally. VFR visibility requirements above 10,000 feet MSL are 5 statute miles visibility and cloud clearance of 1,000 feet below, 1,000 feet above, and 1 mile laterally (FAA 2003).

Class G airspace is uncontrolled.

3.1.1.2 Special Activity Airspace

Special Activity Airspace (SAA), a term that includes SUA and others (e.g., TFRs), is any airspace with defined dimensions within the NAS wherein limitations can be imposed upon aircraft operations. This airspace could include Prohibited Areas, MOAs, Military Training Routes

(MTRs) (Instrument Routes [IRs]/Visual Routes [VRs]), aerial refueling track/anchors, slow routes, low-altitude tactical navigation areas, Air Traffic Control Assigned Airspace (ATCAA), and any other FAA-designated airspace.

SUA is defined airspace in which activities must be confined because of their nature, or in which limitations may be imposed upon aircraft operations that are not a part of those activities. The types of SUA are Prohibited Areas, RAs, MOAs, Warning Areas, Alert Areas, Controlled Firing Areas, and National Security Areas.

MOAs are SUA of defined vertical and lateral limits established outside Class A airspace to separate and segregate certain non-hazardous military activities from IFR traffic and to identify to VFR traffic where these activities are conducted (FAA 2017). MOAs are considered "joint use" airspace. Non-participating pilots operating by VFR are permitted to enter a MOA, even when the MOA is active for military use. Pilots operating by IFR must remain clear of an active MOA unless approved by the responsible ATC. If a pilot operating by IFR is approved to transit a MOA, that part of the MOA is effectively deactivated for military training during the IFR aircraft transit.

Within an active MOA, flight by both participating and non-participating pilots operating by VFR is conducted under the "see-and-avoid" concept, which stipulates, "when weather conditions permit, pilots operating [by] VFR are required to observe and maneuver to avoid other aircraft. Right-of-way rules are contained in Code of Federal Regulations (14 CFR) Part 91" (FAA 2017). The responsible ATC provides separation service for pilots operating by IFR and for air traffic in MOAs. The see-and-avoid procedures mean that if a MOA were active during weather with restricted visibility, the general aviation pilot operating by VFR could not safely access the MOA airspace and a pilot requesting IFR clearance would not be permitted to access the active MOA. If a pilot operating by VFR encountered weather or other conditions requiring IFR flight, that pilot would need to declare an in-flight emergency and communicate with the ATC, which would communicate with the FAA to establish a temporary floor in the MOA. The UTTR ATC facility, Clover Control, would then instruct military pilots not to fly below the temporary floor. Clover Control would also instruct the VFR pilot not to fly above the temporary floor.

RAs are another type of SUA. They are regulated under 14 *CFR* 73 as designated airspace that supports ground or flight activities that could be hazardous to non-participating aircraft. RAs are three-dimensional areas of airspace used to separate and segregate hazardous activities and military flight and training operations, including air-to-ground and ground-to-ground ordnance training. RAs are only used by participating military aircraft during scheduled hours. All commercial, general, and non-participating military pilots are prohibited from entering an active RA. Most RAs are designated "joint-use," and IFR/VFR operations in the area can be authorized by the applicable ARTCC when the RA is not being utilized by the using agency.

3.1.2 Existing Conditions

3.1.2.1 Military Airspace Use

Airspace associated with Hill AFB and the UTTR consists of MOAs, ATCAA, and RAs classified into two major subset complexes: the North Range and South Range. Each range includes RAs and MOAs, and the South Range offers supersonic operating areas for training operations. The airspace units associated with Hill AFB and the UTTR are described in Table 3-1.

Table 3-1. Existing FAA-Designated Airspace at the UTTR

Airspace Unit	Floor (feet MSL unless otherwise noted)	Ceiling (feet MSL unless otherwise noted)	Time of Use	Controlling Agency
North Range				
Lucin MOA A	100 AGL	9,000	7:00 A.M. to 12:00 A.M. Mon. – Fri. 8:00 A.M. to 5:00 P.M. Sat.	ZLC
Lucin MOA B	100 AGL	7,500	7:00 A.M. to 12:00 A.M. Mon. – Fri. 8:00 A.M. to 5:00 P.M. Sat.	ZLC
Lucin MOA C	100 AGL	6,500	7:00 A.M. to 12:00 A.M. Mon. – Fri. 8:00 A.M. to 5:00 P.M. Sat.	ZLC
Lucin MOA D	9,001	18,000	7:00 A.M. to 12:00 A.M. Mon. – Thurs; 8:00 A.M. to 5:00 P.M. Fri.	ZLC
Lucin MOA E	7,501	18,000	7:00 A.M. to 12:00 A.M. Mon. – Thurs; 8:00 A.M. to 5:00 P.M. Fri.	ZLC
R-6404A	Surface	58,000	Continuous	ZLC
R-6404B	Surface	13,000	Continuous	ZLC
R-6404C	100 AGL	28,000	Continuous	ZLC
R-6404D	13,000	25,000	By NOTAM	ZLC
South Range				
Sevier MOA A	100 AGL	14,500	7:00 A.M. to 12:00 A.M. Mon. – Fri. 8:00 A.M. to 5:00 P.M. Sat.	ZLC
Sevier MOA B	100 AGL	9,500	7:00 A.M. to 12:00 A.M. Mon. – Fri. 8:00 A.M. to 5:00 P.M. Sat.	ZLC
Sevier MOA C	14,500	18,000	By NOTAM 6 hours in advance	ZLC
Sevier MOA D	9,500	18,000	By NOTAM 6 hours in advance	ZLC
White Elk MOA	14,000	18,000	7:30 A.M. to 10:00 P.M Mon. – Thurs.; 7:30 A.M. to 4:30 P.M. Fri.	ZLC
Currie ATCAA	18,000	58,000		ZLC
Tippet ATCAA	18,000	58,000		ZLC
Gandy MOA	100 AGL	18,000	7:00 A.M. to 12:00 A.M. Mon. – Fri. 8:00 A.M. to 5:00 P.M. Sat.	ZLC
Gandy ATCAA	18,000	58,000		ZLC
R-6402A	Surface	58,000	Continuous	ZLC
R-6402B	100 AGL	58,000	Continuous	ZLC
R-6403	Surface	9,000	8:00 A.M. to 8:00 P.M. Mon. – Thurs.	ZLC – No air to ground communications
R-6405	100 AGL	58,000	Continuous	ZLC
R-6406A	Surface	58,000	Continuous	ZLC
R-6406B	100 AGL	58,000	Continuous	ZLC
R-6407	Surface	58,000	Continuous	ZLC
R-6412A	Surface	9,000	By NOTAM	S56
R-6412B	9,000	10,000	By NOTAM	S56
R-6412C	Surface	9,000	By NOTAM	S56
R-6412D	9,000	10,000	By NOTAM	S56

Note: MSL is the elevation (on the ground) or altitude (in the air) of an object, relative to the average sea level.
NOTAM – Notice to Airmen; S56 – Salt Lake City Terminal Radar Approach Control

HQ UTTR at Hill AFB has oversight of the UTTR. As part of this mission, HQ UTTR is responsible for airspace management in the UTTR. The 388 FW is the using agency for the RA airspace in the UTTR, and ZLC is the servicing ATC agency for the surrounding UTTR airspace. The UTTR ATC facility, Clover Control, operates with multiple feeds from FAA radar sites. Clover Control provides RA information and air traffic services to the general aviation public. HQ UTTR owns primary and

secondary radar sites, which are scattered throughout the UTTR. These radar sites are relied upon for military traffic separation within the RA structures outside of assigned Salt Lake City Terminal Radar Approach Control (S56) airspace.

3.1.2.2 Civil Airspace Use

Civil aviation consists primarily of commercial and general aviation. Civil aircraft operations can occur anywhere within the airspace described in Section 3.1.1.2 if, and when, permitted. Civilian pilots often operate by VFR using topographic or highway features and/or using Global Positioning System (GPS) for direct routing. Specified routes and areas facilitate air transportation and airspace management. This section describes these routes and areas.

Victor Airways, sometimes referred to as Victor Routes, are "highways in the sky" used by pilots to transit between navigational aids (NAVAIDs). Victor Airways are designated on aeronautical charts with the letter "V" (hence Victor). Victor Airways are Class E airspace extending typically from 1,200 feet AGL to FL 180 or 18,000 feet MSL. The width of the victor corridor depends on the distance from the NAVAIDs (e.g., Very High Frequency Omni-Directional Ranges [VORs]). When VORs are less than 102 NM from each other, the Victor Airway extends 4 NM on either side of the centerline (8 NM total width). When VORs are more than 102 NM from each other, the width of the airway increases. The width of the airway beyond 51 NM from a NAVAID is 4.5 degrees on either side of the centerline between the two NAVAIDs (at 51 NM from a NAVAID, 4.5 degrees from the centerline of a radial is equivalent to 4 NM). The maximum width of the airway is at the middle point between the two NAVAIDs. No low-altitude Victor Routes transit the South Range. V32/V200, located in the gap between the South Range and the North Range, provides a corridor for low-altitude civilian flights across this portion of Utah.

Jet Routes are designated highways in Class A airspace for high altitude air traffic above FL 180. These routes are used by commercial aviation operators that fly under IFR control by the various FAA ARTCCs throughout the United States. While the minimum en route altitude for many of these commercial routes is FL 180, the majority of flight activity on these routes occurs at altitudes above FL 260 and up to FL 450. One high-level Jet Route, J56, bisects the UTTR southern RAs; however, pilots using the route are under positive ATC at altitudes above FL 180. Jet Routes J154 and Q124, both under positive ATC, are located in the gap between the South Range and the North Range.

Civilian and private airports/airstrips in the immediate area include Wendover Airport, which is owned and operated by Tooele County. Wendover Airport has two active runways. Runway 8/26 is approximately 10,000-feet long and 150-feet wide. Runway 12/30 is approximately 8,000-feet long and 100-feet wide. Approximately 90 aircraft operations are conducted per week from Wendover Airport, and five aircraft are based at the airport (AirNav 2019). Wendover Airport has six IFR approach procedures and one IFR departure procedure. Airspace units (as shown on the FAA Sectional Chart for the region around Wendover Airport) are shown on Figure 3-2.

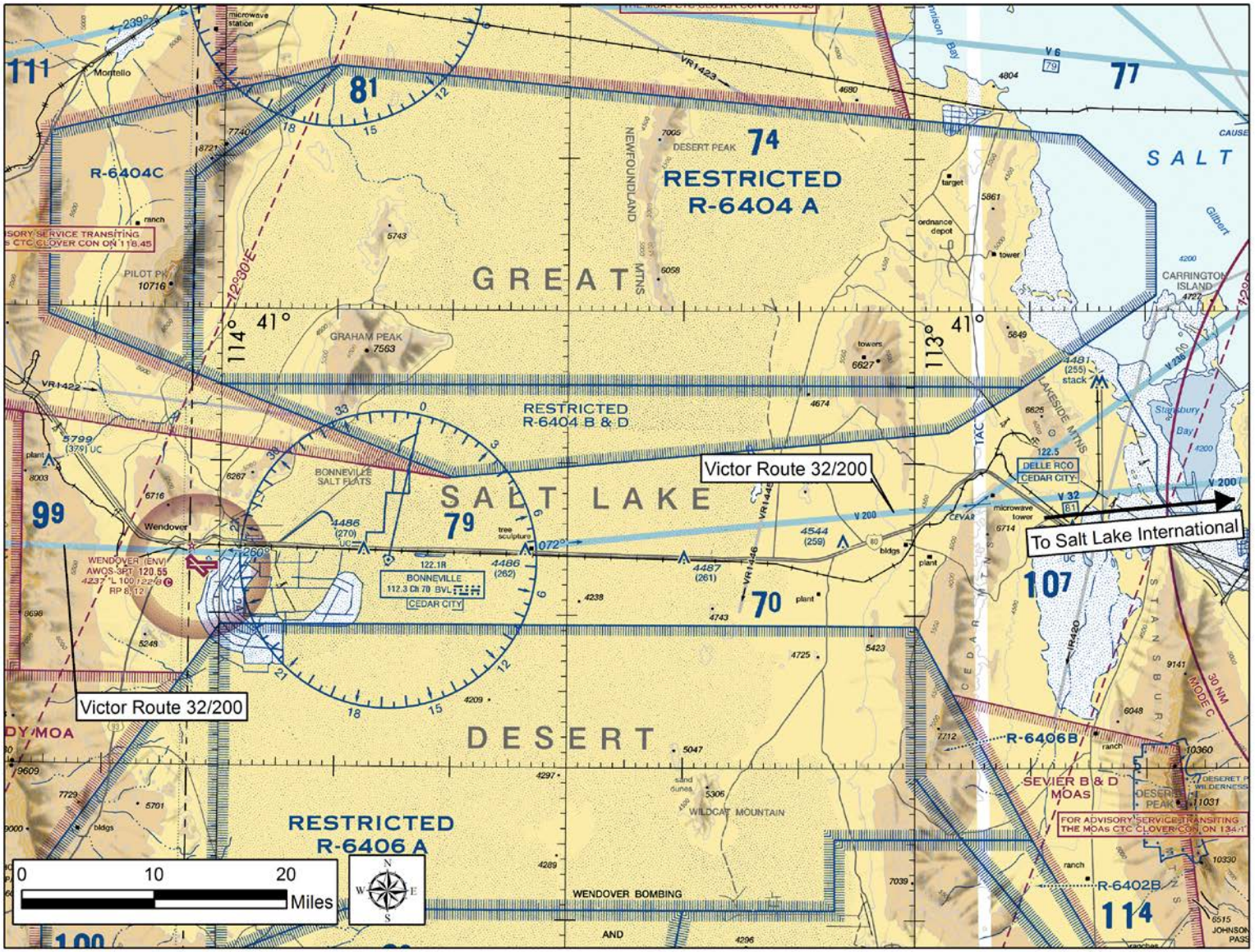


Figure 3-2. Excerpt from the FAA Sectional Chart near Wendover Airport

3.2 AIR QUALITY

3.2.1 Definition of the Resource

Air quality is determined by the type and amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. The levels of pollutants are generally expressed on a concentration basis in units of parts per million or micrograms per cubic meter.

The baseline standards for pollutant concentrations are the National Ambient Air Quality Standards (NAAQS) and state air quality standards established under the Clean Air Act (CAA) and amendments of 1990. These standards represent the maximum allowable atmospheric concentration that could occur and still protect public health and welfare. The NAAQS provide both short- and long-term standards for the following criteria pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than or equal to 10 micrometers in diameter (PM_{10}), particulate matter less than or equal to 2.5 micrometers in diameter ($PM_{2.5}$), ozone (O_3), and lead (Pb).

Under the CAA, it is the responsibility of the individual states to achieve and maintain the NAAQS. To accomplish this, states use the U.S. Environmental Protection Agency (USEPA)-required State Implementation Plan (SIP). A SIP identifies goals, strategies, schedules, and enforcement actions designed to reduce the level of pollutants in the air and bring the state into compliance with the NAAQS.

All areas of the United States are designated as having air quality better than (attainment) or worse than (nonattainment) the NAAQS. Areas for which the air quality data are insufficient for the USEPA to form a basis for attainment status are unclassifiable. Such areas are treated as attainment areas until proven otherwise. Nonattainment areas in which air pollution concentrations have been successfully reduced to levels below the standard are designated as “maintenance areas.” Maintenance areas are subject to special maintenance plans to ensure compliance with the NAAQS.

Hazardous air pollutants (HAPs) are chemicals known to or suspected of causing cancer or other serious health effects for which occupational exposure limits have been established. Some volatile organic compounds (VOCs) are classified as HAPs. VOCs are also ozone precursors and include any organic compound involved in atmospheric photochemical reactions, except those designated by a USEPA administrator as having negligible photochemical reactivity. HAPs are not covered by the NAAQS but could present a threat of adverse human health or environmental effects under certain conditions.

3.2.2 Existing Conditions

3.2.2.1 Climate

The UTTR is located in Box Elder and Tooele Counties in Utah. The UTTR is located in the interior climate region of central/western Utah, which is in the transition zone between a humid, subtropical climate and a hot-summer humid continental climate. The average temperature is 51.5 degrees Fahrenheit (°F) (10.8 degrees Celsius [°C]). The warmest month is July, with an average high temperature of 93.7°F (34.3°C). The coolest month is January, with an average low temperature of 18.1°F (-7.7°C) (Western Regional Climate Center 2017).

Average annual precipitation at the UTTR is 10.4 inches (263.1 millimeters [mm]). April is the wettest month, with an average of 1.3 inches (33.0 mm) of precipitation. August is the driest month, with an average of 0.35 inches (8.9 mm) of precipitation. Average annual snowfall at the

UTTR is 18.3 inches (46.5 centimeters [cm]). The most snow falls in January, with an average of 7.7 inches (19.6 cm) (Western Regional Climate Center 2017).

3.2.2.2 Air Quality

The proposed project area is located entirely within Tooele County. Therefore, for the purposes of this air quality analysis, the ROI for the proposed action and No Action Alternative includes Tooele County. According to the USEPA, portions of Tooele County are in serious nonattainment for $PM_{2.5}$ (2006 standard) and nonattainment for SO_2 (1971 standard) (USEPA 2020a). However, because the Wendover Site is not included in the nonattainment areas, a conformity determination is not required.

Tooele County emissions data were obtained from USEPA's 2017 National Emissions Inventory (NEI) (Table 3-2). The county data include emission amounts from point sources, area sources, and mobile sources. *Point sources* are stationary sources that can be identified by name and location. *Area sources* are point sources from which emissions are too low to track individually (e.g., a home or small office building) or a diffuse stationary source (e.g., wildfires or agricultural tilling). *Mobile sources* are any kind of vehicle or equipment with a gasoline- or diesel-powered engine, an airplane, or a boat. Two types of mobile sources are considered: on-road and non-road. On-road sources include vehicles such as cars, light trucks, heavy trucks, buses, engines, and motorcycles. Non-road sources include aircraft, locomotives, diesel- and gasoline-powered boats, personal watercraft, lawn and garden equipment, agricultural and construction equipment, and recreational vehicles (USEPA 2020b).

Table 3-2. Baseline Criteria Pollutant Emissions Inventory for Tooele County, Utah

County	Criteria Pollutant (tons/year)					
	CO	NO_X	PM_{10}	$PM_{2.5}$	SO_2	VOCs
Tooele	26,195	6,083	7,214	2,554	193	19,535

Source: USEPA 2020b
NO_x = nitrogen oxides

3.2.2.3 Greenhouse Gas Emissions

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere; the accumulation of these gases in the atmosphere has been attributed to the regulation of Earth's temperature. Human influence on the climate system is clear, and recent anthropogenic emissions of GHGs are the highest in history. Recent climate changes have had widespread impacts on human and natural systems (IPCC 2014). Air emissions, including GHG emissions, have been assessed in accordance with the *Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide – Fundamentals, Volume 1 of 2* and *Volume II – Advanced Assessments* (USAF 2017a, USAF 2018). The guidance recommends consideration of both the potential effects of a proposed action on climate change, as indicated by its estimated GHG emissions, and the implications of climate change for the environmental effects of a proposed action. The guidance also emphasizes that agency analyses should be commensurate with projected GHG emissions and climate impacts, and should employ appropriate quantitative or qualitative analytical methods to ensure useful information is available to inform the public and the decision-making process in distinguishing between alternatives and mitigations.

The six primary GHGs, as defined by the USEPA under Section 202(a) of the CAA by rulemaking (see Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the CAA, 74 *Federal Register* 66495–66546, 15 December 2009) are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

The GHGs of interest for this project are CO_2, N_2O, and CH_4. Each GHG has an estimated global warming potential (GWP), which is a function of its atmospheric lifetime and its ability to absorb and radiate infrared energy emitted from the earth's surface. The GWP allows for the comparison of GHGs by converting the GHG quantity into the common unit carbon dioxide equivalent (CO_2e). Current GHG emissions for Tooele County, obtained from the USEPA's 2017 NEI, are summarized in Table 3-3.

Table 3-3. Current Greenhouse Gas Emissions Inventory for Tooele County, Utah

County	Greenhouse Gases (tons/year)			
	CO_2	N_2O	CH_4	CO_2e
Tooele	885,369	13	655	905,534

Source: USEPA 2020b

3.3 CULTURAL RESOURCES

3.3.1 Definition of the Resource

Cultural resources are districts, sites, buildings, structures, or objects considered important to a culture or community for scientific, traditional, religious, or other purposes. They include historic architectural/engineering resources, archaeological resources, American Indian sacred sites, and traditional resources. Historic properties are any prehistoric, historic, or traditional resource included on or eligible for inclusion on the National Register of Historic Places (NRHP) (36 *CFR* 800.16(l)). For the purposes of this cultural resources analysis, the Area of Potential Effect (APE) for the proposed action and No Action Alternative includes the footprints of the launch, control, and maintenance facilities; the radio-relay locations, and the recovery area (see Figure 2-2).

3.3.2 Existing Conditions

3.3.2.1 Architectural Resources

No architectural resources are present in the APE. Wendover Airport and many of its structures are part of an NRHP-eligible historic site. Buildings within this site may be contributing elements to the site or are individually eligible. Wendover Airport is located within 1 mile of the APE.

3.3.2.2 Archaeological Resources

Several archaeological inventories have been conducted near the APE. Only one archaeological resource, the former Deep Creek Railroad, has been documented in the APE. The former Deep Creek Railroad is located along the western edge of the APE. This railroad was constructed in 1917 as a branch of the Western Pacific Railroad. The Deep Creek Railroad connected the main lines of the Western Pacific at Wendover to Gold Hill and the Ferber Gold Mining District (Hill AFB 2016a). The railroad was abandoned and most of its associated features (e.g., ties and rails) were removed in 1939, but the rail bed remains. The former Deep Creek Railroad is significant for its association with regionally significant themes of area development, transportation, and communication.

Surveys have identified seven additional archaeological resources within 1 mile of the APE. Table 3-4 contains a summary of the resources located in the APE and within 1 mile of the APE.

Table 3-4. Archaeological and Architectural Resources Near the APE

Site Number	Site Name	NRHP Status
CRNV-11-8619	NA	Not Eligible
CRNV-11-8635	NA	Not Eligible
42TO3663	NA	Not Eligible
42TO855	Wendover Airfield	Eligible
42TO2749	JB-2 Rocket Test Site	Eligible
42TO0708	Deep Creek Railroad	Eligible
CRNV-11-8631	NA	Unevaluated
CRNV-11-8632	NA	Unevaluated
26EK6396	NA	Not Eligible

NA – not applicable

3.3.2.3 American Indian Sacred Sites and Traditional Resources

Pursuant to Sections 101(d)(6)(B) and 106 of the National Historic Preservation Act (NHPA) and implementing regulations prescribed in 36 *CFR* 800.2(c)(2), the USAF is in the process of consulting on a government-to-government basis with tribes culturally affiliated with the UTTR. These tribes have been asked to provide information on any properties to which they attach religious and cultural significance (Appendix D). The Hill AFB Cultural Resource Manager has been providing updates on the project at the Annual American Indian meeting and Utah DoD Quarterly Tribal Meetings since 2015. No tribal sacred sites or properties of traditional religious and cultural importance have been documented in the APE.

3.4 INFRASTRUCTURE

3.4.1 Definition of the Resource

Infrastructure, within the context of this EA, is associated with utilities and transportation. The utility systems described and analyzed include potable water, electricity, and waste water/solid waste. The description of each utility system focuses on existing infrastructure and current use.

For the purposes of this infrastructure analysis, the ROI for the proposed action and No Action Alternative includes the portion of the project area within and immediately surrounding Wendover Airport.

3.4.2 Existing Conditions

The existing infrastructure system of Wendover, Utah, and West Wendover, Nevada, currently serves a combined population of 5,668 (USCB 2016). This population increases by an average of 12,000 to 15,000 visitors per weekend (West Wendover 2016).

3.4.2.1 Utilities

Potable water is supplied to the region by the Johnson Springs Transmission System, which is owned by the Cities of Wendover and West Wendover. Wendover and West Wendover also provide wastewater and solid waste collection services. Wells Rural Electric Company, a co-operative facility serving northeastern Nevada and a portion of western Utah, provides electricity.

3.4.2.2 Transportation

Transportation in the region consists of I-80, which connects Salt Lake City, Utah, to San Francisco, California; and U.S. Highway 93A, which connects the Wendover and West Wendover communities

to Las Vegas, Nevada, and I-15. The region is also accessible by FLYAWAY, a commercial charter flight into and out of Wendover Airport. This program averages 7 to 10 flights per week on a 168-passenger Boeing 737-800 aircraft operated by Xtra Airways (West Wendover 2016).

3.5 HAZARDOUS MATERIALS AND HAZARDOUS WASTE

3.5.1 Definition of the Resource

The terms "hazardous materials" and "hazardous waste" refer to substances that, because of their quantity, concentration, or physical, chemical, or infectious characteristic, could present substantial danger to public health or the environment when released into the environment. Products containing hazardous materials that could result in the generation of hazardous waste include fuel, adhesives, sealants, corrosion-prevention compounds, hydraulic fluids, lubricants, oils, paints, polishes, thinners, and cleaners. In addition to these substances, the EA also evaluated ordnance such as chaff and flares.

The key federal regulatory requirements related to hazardous materials and waste include:

- Resource Conservation and Recovery Act (RCRA) of 1976 (42 *USC* 6901 et seq.);
- Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 (42 *USC* 11001-11050);
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 (42 *USC* 9601-9675);
- Community Environmental Response Facilitation Act of 1992 (42 *USC* 9620);
- Asbestos Hazard Emergency Response Act (15 *USC* 2651);
- Spill Prevention, Control, and Countermeasure (SPCC) Rule (40 *CFR* 112);
- USEPA Regulation on Identification and Listing of Hazardous Waste (40 *CFR* 261);
- USEPA Regulation on Standards for the Management of Used Oil (40 *CFR* 279);
- USEPA Regulation on Designation, Reportable Quantities, and Notification (40 *CFR* 302);
- EO 13834, *Efficient Federal Operations;*
- Toxic Substances Control Act (TSCA) of 1976 (40 *CFR* 700–766); and
- CAA of 1970, including the 1990 CAA Amendments (40 *CFR* 61).

Several USAF regulations address the management and safe handling of hazardous materials and wastes in accordance with applicable federal and state regulations. These include:

- Air Force Instruction (AFI) 32-7086, *Hazardous Material Management;*
- The Hill AFB Supplement to AFI 32-7086, *Hazardous Material Management;*
- AFI 32-7042, *Solid and Hazardous Waste Compliance;* and
- AFI 32-1052, *Facility Asbestos Management.*

USAF and DoD regulations concerning the safe storage, handling, and use of chaff and flares include:

- Department of Defense Directive (DoDD) 6055.09E, *Explosives Safety Management*
- AFI 11-214, *Air Operations Rules and Procedures*

- Air Force Manual (AFMAN) 91-201, *Explosives Safety Standard*s
- AFMAN 32-1084, *Facility Requirements*
- AFI 91-204, *Safety Investigations and Reports*

For the purposes of this hazardous materials and waste analysis, the ROI for the proposed action and No Action Alternative includes portions of the UTTR where these substances are used, stored, transported, or disposed, and the footprints of the proposed construction projects described in Section 2.6.1 of this EA. The ROI also includes the area beneath the airspace located between the SSAT launch area and the existing RA. This area is included as the area (outside of existing RA) where a SSAT accident and resulting hazardous material release could occur.

3.5.2 Existing Conditions

Hazardous materials used by USAF and contractor personnel at the UTTR are managed in accordance with the Hill AFB Supplement to AFI 32-7086. Hazardous materials at the UTTR are authorized, issued, and tracked via coordination with the Installation Hazardous Materials Management Program, using the installation Hazardous Material Management Process (HMMP) and Enterprise Environmental, Safety, and Occupational Health – Management Information System (EESOH-MIS). Federal Supply System (FSS) hazardous material (e.g., National Stock Number [NSN] hazardous material) is procured through coordination with Material Control and Demand Processing (75th Logistics Readiness Squadron, Materiel Management Flight [75 LRS/LGRM]) via the Integrated Logistics System – Supply (ILS-S) and Base Supply/Central Receiving Warehouse, which is the Hazardous Materials Pharmacy (HAZMART)/Hazardous Material Distribution Service Center (HDSC) established by and accountable to 75 LRS/LGRM. Base Supply/Central Receiving Warehouse is a component of the HMMP and the primary receiving point for FSS hazardous material deliveries. Procurement of non-FSS hazardous material (e.g., locally purchased) is handled on a case-by-case basis and coordinated via the HMMP and EESOH-MIS, 75 LRS/LGRM, and the requesting organization or contractor.

The UTTR North Range is a large quantity generator (LQG) of hazardous waste, as defined by the USEPA, with USEPA identification number UT0570090001 (UDEQ 2003). However, the proposed site is discontiguous from the UTTR-North area. Hazardous wastes generated at the proposed site would be managed separately from UTTR-North wastes. Depending on the amount of waste generated, the proposed site would receive a separate designation, likely as either a very small quantity generator (VSQG) or a small quantity generator (SQG). As defined in Utah Administrative Code R315-262, VSQGs generate less than or equal to 100 kilograms (kg) per month of non-acute hazardous waste, and SQGs generate less than or equal to 1,000 kg per month. Should the proposed site generate greater than 1,000 kg per month of hazardous waste, the site would be designated as an LQG. Waste generating activities would need to be coordinated with Hill AFB/UTTR environmental support staff (75th Civil Engineer Group, Environmental Compliance [75 CEG/CEIE]) and be tracked in the EESOH-MIS database. All hazardous wastes generated would be managed in accordance with the Hill AFB Hazardous Waste Management Plan (Hill AFB 2016b). This plan describes the responsibilities, training, policies, and procedures for managing hazardous wastes on the UTTR and ensures compliance with applicable federal, state, and local laws and regulations at Hill AFB, the UTTR, and the Little Mountain Test Annex. The Hazardous Waste Management Plan applies to all organizations and activities associated with, located on, or occurring at the UTTR (Hill AFB 2016b).

HQ UTTR manages oil and hazardous substance spills and releases through implementation of the Hill AFB Installation Contingency Plan (ICP) for Oil Prevention and Emergency Response

(Hill AFB 2016c). The ICP fills the requirement for a Facility Response Plan (FRP) and SPCC Plan. The ICP serves to reduce the likelihood of spills, prepare personnel to respond rapidly in the event of a spill, minimize discharge in the event of a spill, provide resources to support DoD requirements in the National Contingency Plan, and protect the environment and public health at the UTTR. The ICP establishes the responsibilities, duties, procedures, and resources to contain, mitigate, and clean up oil products and hazardous material or waste spills on the UTTR and associated sites (Hill AFB 2016c). The proposed site would need to be incorporated into the Hill AFB ICP.

Toxic substances, as regulated under the TSCA, include asbestos, lead, and polychlorinated biphenyls (PCBs). It is not likely that asbestos, lead-based paint, or PCBs would be encountered during the projects associated with the proposed action; these substances are therefore not carried forward for analysis in this EA.

The UTTR Environmental Restoration Program (ERP) includes the Military Munitions Response Program (MMRP) and provides for the environmental cleanup of contamination attributable to USAF activities. The ERP includes immediate actions to remove imminent threats to human health and the environment. The objective of the ERP at the UTTR is to protect human health and the environment, and comply with all applicable statutory, regulatory, and other requirements. Environmental response actions at the UTTR are planned and executed under the ERP in a manner consistent with AFI 32-7020, *Environmental Restoration Program*, CERCLA, and other applicable laws.

Construction associated with the maintenance and launch facilities (described in Section 2.6.1) would occur in the former Munitions Response Site (MRS) AL501C. The former MRS AL501C is now part of an active range; this site was closed out and withdrawn from the MMRP on 24 October 2014 (Hill AFB 2014).

Chaff and flares are currently used in the portions of the UTTR that have been approved for such use. Additional information on chaff and flare storage is described in Section 3.8.2.2.

3.6 LAND USE

3.6.1 Definition of the Resource

Land use describes the way the natural landscape has been modified or managed to provide for human needs. In developed and urbanized areas, land uses typically include residential, commercial, industrial, utilities and transportation, recreation, open space, and mixes of these basic types. Other uses such as mining, agriculture, forestry, and specially protected areas (e.g., monuments, parks, and preserves) are usually found on the fringes of or outside of urbanized areas. Plans and policies guide how land resources are allocated and managed to best serve multiple needs and interests. Ordinances and regulations define specific limitations on uses.

The attributes of land use addressed in this analysis include general land use patterns within and surrounding Wendover Airport and the land use regulatory setting. The regulatory setting is the framework for managing land use and approving new development. It pertains to federal, state, and local statutes, regulations, plans, programs, and ordinances.

For the purposes of this land use analysis, the ROI for the proposed action and No Action Alternative includes Wendover Airport and the area beneath the airspace located between the SSAT launch area and the existing RA.

3.6.2 Existing Conditions

The DoD owns a portion of the land in the area beneath the airspace located between the SSAT launch area and the existing RA. This area is part of the UTTR South Range, which is primarily used for military personnel and weapon systems training and testing exercises. Testing and training includes air-to-air operations, air-to-surface operations, visual and radar bombing, and tactical maneuvers.

The other portions of land that would be overflown by SSATs after launch are owned by the School and Institutional Trust Lands Administration (SITLA) and Intrepid Potash Wendover, LLC (Intrepid Potash). The SITLA manages Utah's trust lands to support public institutions such as schools, hospitals, and universities. Two SITLA parcels are located beneath the airspace located between the SSAT launch area and the existing RA. One parcel is leased to Intrepid Potash. The other parcel is currently unleased. The land owned by Intrepid Potash and the SITLA parcel leased to Intrepid Potash include portions of potash evaporation ponds associated with potash production in the area.

Wendover Airport is located approximately 1 mile to the north of the Wendover Site. Wendover Airport is an active civil airport owned by Tooele County. The airport contains an 8,000-foot long runway and a 10,000-foot long runway, and is used primarily by general aviation pilots but also by military and commercial pilots (AirNav 2019). Wendover Airfield is listed on the NRHP as an archaeological resource.

3.7 NOISE

3.7.1 Definition of the Resource

Noise is commonly defined as unwanted sound. Sound is defined as pressure variations in air that can be detected by the human ear. A sound can be characterized by its pitch and its loudness. Pitch depends on the rapidity (frequency) of the vibrations that comprise a sound. The human ear is specialized and best suited for the detection of sounds with vibrational frequencies between 1,000 and 6,000 cycles per second. Extremely high-pitched sounds (e.g., dog whistles) and extremely low-pitched sounds (e.g., distant rumbles) are not heard as well as sounds in mid-range frequencies. Sound levels are typically described in decibels (dB), a logarithmic scale used to simplify communication of a very wide range of audile sound pressure levels. Loudness describes the amplitude of sound waves as perceived by a listener. A system known as A-weighting (measured in A-weighted decibels [dBA]) is often applied to sounds to mathematically de-emphasize sound energy at frequencies not easily detected by the human ear. Zero on the dBA scale is based on the lowest sound pressure that a healthy, unimpaired, human ear can detect. Sound levels higher than 120 dBA can cause discomfort. Normal conversation at a distance of 3 feet typically generates sound levels of approximately 60 dBA. Common A-weighted sound levels are shown on Figure 3-3.

The dB scale is logarithmic, which reflects the way in which sounds of various acoustic energies are perceived. An increase of 10 dB relative to any dB starting point represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense. Because of the nature of logarithms, the addition, to an existing sound environment, of a sound that is 10 dB less loud than the existing sound level adds only 0.1 dB, an increase that is not measurable under normal conditions. There is also a relationship between the subjective noisiness (i.e., perception) of a sound and its level. A 20-dB increase in sound level is perceived by the human ear as approximately a quadrupling of

sound level, while a 10-dB increase is perceived as a doubling of sound level and a 3-dB increase is barely perceptible under normal (i.e., non-laboratory) conditions.

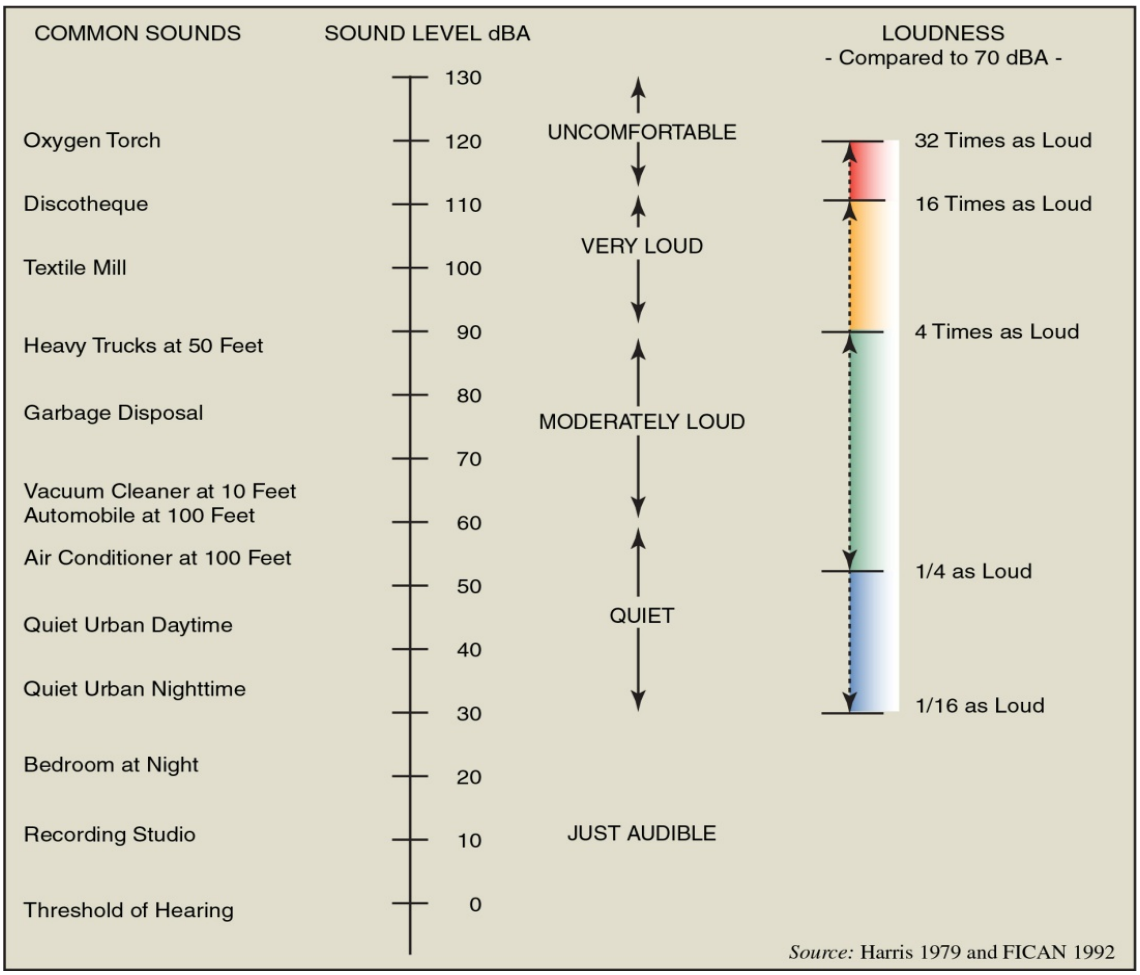
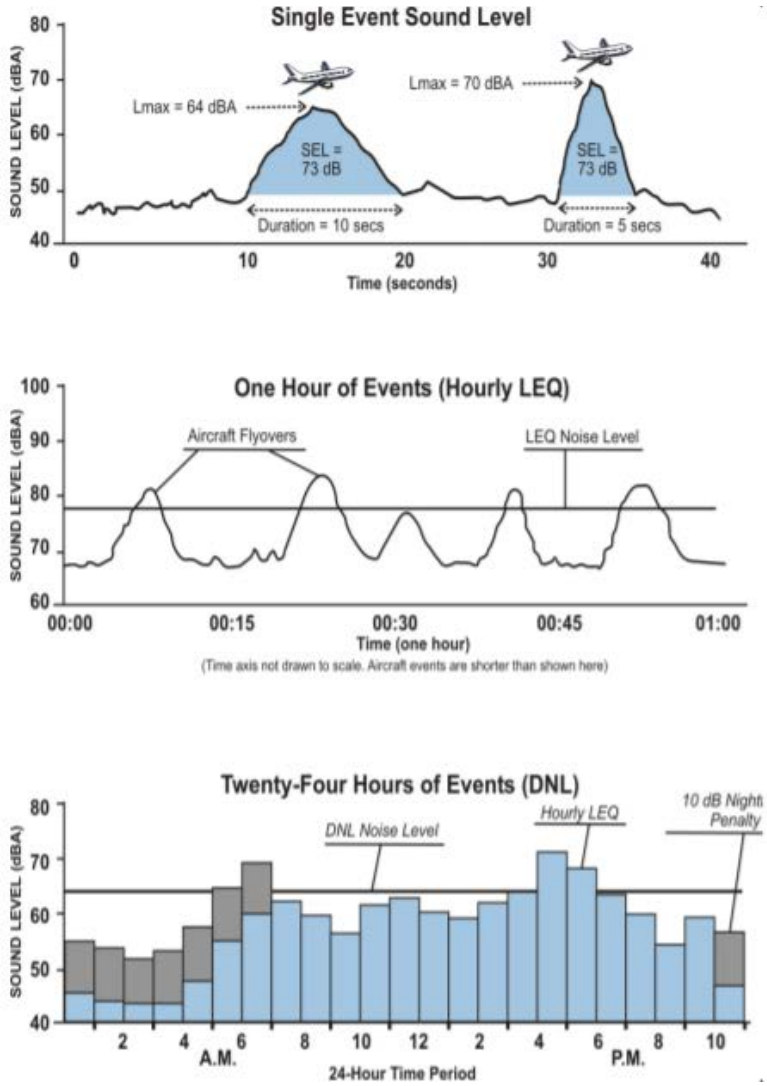


Figure 3-3. Typical A-Weighted Levels of Common Sounds

The variability of sound levels across time is also important in determining impacts. The highest sound level measured during a noise event (e.g., a vehicle pass-by) is referred to as the maximum sound level (L_{max}); the overall noise energy of a noise event normalized to a single second is the sound exposure level (SEL); and the decibel-averaged sound level over a period of time is the equivalent sound level (L_{eq}). The day-night average sound level (DNL) is a dB-averaged noise level for a 24-hour time period with a 10-dB "penalty" applied to noise levels generated between 10:00 P.M. and 7:00 A.M. In this EA, referenced L_{eq} values are for a 24-hour period, and are approximately equivalent to DNL for acoustic environments where loud late-night events are uncommon. Figure 3-4 illustrates time-varying sound levels for a hypothetical location exposed to aircraft flyover noise. It should be noted that the time-averaged noise level is often substantially lower than the noise level of individual loud events (e.g., aircraft overflights). Noise values in Figure 3-3, for example, are instantaneous noise levels, not time-averaged noise levels like those communicated using the DNL metric. In military training airspace, DNL is calculated for the month with the highest operations tempo and includes a dB-correction for potential startle reactions caused by sudden onset noises generated by low-flying, high-speed military aircraft. This metric is the onset-rate adjusted monthly day-night average sound level (DNL_{mr}).



Source: Kendall-Tamiami Executive Airport 2009

Figure 3-4. Describing Time-Varying Sound Levels

Social surveys have identified a correlation between DNL and the percentage of the population that is highly annoyed by a noise. A DNL of 65 dBA is expected to highly annoy approximately 12 percent of the population (Schultz 1978; Finegold et al. 1994). The DoD has published land use guidelines stating that certain noise-sensitive land uses (e.g., residences) are not compatible with DNL greater than 65 dBA (FICON 1992). As previously mentioned, reactions to noise depend on characteristics of the listener and characteristics of the sound. Some people will be annoyed by noise at any level. People are more likely to be annoyed when engaged in a noise-sensitive activity such as sleeping or conversation. However, DNL greater than 65 dBA imply that noise events are intense, frequent, and/or occur frequently late at night, resulting in a greater likelihood of annoyance.

For the purposes of this noise analysis, the ROI for the proposed action and No Action Alternative includes areas in which the component actions of the proposed action (i.e., construction; operation of ground vehicles and equipment; launch, recovery, and maintenance of SSATs) would be audible. As described in Section 1.1, for the purposes of this EA, "launch" is defined as the time in which the SSAT is launched from the ground surface to the time the SSAT enters into existing

RA; "recovery" is defined as the time in which the SSAT exits the existing RA to the time the SSAT lands on the ground. Existing UTTR airspace is currently used by a wide variety of military aircraft, including SSATs; therefore, the noise resulting from operation of SSATs in existing airspace would not constitute a new noise source. Only noise associated with the proposed action (i.e., noise at the Wendover Site) is analyzed in this EA.

3.7.2 Existing Conditions

3.7.2.1 Existing Noise Sources

The majority of the activities associated with the proposed action would occur in the desert south of Wendover Airport. In 2017, Wendover Airport supported approximately 90 aircraft operations per week, which equates to an average of 13 aircraft operations per day. Seventy-six (76) percent of the aircraft operations were conducted with transient general aviation aircraft, 17 percent were conducted with commercial aircraft, 6 percent were conducted with military aircraft, and 1 percent were conducted with local general aviation aircraft (AirNav 2019). L_{max} associated with common examples of general aviation, commercial, and military aircraft are listed in Table 3-5. Low-altitude overflights occur frequently near the runways and along the extended runway centerlines. Aircraft operations are relatively infrequent, and according to the *Wendover Airport Industrial Park Plan*, DNL greater than 60 dB occur only on and immediately adjacent to the runways (Tooele County 2016).

Table 3-5. Maximum Noise Levels of Example General Aviation, Commercial, and Military Aircraft

Aircraft Category	Example Aircraft Type	Maximum Noise Level (L_{max}) at Distance (feet)		
		4,000	8,000	12,000
General Aviation	Beechcraft Baron	52	38	33
Commercial	Boeing 737	56	40	33
Military	KC-135R	72	63	56

Notes: Aircraft types listed are examples only; a large number of aircraft types are used at Wendover Airport; sound levels are reported for takeoff engine power setting at 59 °F and 70 percent humidity
Source: SELCALC run at standard acoustic conditions (59 °F and 70 percent relative humidity)

The launch facility is located in an area immediately adjacent to the UTTR airspace complex. The UTTR airspace complex is used for training by several very loud (greater than 65 dB) types of military aircraft, including the F-35A. As reported in the F-35A Operational Basing EIS (USAF 2013), the DNL_{mr} in the adjacent UTTR airspace is 60 dB. Supersonic aircraft operations in portions of UTTR airspace where supersonic operations are permitted generate 61 sonic booms per month (USAF 2013). Although military aircraft noise events are less frequent outside the boundaries of the UTTR than within the boundaries of the UTTR, they do occur on a regular basis within the ROI.

Noise in the ROI also includes sounds generated in the Cities of Wendover and West Wendover, traffic noise generated on nearby roads (e.g., I-80), and aircraft operations at Wendover Airport. Areas immediately adjacent to human development generally experience higher sound levels than more remote areas. The National Park Service (NPS) conducted an extensive study of the relationship between ambient sound level and non-acoustic geospatial features such as topography, climate, hydrology, and human activity (NPS 2017). This study involved field measurements of sound levels at locations across the United States. Based on this study, the L_{eq} during a typical summer daytime hour is approximately 30 dB in remote portions of the desert and approximately

40 dB on the outer fringes of developed areas near Wendover and West Wendover (i.e., the proposed SSAT launch site) (NPS 2015). Because the NPS study does not specifically account for Wendover Airport aircraft operations, noise levels in portions of the ROI close to the airport could be slightly higher than predicted by the study. Because late-night noise events are not common under baseline conditions, baseline DNL is approximately equal to baseline L_{eq}.

3.7.2.2 Noise-Sensitive Locations

Table 3-6 lists the distances from the maintenance facility, launch facility, and recovery area to the nearest noise-sensitive locations. The nearest residence is located near Airport Drive (i.e., near Wendover Airport). West Wendover Equestrian Park is located immediately south of the City of West Wendover.

Table 3-6. Noise-Sensitive Locations Near the Wendover Site

Facilities	Distance to Nearest Residence	Distance to West Wendover Equestrian Park
	Miles	
Maintenance Facility	2.9	3.3
Launch Facility	4.5	4.8
Recovery Area	5.0	5.3

3.8 SAFETY

3.8.1 Definition of the Resource

For the purposes of this EA, safety includes ground, explosive, and flight safety. Ground safety considers issues associated with construction, and operations and maintenance (O&M) activities that support aircraft operations, including fire and emergency response. Explosive safety considers the management and use of ordnance or munitions associated with SSATs. Flight safety considerations include the interaction of launch and recovery operations with other flight activities in the region. Flight safety also addresses potential for aviation mishaps and bird/wildlife aircraft strike hazards (BASH).

For the purposes of this safety analysis, the ROI for the proposed action and No Action Alternative includes the UTTR and surrounding areas.

3.8.2 Existing Conditions

3.8.2.1 Ground Safety

The UTTR is currently managed in accordance with the requirements and procedures prescribed in AFI 13-212, Air Combat Command (ACC) Supplement 1, 388 FW Addenda A, *Range Planning and Operations*. This AFI addresses a variety of ground safety considerations, including land ownership and control, weapons use, range scheduling, range maintenance, Explosive Ordnance Disposal (EOD), range decontamination and debris disposal, and environmental stewardship of ranges. AFI 13-212 also assigns responsibilities and provides detailed processes and procedures for range scheduling; maintenance; EOD; range decontamination and debris disposal; and entry into, operations within, and exit from airspace directly supporting range operations.

HQ UTTR is responsible for the safe management and operation of the UTTR. Range management involves the development and implementation of those processes and procedures required to ensure

that range operations are planned, operated, and managed safely. The focus of range management is on ensuring the safe, effective, and efficient operation of the UTTR and the safe and efficient use of RAs. The overall purpose of range management is to balance the military need to accomplish realistic testing and training with the need to minimize potential impacts of such activities to human health, the environment, and surrounding communities.

The UTTR Fire Department, which is stationed at Oasis Range, provides fire response for activities on the UTTR, including those near Wendover Airport. HQ UTTR also has mutual aid agreements with Tooele County, the City of West Wendover, and the City of Wendover's volunteer fire department. HQ UTTR works with the local fire departments to alert citizens about the potential for injury should they handle or disturb aircraft or munitions debris associated with military operations.

All structures on the ground have the potential to create hazards to aviation. The FAA provides detailed instructions for the marking of obstructions (i.e., paint schemes and lighting) to warn pilots of their presence. Any temporary or permanent structure, including all appurtenances, that exceeds an overall height of 200 feet AGL or exceeds any obstruction standard prescribed in 14 *CFR* 77 should normally be marked and/or lighted. The FAA may also recommend marking and/or lighting a structure that does not exceed 200 feet AGL or 14 *CFR* 77 standards because of its particular location. The obstruction standards prescribed in 14 *CFR* 77 are primarily focused on structures in the immediate vicinity of airports and in the approach and departure corridors of airports.

3.8.2.2 Explosive Safety

Explosives include ammunition, propellants (solid and liquid), pyrotechnics, warheads, explosive devices, and chemical agent substances and associated components that present real or potential hazards to life, property, or the environment. Hill AFB/HQ UTTR currently stores, maintains, and uses munitions required to perform the testing and training mission of the WSEP Combat Archer program.

DoDD 6055.09E and AFMAN 91-201 describe DoD and USAF guidelines for explosives safety. These regulations, along with AFI 91-204, identify potential explosive safety mishaps involving both explosive and chemical agents. Siting requirements for munitions storage and handling facilities are based on safety and security criteria. Defined distances are maintained between munitions storage areas and a variety of other types of facilities. These distances, called explosive safety quantity-distance (ESQD) arcs, are determined by the type and quantity of explosive material to be stored. Each explosive material storage or handling facility has ESQD arcs extending outward from its sides and corners for a prescribed distance. Within these ESQD arcs, development is either restricted or prohibited altogether to ensure personnel safety and to minimize potential for damage to other facilities in the event of an accident. In addition, explosives storage and handling facilities must be located in areas where security of the munitions can be maintained at all times. Identifying the ESQD arcs ensures that incompatible construction does not occur in these areas.

Trained, qualified personnel using USAF-approved technical procedures perform all munitions maintenance conducted at the UTTR. Restrictions apply to areas immediately surrounding munitions handling and storage facilities to segregate these facilities from other activities. Information on the hazards associated with the explosives located in these facilities is provided to first responders and other emergency responders.

3.8.2.3 Flight Safety

The primary concern regarding flight safety is the potential for aircraft accidents. Aircraft mishaps could include accidents related to weather, mechanical failure, or pilot error; mid-air collisions; collisions with manmade structures or terrain; or bird-aircraft collisions. Flight risks apply to all aircraft; they are not limited to the military. During 2016, six aircraft were based at Wendover Airport. A total of 4,722 operations (3,368 general aviation transient, 850 air carrier, 432 military, and 72 general aviation local) were conducted from Wendover Airport.

Bird-aircraft strikes constitute a safety concern for the USAF because they can result in damage to aircraft, injury to aircrews, or injury to local human populations if an aircraft crashes. Most birds fly below 500 feet AGL, except during migration. Generally, long-distance migrants begin migrating at elevations of approximately 5,000 feet and then progressively climb to approximately 20,000 feet. The highest known flight of a North American migratory bird species is that of the mallard duck (*Anas platyrhynchos*), which has been observed flying as high as 21,000 feet (World Atlas 2016). More than 97 percent of reported bird-aircraft strikes occur below 3,000 feet AGL, approximately 30 percent occur in the airport environment, and approximately 55 percent occur during low-altitude flight training (USAF 2017b).

3.9 SOCIOECONOMICS

3.9.1 Definition of the Resource

Socioeconomics refers to features or characteristics of the social and economic environment (e.g., population, employment, earnings, housing, and public services). For the purposes of this socioeconomic analysis, the ROI for the proposed action and No Action Alternative includes the area beneath the airspace located between the SSAT launch area and the existing RA, and the Cities of Wendover and West Wendover.

3.9.2 Existing Conditions

The area beneath the airspace located between the SSAT launch area and the existing RA is primarily owned by the DoD. SITLA and Intrepid Potash own private parcels of land beneath the airspace located between the SSAT launch area and the existing RA. Wendover and West Wendover are located approximately 4 miles north of the Wendover Site. The arts, entertainment, and recreation industries are the primary drivers of economic conditions in the region (City Data 2019). Fifteen (15) hotels in the region support these industries. Other drivers of economic conditions in the area include tourism and potash mining. The combined population of Wendover and West Wendover is approximately 5,668 (USCB 2016).

3.10 SOIL RESOURCES

3.10.1 Definition of the Resource

The following section describes the soils and physiography of the ROI. The term “soils” refers to unconsolidated materials formed from the underlying bedrock or other parent material. Soils play a critical role in both the natural and human environment.

For the purposes of this soils analysis, the ROI for the proposed action and the No Action Alternative includes the land proposed for the H-97 radio-relay station, the land adjacent to the existing gravel pad for the launch facility, and the area beneath the airspace located between the

SSAT launch area and the existing RA. All other proposed construction projects would occur on existing gravel pads evaluated in previous environmental analysis documents.

3.10.2 Existing Conditions

Four soil components are mapped by the Natural Resources Conservation Service (NRCS) in the ROI: playas, salt flats, saltair-playas complex, and theriot-rock outcrop complex (Soil Survey Staff 2018). Playa soils consist of very poorly drained, strongly calcareous, stratified silt loam, clay loam, and sand loam with a salt layer overlying alkaline sediments. Salts flats are barren, undrained basins on lake plains with a layer of salt crust that can reach approximately 1 foot in thickness. Saltair soil consists of very deep, poorly drained to very poorly drained soils that formed in alluvium and lacustrine sediments derived from mixed-rock sources (e.g., limestone, shale, and quartzite). The theriot-rock outcrop complex is found on mountainsides with short, convex slopes. Theriot soil is shallow and well drained and formed from limestone. Rock outcrops in this soil series consist of barren limestone found on escarpments and ridges.

Construction activities that disturb one (1) or more acre(s) of land must be authorized under Utah's pollutant discharge elimination system; landowners and contractors are required to obtain a stormwater permit for such activities. At the UTTR, construction activities with a footprint greater than 5,000 square feet must follow Energy Independence and Security Act (EISA) Section 438 guidance for long-term stormwater management using the Low Impact Development (LID) methods described in DoD Guidance, Unified Facilities Criteria (UFC) 3-210-10, *Low Impact Development*. An erosion control plan incorporating best management practices (BMPs) must be submitted to and approved by the 75 CEG/CEIE prior to construction startup (Hill AFB 2016d).

3.11 BIOLOGICAL RESOURCES

3.11.1 Definition of the Resource

For the purposes of this EA, sensitive and protected biological resources include plant and animal species that are federally (U.S. Fish and Wildlife Service [USFWS]) or state (Utah Division of Wildlife Resources [UDWR]) listed for protection. Identifying which species occur in an area affected by an action can be accomplished through literature reviews and coordination with appropriate federal and state regulatory agency representatives, resource managers, and other knowledgeable experts.

For the purposes of this biological resources analysis, the ROI for the proposed action and No Action Alternative includes the proposed project area as shown on Figure 2-2. The proposed project area includes the radio-relay stations; the launch, control, and maintenance facilities; the recovery area; and the area beneath the airspace located between the SSAT launch area and the existing RA.

3.11.2 Existing Conditions

3.11.2.1 Vegetation

The project area is located near the Bonneville Salt Flats in the Great Salt Lake Desert, a large dry lake surrounded by several small mountain ranges along the edges of the desert. The Bonneville Salt Flats are a densely packed salt pan encompassing more than 30,000 acres in northwestern Utah. This area is comprised of sparsely vegetated desert salt flat or alkali flats typically devoid of vegetation, with the exception of salt-tolerant shrubs and grasses adapted to the climate. Great Basin sagebrush is the primary vegetation community. Invasive species such as cheat grass

(*Bromus tectorum*), Russian thistle (*Salsola tragus*), and halogeton (*Halogeton glomeratus*) are the dominant species. As elevation increases, the landscape contains a mixture of shrubs and grasses, including sagebrush (*Artemisia tridentata*), greasewood (*Sarcobatus vermiculatus*), shadescale (*Atriplex confertifolia*), seepweed (*Suaeda torreyana*), budsage (*Artemisia spinosa*), rabbitbrush (*Chrysothamnus nauseosus*), blue grama grass (*Bouteloua gracilis*), and galleta grass (*Hilaria jamesii*) (Hill AFB 2014).

The Wendover Site is located in an existing military operations area. The adjacent areas are disturbed and have been used for range activities dating back to World War II. The H-97 radio-relay station is the only radio-relay station that would be located in a new location. The H-97 radio-relay station would be located on DoD property on the peak of a mountain approximately 15 miles south of Wendover (Figure 2-2). The land area beneath the airspace between the launch area and existing RA is partially an existing military operating area and partially private land used for mining. No unique vegetation is present in these areas.

3.11.2.2 Wildlife

A variety of mammals, birds, and reptiles inhabit the desert shrub habitat found within the Great Salt Lake Desert area. Common mammal species include black-tailed jackrabbit (*Lepus californicus*), coyote (*Canis latrans*), and desert cottontail (*S. audubonii*). Avian species include house sparrow (*Passer domesticus*), Brewer's sparrow (*Spizella breweri*), mourning dove (*Zenaida macroura*), horned lark (*Eremophila alpestris*), turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), burrowing owl (*Athene cunicularia*), and golden eagle (*Aquila chrysaetos*). Common reptile species include the Great Basin collared lizard (*Crotaphytus bicinctores*), sagebrush lizard (*Sceloporus graciosus*), side-blotched lizard (*Uta stansburiana*), western rattlesnake (*Crotalus viridis*), and Great basin gopher snake (*Pituophis catenifer deserticola*).

3.11.2.3 Special Status Species

3.11.2.3.1 Endangered Species Act

Special status plant and wildlife species are subject to regulations under the authority of federal and state agencies. The Endangered Species Act (ESA) (16 *USC* 1532 et seq.) of 1973, as amended, was enacted to protect and recover imperiled species and the ecosystems upon which they depend. The USFWS maintains a list of special status species considered endangered, threatened, or candidate.

"Endangered" means a species is in danger of extinction throughout all or a significant portion of its range. "Threatened" means a species is likely to become endangered within the foreseeable future. Candidate species include plants and animals that have been studied and proposed for addition by the USFWS to the federal endangered and threatened species list. All federal agencies are required to implement protection programs for endangered and threatened species, and to use their authority to further the purposes of the ESA.

The USFWS Information for Planning and Consultation (IPaC) system was accessed online to request an *Official Species List* to identify species protected under Section 7(c) of the ESA that could occur in Tooele County. On 27 September 2018, an *Official Species List* with the names of three federally threatened species that could occur in Tooele County was generated (via online letters) by the USFWS Utah Ecological Services Field Office and the Reno Fish and Wildlife Office (Consultation Codes: 06E23000-2017-SLI-0407, 08ENVD00-2017-SLI-0561). An updated list generated on 13 July 2020 (USFWS 2020) confirmed minimal changes to the 27 September 2018

list had occurred. These changes included the removal of Ute ladies-tresses (*Spiranthes diluvialis*) and the addition of the Lahontan cutthroat trout (*Oncorhynchus clarkia henshawi*). See Appendix E for copies of these letters. Federally listed species with potential to occur in Tooele County are shown in Table 3-7.

Additionally, the USFWS Critical Habitat Portal was used to determine if designated critical habitat is present in or near the ROI. No critical habitat for USFWS special status species is present in Tooele County (USFWS 2017a, USFWS 2020).

Table 3-7. Federally Listed Species with Potential to Occur in Tooele County, Utah

Common Name	Scientific Name	Protection Status	Habitat	Potential to Occur within the Project Area
Birds				
Yellow-billed Cuckoo	*Coccyzus americanus*	Threatened	This species uses riparian habitats. The species nests in young, rapidly growing stands of riparian areas, including willows, cottonwoods, and box elders.	None. No suitable habitat present.
Flowering Plants				
Jones Cycladenia	*Cycladenia humilis var. jonesii*	Threatened	This species is found in mixed desert scrub, juniper areas, or areas dominated by wild buckwheat and Mormon tea. The species grows only on the gypsiferous, saline soils of the Cutler, Summerville, and Chinle formations at elevations of 4,390 to 6,000 feet.	None. No suitable habitat present.
Lahontan cutthroat trout	*Oncorhynchus clarkia henshawi*	Threatened	Lahontan cutthroat trout occur in cool, flowing water with available cover of well-vegetated and stable stream banks, in areas where there are stream velocity breaks, and in relatively silt-free, rocky, riffle-run areas.	None. No suitable habitat present

Source: Laymon 1998; NatureServe 2017a, b; UDWR 2017; USFWS 2017a, b; USFWS 2018, USFWS 2020

No federally listed plant or animal species have been documented in the ROI (Lawrence 2017). No suitable habitat for federally listed species is present in the ROI.

3.11.2.3.2 Utah Wildlife Species of Concern

Pursuant to Sections 23-14-19 and 63-34-5(2)(a) of the Utah Code, the UDWR Utah Natural Heritage Program's Biodiversity Tracking and Conservation System (BIOTICS) species-by-county list was obtained to identify state-listed species that could occur within Tooele County (UDWR 2020) (Appendix E). In accordance with AFI 32-7064, *Integrated Natural Resources Management*, the USAF provides the same level of protection, when practicable, to any state-listed threatened, endangered, or other rare species as that provided to federally listed species.

Of the 28 species listed for Tooele County, three (3) Utah Wildlife Species of Concern (SPC) have been documented near the project area. These species include the short-eared owl (*Asio flammeus*), kit fox (*Vulpes macrotis*), and bald eagle (*Haliaeetus leucocephalus*) (Lawrence 2017). The short-eared owl and kit fox and their respective habitats near the ROI are described below. The bald eagle is described separately in Section 3.11.2.3.4.

Short-eared Owl. The short-eared owl is a medium-sized owl typically found within grasslands, shrublands, and other open habitats (UDWR 1999). Habitat occurs throughout the UTTR region.

The short-eared owl has been occasionally observed at the UTTR, but the species has not been observed in the ROI (Hill AFB 2014).

Kit Fox. The kit fox is native to much of the Western United States and Northern Mexico. Although the species is not overly abundant in Utah, it does occur in the western, east-central, and southeastern areas of the state. The species most often occurs in open prairie, plains, and desert habitats (UDWR 1997). Kit fox habitat occurs throughout the UTTR region; however, kit fox are uncommon throughout the UTTR and are rarely seen during the surveys performed under the Hill AFB Natural Resource Program (Hill AFB 2014).

3.11.2.3.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits actions that result in the pursuit, capture, killing, and/or possession of any protected migratory bird, nest, egg, or parts thereof. The USFWS maintains a list of designated migratory birds known to occur in various regions of the United States. The USFWS regulations allow for the incidental take of migratory birds for military readiness activities. Birds of Conservation Concern (BCCs) are a subset of MBTA-protected species identified by the USFWS as those in the greatest need of additional conservation action to avoid future listing under the ESA. BCCs have been identified at three geographic scales: National, USFWS Regions, and Bird Conservation Regions (BCRs). BCRs are the smallest geographic scale at which BCCs have been identified, and the lists of BCC species at this scale are expected to be the most useful for government agencies to consider in complying with the MBTA and EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*. The proposed project area is located within BCR 9.

In 2018, the USFWS IPaC system identified seven (7) migratory bird species with potential to occur in Tooele County (USFWS 2018). The 2020 update identified 19 migratory bird species with potential to occur in Tooele County (USFWS 2020). See Appendix E for a list of the species identified by the IPaC system. The USFWS BCC 2008 identified 28 BCCs for BCR 9 (USFWS 2008). Four (4) BCCs are known to occur near the ROI: the bald eagle, golden eagle, ferruginous hawk (*Buteo regalis*), and short-eared owl (Lawrence 2017).

3.11.2.3.4 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) (as amended in 1962) provides for the protection of bald and golden eagles by prohibiting the take, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export, or import of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit (16 *USC* 668(a); 50 *CFR* 22). “Take” means to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb (16 *USC* 668c; 50 *CFR* 22.3).

Bald and golden eagles are known to frequent the Great Salt Lake Desert area. Nesting habitat near the project area includes the surrounding rock outcrops and mountain areas. Foraging habitat is present throughout the Great Salt Lake Desert area. Documented eagle sightings are the most recurrent at Blue Lake, a large geothermal pond located approximately 11 miles south of the Wendover Site and approximately 5 miles north of the proposed H-97 radio-relay station. The closest documented eagle nest is located approximately 3 miles southwest of the launch facility (Brown 2017). Additional documented eagle nests are located near Blue Lake. In accordance with the *National Bald Eagle Management Guidelines* (USFWS 2007), HQ UTTR currently applies a 1-mile buffer to military activities that could disturb eagles and affect their ability to forage, nest, roost, breed, or raise young (Lawrence 2017; Brown 2017).

3.11.2.4 Natural Resource Area of Concern

The USFWS IPaC system was accessed to identify any National Refuge lands or invasive species management practices near the ROI. Bear River Migratory Bird Refuge, which is located approximately 120 miles to the northeast of the ROI, is the nearest natural resource area of concern (USFWS 2017b).

3.12 WATER RESOURCES

3.12.1 Definition of the Resource

For purposes of this EA, water resources include surface water, groundwater, wetlands, and floodplains. Surface water resources include lakes, ponds, rivers, and creeks. These resources are important for a variety of reasons, including economic, ecological, recreational, and human health factors. Groundwater includes the subsurface hydrologic resources of the physical environment; its properties are often described in terms of depth to aquifer or water table, water quality, and surrounding geologic composition. Wetlands are areas of transition between terrestrial and aquatic systems in which the water table is usually at or near the surface, or the land is covered by shallow water (Mitsch and Gosselink 2000). Wetlands and other water resources that are under the regulatory authority of the U.S. Army Corp of Engineers (USACE) under Section 404 of the Clean Water Act (CWA) are termed jurisdictional waters. Floodplain refers to the lowland and relatively flat areas adjoining inland and coastal waters, including, at a minimum, that area subject to a 0.2 percent or greater chance of flooding in any given year.

For the purposes of this water resources analysis, the ROI for the proposed action and No Action Alternative includes the water resources within the proposed project area. The proposed project area includes the radio-relay stations; the launch, control, and maintenance facilities; the recovery area; and the area beneath the airspace located between the SSAT launch area and the existing RA.

3.12.2 Existing Conditions

3.12.2.1 Surface Water

The proposed project area is located near the Bonneville Salt Flats in the western portion of the Great Salt Lake Desert Basin (Groundwater Basin 192) (King 2010). Basin 192 encompasses approximately 507 square miles across Nevada and Utah. Hydrology within Basin 192 is characterized by the closed hydrologic nature of the basin. A closed basin contains no surface water or other hydrologic outlets. All precipitation falling within the basin remains in the basin or is lost to evaporation. This results in the creation of playas (i.e., flat-floored desert areas that periodically fill with water to become temporary lakes) and distinct ephemeral stream channels that flow from the mountains toward the playas. Many of these ephemeral streams will end and drain into the surrounding soil before reaching a playa (USGS 1998). Because these drainages terminate into salt flats with no defined bed or bank and do not drain into another substantial waterbody, they are not considered Waters of the United States (USACE 2010). In the proposed project area, these ephemeral streams have been intercepted by brine-collection ditches and associated berms used for potash mining.

3.12.2.2 Groundwater

Depths to the shallow groundwater near the ROI vary from 3.5 to 7 feet below ground surface (USACE 2010) to deeper than 30 feet (West Wendover 2010). Water quality is poor due to high

concentrations of total dissolved salt ion solids (USAF 2000). Because of the poor quality of the groundwater, Wendover and West Wendover obtain drinking water from springs located in the surrounding mountains approximately 30 miles to the north (USAF 2000).

3.12.2.3 Wetlands and Floodplains

The ephemeral streams, diversion ditches, and playas described in Section 3.12.2.1 are mapped by the National Wetland Inventory (Figure 3-5) as the following wetland types:

- L2USJ Lacustrine Littoral Unconsolidated Bottom Intermittently Flooded
- R4SBA Riverine Intermittent Streambed Temporary Flooded
- R4SBJ Riverine Intermittent Streambed Intermittently Flooded
- R3UBF Riverine Upper Perennial Unconsolidated Bottom Semipermanently Flooded
- R4SBC Riverine Intermittent Streambed Seasonally Flooded

These areas are located in the southern and eastern portions of the area beneath the airspace located between the SSAT launch area and the existing RA. As described in Section 3.12.2.1, these are non-jurisdictional waters. No surface waters or wetlands are located in the areas proposed for construction.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) indicate that the project area is outside the FEMA FIRM area.

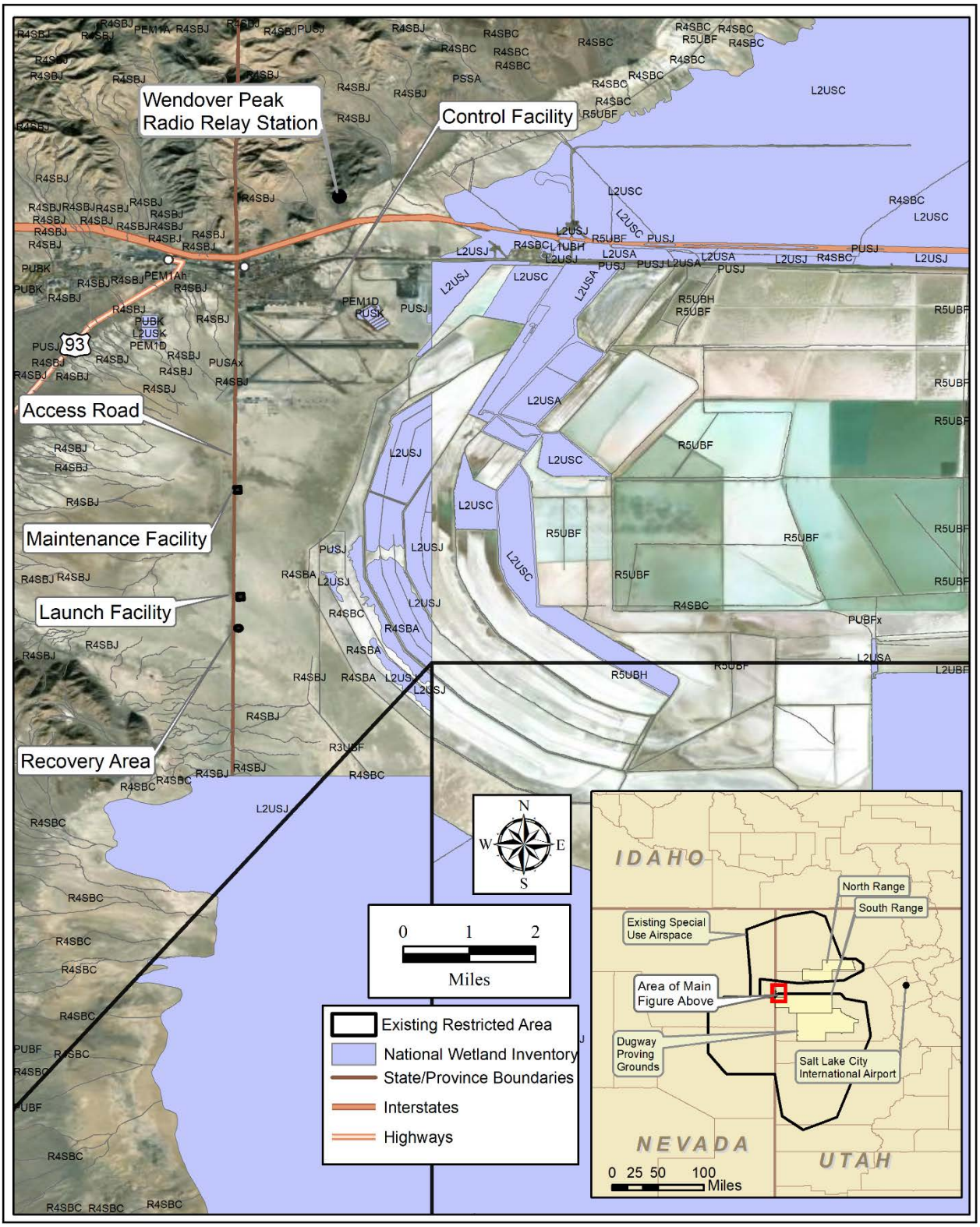


Figure 3-5. National Wetland Inventory-Mapped Waters within the Proposed Project Area

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4.0 ENVIRONMENTAL CONSEQUENCES

4.1 AIRSPACE RESOURCES

4.1.1 Proposed Action

No new SUA or modifications of existing SUA are planned as part of the proposed action. SSAT sorties (i.e., launches and recoveries) would occur during twenty-four (24), 1-week periods per year, Monday through Thursday, 6 hours per day. SSAT sorties would be conducted during approximately 96 days per year, with up to 12 sorties conducted per day. No SSAT launches would occur after 10:00 P.M.

Airspace near the Wendover Site is controlled by ZLC and UTTR Clover Control. A memorandum of agreement between ZLC and Clover Control states that any time Clover Control is open they have control of the airspace. Clover Control would hold and control all SSAT operations at the Wendover Site and would provide real time deconfliction with flights into and out of Wendover Airport. In addition, visual observers would be present between launch and RA entry. All civilian flights into and out of Wendover Airport would have priority over SSAT operations to allow for uninterrupted operations at Wendover Airport.

Implementation of the proposed action is not anticipated to result in significant impacts to the management or use of airspace near Wendover Airport. During the 30-day Draft EA public comment period for the previous Draft EA (see Section 1.1), one commenter objected to the creation of new RA and indicated that RA would directly interfere with the VFR corridor between Nevada and northern Utah. The new proposed action does not include the creation of new RA, and no interference with the VFR corridor is anticipated to result from implementation of the proposed action.

No Victor or Jet Routes would be affected. Wendover Airport is currently located under existing MOAs or airspace subject to existing civilian and military ATC.

4.1.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site and none of the associated proposed activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. Launch activities would be limited to what could be conducted from the former GLCM site at DPG. Implementation of the No Action Alternative would result in no impacts to management or use of airspace.

4.2 AIR QUALITY

CAA Section 176(c), *General Conformity*, requires federal agencies to demonstrate that their proposed activities would conform to the applicable SIP for attainment of the NAAQS. General conformity applies only to nonattainment and maintenance areas. If the emissions from a federal action proposed in a nonattainment area exceed annual *de minimis* thresholds identified in the rule, a conformity determination is required for that action. The thresholds are more restrictive as the severity of the nonattainment status of the area increases. The criteria pollutants were compared with Tooele County's annual emissions. Because the proposed action would be located in an attainment area, a General Conformity determination is not required. However, project emissions were also compared to General Conformity annual *de minimis* thresholds in order to provide a point of reference and indicator of the potential significance of the impact.

To evaluate air emissions and their impact on the overall ROI, the emissions associated with the proposed project activities were compared with the total emissions from the ROI's 2017 NEI data on a pollutant-by-pollutant basis. Potential impacts to air quality are evaluated with respect to the extent, context, and intensity of the impact in relation to relevant regulations, guidelines, and scientific documentation. The CEQ defines significance in terms of context and intensity in 40 *CFR* 1508.27. This requires the significance of the action to be analyzed with respect to the setting of the action and based relative to the severity of the impact. The CEQ NEPA regulations (40 *CFR* 1508.27[b]) provide 10 key factors to consider in determining an impact's intensity. To provide a more conservative analysis, Tooele County was selected as the ROI instead of the USEPA-designated Air Quality Control Region, which is a much larger area.

The air quality analysis focused on emissions generated by construction equipment, emissions from generators, vehicle exhaust from contracted employees' personal vehicles, and emissions from SSAT operations.

GHGs are included in the analysis. The primary source of CO_2 emissions would be from vehicles operating on-site during construction activities. The emissions generated by construction equipment operation and associated commuting workers, as well as operational emissions, would contribute to minimal GHG emissions in the area.

4.2.1 Proposed Action

Under the proposed action, construction emissions would be generated by equipment used for site grading, facility construction, and worker trips while construction is ongoing. SSAT operations, as well as fuel storage tanks, generator operations, and full-time employee commutes would also contribute to long-term emission increases.

Emissions that would be generated by the proposed action were calculated and are summarized in Table 4-1. Excavation and grading emissions were calculated using DoD-developed Air Conformity Applicability Model (ACAM) Version 5.0.16 inputs. Calculations are described in Appendix F.

Table 4-1. Proposed Action Emissions Compared with Tooele County Emissions

	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC	CO_2e
	Tons per year						
Proposed action emissions	69.62	26.84	7.38	2.25	2.87	15.56	8,606
ROI baseline emissions	**26,195**	**6,083**	**7,214**	**2,554**	**193**	**19,535**	**905,534**
Percentage of ROI emissions	*0.27%*	*0.44%*	*0.10%*	*0.09%*	*1.48%*	*0.08%*	*0.95%*
Reference level	*100*	*100*	*100*	*70*	*100*	*100*	*NA*

Source: USEPA 2020
NA = not applicable

Impacts resulting from implementation of the proposed action would amount to less than 1.5 percent of each of the criteria pollutants. The highest percentage would be for SO_2 (1.48 percent). In addition, particulate matter emissions could be further minimized by the use BMPs (e.g., spraying grading areas and unpaved construction roads with water during the construction phase). GHG emissions would be minimal, representing 0.95 percent of the Tooele County baseline annual emissions. Emissions of all pollutants would be below their respective annual *de minimis* levels. Therefore, no significant impacts to local or regional air quality are anticipated from implementation of the proposed action.

4.2.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site and none of the associated proposed activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. Implementation of the No Action Alternative would result in no impacts to the air quality of Tooele County.

4.3 CULTURAL RESOURCES

4.3.1 Proposed Action

As described in Section 3.3.2.2, only one cultural resource (the former Deep Creek Railroad) is located within the APE of the proposed action. Limited construction activities are planned adjacent to the former Deep Creek Railroad site, and no adverse impacts to this resource are anticipated.

Minor construction for the launch facility would occur on existing gravel pads that were previously evaluated for impacts to cultural resources (see Appendix D for State Historic Preservation Office [SHPO] letters). In addition, an extension to the existing concrete launch pad would be constructed. The extension to the launch pad would be constructed in the same manner as the existing pads and would include the use of a geotextile fabric laid over existing site soils. Use of this fabric would allow for restoration of the site to preexisting grading should the facility be decommissioned. Therefore, implementation of the proposed construction activities would have no adverse impacts to cultural resources.

No operational impacts to the former Deep Creek Railroad are anticipated. As described in Section 4.7.1, the operation of SSATs would not result in significant noise impacts. The launch, operation, and recovery activities and use of existing airspace would not change the visual setting of the former Deep Creek Railroad. The site's historical significance is based on its location and association with important historical events. A quiet setting is not one of the characteristics/criteria for NRHP eligibility of the site. No impacts to the historical integrity of the former Deep Creek Railroad are anticipated to result from the proposed action.

The USAF submitted a Section 106 letter to the Utah SHPO during the preparation of the previous Draft EA. An additional letter was submitted on 8 July 2020 notifying the SHPO of the change in the proposed action. The letter defined the revised APE and included the USAF determination that the undertaking would have no adverse effect on historic properties. In a letter dated 9 July 2020, the Utah SHPO stated that the project may have the potential to cause effects and they will wait for more information to provide a more robust comment (Appendix D).

As described in Section 3.3.2.3, the USAF continues to consult on a government-to-government basis with tribes culturally affiliated with the UTTR. On 8 July 2020, the USAF received a concurrence from the Navajo Tribe (Appendix D) for no adverse effects on Navajo properties. No other tribal comments have been received as of 10 September 2020.

4.3.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site and none of the associated proposed activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. Implementation of the No Action Alternative would result in no impacts to cultural resources at the UTTR.

4.4 INFRASTRUCTURE

Effects on infrastructure were evaluated based on the potential for disruption or improvement of existing levels of service and additional needs for resource consumption (e.g., water and energy). The proposed development and additional population associated with this action were used to determine the impact(s) to infrastructure.

The effects analysis consisted of a qualitative assessment based on available information for current population and the anticipated temporary population using each of the utilities and transportation infrastructure. An effect would be considered adverse if the proposed development caused any of the following:

- A violation of a permit condition or contract with a utility provider.
- A capacity exceedance of a utility.
- A system that could not sustain a mission increase due to poor condition, inefficient function, or operation.
- A mission increase that would require costly upgrades.
- A long-term interruption of a utility.

4.4.1 Proposed Action

The proposed action would require the infrastructure to support 40 full-time personnel for approximately 96 launch days per year. In addition, a limited number of personnel would also be required the week prior to and the week following a launch. These personnel would help assemble SSATs for launch and would dissemble SSATs for storage or shipping at the completion of launch activities. Facilities required to support the proposed SSAT operations are described in Section 2.6.1.

Because the proposed operations would occur for approximately 96 days per year, no permanent service facilities (e.g., potable water or sewer systems) would be required. Personnel using the launch and maintenance facilities would provide their own potable water, and portable toilets would be used. Generators would be used to provide electricity, and fuel for those generators would be provided by fueling trucks. The launch and maintenance facilities and the recovery area would be accessed by a north/south gravel access road that traverses the Utah/Nevada border. This road was recently improved to accommodate the increased traffic using the facilities. The control facility would be accessed using the existing road network at Wendover Airport.

The increase in traffic and demand on the infrastructure of Wendover and West Wendover would be minimal because the influx of 40 additional personnel would represent less than 0.4 percent of the average weekend increase in population due to gaming activities. No impacts to potable water, wastewater and solid waste, electricity, or transportation infrastructure are anticipated to result from implementation of the proposed action.

4.4.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site and none of the associated proposed activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. Implementation of the No Action Alternative would result in no impacts to the infrastructure of Wendover or West Wendover.

4.5 HAZARDOUS MATERIALS AND HAZARDOUS WASTE

The qualitative assessment of impacts to hazardous materials and waste management focuses on how (context) and to what degree (intensity) each alternative could affect hazardous materials usage and management, hazardous waste generation and management, and hazardous waste disposal. Potential impacts related to hazardous materials and wastes were analyzed for the following five effects:

1. Generation of hazardous material/waste types or quantities that could not be accommodated by the current management system;
2. Increased likelihood of an uncontrolled release of hazardous materials that could contaminate the soil, surface water, groundwater, or air;
3. Non-compliance with applicable federal and state regulations as a result of the proposed action;
4. Disturbance or creation of contaminated sites, resulting in adverse effects on human health and/or the environment; and
5. Established management policies, procedures, and handling capacities could not accommodate the proposed action.

4.5.1 Proposed Action

The existing HMMP is adequate to accommodate the relocation of the SSAT launch, control, recovery, and maintenance operations from the former GLCM site at DPG to the Wendover Site. All hazardous materials would be authorized and tracked in EESOH-MIS via the HMMP, and hazardous materials would continue to be managed in accordance with the Hill AFB Supplement to AFI 32-7086 (USAF 2006).

Implementation of the proposed action would add a new waste generating site that would be managed by the Hill AFB/UTTR environmental management staff (75 CEG/CEIE). The site would need to comply with all management and reporting requirements specified by USAF policies, including the Hill AFB Hazardous Waste Management Plan (Hill AFB 2016b), and state and federal laws. Hazardous waste disposal procedures would be similar to those currently used at Hill AFB and the UTTR.

As described in Section 2.6.1, new facilities would require the addition of new ASTs to support electrical generators and O&M activities. These new ASTs would have the required secondary containment and meet all the requirements of federal, state, local, and USAF regulations. New hazardous material and waste containers associated with the maintenance facility would also be required. The Hill AFB ICP would subsequently need to be revised to incorporate the addition of new ASTs and any changes in facility design, operation, or maintenance that materially affects the potential for an uncontrolled release of petroleum products or other hazardous materials or wastes. In the event of an accidental hazardous material or waste release during the proposed construction or operations, the proper notifications and actions would be taken in accordance with the Hill AFB ICP (Hill AFB 2016c). Spill kits would be available and accessible during generator refueling and SSAT fueling, de-fueling, and smoke oil distribution activities.

No ERP sites/MRSs would be impacted by the proposed construction activities. As described in Section 3.5.2, construction associated with the maintenance and launch facilities would occur in the former MRS AL501C. The former MRS AL501C is now part of an active range; this site was closed and withdrawn from the MMRP on 24 October 2014 (Hill AFB 2014). Additionally, surface clearance

actions were completed at the former MRS AL501C in 2011 along with adjacent MRSs AL501B, AL501D, AL501E, and AL501F. These surface clearance actions included the removal of debris and hazards associated with the munitions and explosives of concern (MEC) that were identified on the surfaces of these MRSs (Hill AFB 2012). MRS AL501 is the only remaining MRS in the area adjacent to the proposed project area. The Hill AFB Comprehensive Site Evaluation (CSE) Phase II includes a determination that no further action is required at MRS AL501 (Hill AFB 2011). Undocumented contaminated soils or MEC could be encountered during construction activities. Should soil contaminants or MEC be encountered, storage, transport, and disposal of contaminated soils and/or MEC would be conducted in accordance with applicable federal, state, and local regulations; AFIs; and base policies. Health and safety precautions, including worker awareness training, would also be required should soil contaminants or MEC be encountered during construction activities.

An SSAT accident in the area between the launch pad and existing RA could result in a release of hazardous materials on the ground. The UTTR has procedures in place to respond to aircraft accidents, including the release of associated hazardous materials (Hill AFB 2017 and Hill AFB 2016c). In the event of an SSAT accident, the existing procedures would be followed.

No chaff or flares would be used in the area between the launch pad and existing RA. Storage and handling of chaff and flares in the launch facility would be conducted in accordance with all DoD and USAF regulations concerning the materials. Section 4.8 contains additional information on explosive safety.

Impacts to hazardous materials and waste management from implementation of the proposed action would be minimal. Implementation of the proposed action would not negatively affect the hazardous materials and waste program.

4.5.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site and none of the associated proposed activities would be conducted at the Wendover Site. The UTTR would continue to use, manage, and dispose of hazardous materials and waste as described in Section 3.5.2. Implementation of the No Action Alternative would result in no impacts to the management, use, or generation of hazardous materials and waste at the UTTR.

4.6 LAND USE

4.6.1 Proposed Action

No significant changes to land use would result from implementation of the proposed action. The overflight of SSATs would have no impact on mining operations on the Intrepid Potash or SITLA lands in the area between the launch facility and existing RA. The use of the existing radio-relay station (Wendover Peak) and the placement of a new station (I-80) on an existing cell tower would have no impact to land use.

All other elements of the proposed action, including the proposed H-97 radio-relay station, would occur on or above the boundaries of the UTTR and are compatible with the use of UTTR lands for military training.

4.6.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site and none of the associated proposed activities would be conducted at the Wendover Site.

Existing public, private, and DoD land use would remain unchanged. Implementation of the No Action Alternative would result in no significant impacts to land use.

4.7 NOISE

The USAF considers "significance" of noise impacts in the context of the NEPA in terms of context and intensity, and has not defined uniformly applicable significance thresholds. As described in Section 3.7.2, the noise metric DNL represents a dB-averaged noise level over a 24-hour period with adjustments made for late-night noise events. In accordance with federal guidelines, some land uses are considered incompatible with DNL greater than 65 dBA (FICON 1992). This environmental analysis considers impacts in terms of context and intensity.

4.7.1 Proposed Action

The proposed action involves three components that would generate noise: construction of new facilities, operation of ground vehicles and equipment, and SSAT launch and recovery.

4.7.1.1 Construction

Construction would involve equipment such as backhoes, cement mixers, and graders. According to the Federal Highway Administration's Roadway Construction Noise Model, these types of construction equipment generate L_{max} of approximately 85 dBA at a distance of 50 feet (FHWA 2006). The residence nearest to the proposed maintenance facility is 3 miles away. Using the Roadway Construction Noise Model, the L_{max} at this residence would be approximately 35 dBA. This noise level would be below background sound levels in the Cities of Wendover and West Wendover and would therefore not be noticeable. Installation of the proposed radio-relay stations would occur in geographically remote areas and would generate minimal noise. Noise generated by construction activities associated with implementation of the proposed action would not be significant.

4.7.1.2 Ground Vehicles and Equipment

Once construction is complete, ground vehicles (e.g., cars and trucks) would continue to access the sites in support of SSAT operations. Equipment, including generators, would also be used as part of day-to-day O&M. Ground vehicles associated with the proposed action would generate noise levels comparable to those generated by vehicles currently operating in the area under existing conditions. Generators, which would be used at the maintenance and launch facilities, generate approximately 82 dBA at a distance of 50 feet if they are not enclosed within structures (FHWA 2006). Enclosure within a structure provides some level of sound attenuation, with the specific amount of attenuation dependent upon the specifications of the structure. Noise generated by un-enclosed generators would attenuate to less than 31 dBA at the residence nearest to the proposed maintenance facility (approximately 3 miles away). This noise level would be below background sound levels and would therefore not be noticeable during typical conditions. Noise levels at noise-sensitive locations could be even lower if the generators are enclosed in structures. Noise generated by ground vehicles and equipment associated with implementation of the proposed action would not be significant.

4.7.1.3 SSAT Launch and Recovery

Implementation of the proposed action would include launch activities for twenty-four (24) 1-week periods per year; Monday through Thursday: 6 hours per day. SSAT sorties would be conducted during approximately 96 days per year, with up to 12 sorties conducted per day. No SSAT launches

would occur from 10:00 P.M. to 7:00 A.M. Launches would be conducted toward the south (i.e., the SSAT would move away from noise-sensitive locations to the north after launch).

The BQM-167 SSAT was used as the noise source surrogate for all launch events. The BQM-167 is the aircraft currently used at Tyndall AFB and is the aircraft expected to be used most frequently at the Wendover Site. BQM-167 launches would generate noise levels similar to or greater than the other SSATs proposed for use. As described in Section 2.6, the BQM-34 uses a RATO bottle during launch (i.e., same launch method as the BQM-167), and would generate approximately equivalent launch noise levels to the BQM-167. The BQM-178 uses a pneumatic launch system, which is substantially quieter than launches using RATO.

The following text describes the methodology used to calculate noise impacts in this EA. The following methodology was used in place of standard noise modeling (e.g., the Aviation Environment Design Tool [AEDT], NOISEMAP, MOA Range NOISEMAP [MRNMAP], and Blast Noise Version 2) for the following reasons. The AEDT is not designed to model noise levels associated with rocket launches (large-scale or small-scale), and is therefore not appropriate for this analysis. Similarly, the DoD aircraft noise modeling programs NoiseMap and MRNMAP do not have capability to model large-scale or small-scale rocket launch noise. The U.S. Army noise modeling program Blast Noise Version 2 does have the ability to model small-scale rocket launch noise (e.g., munitions such as the Multiple Launch Rocket System), but its reference noise level data set does not contain SSATs or any surrogate noise source with comparable characteristics to an SSAT.

As shown below, formula 1 calculates change in sound level with change in distance based on spherical spreading of sound energy and atmospheric absorption of sound energy over distance. This formula, which is used to calculate L_{max} at the nearest noise-sensitive location, provides a conservative estimate of actual noise levels because it does not account for additional sound energy that would be absorbed by the ground during transmission. Atmospheric absorption was estimated to be 1.4 dB per 1,000 feet.

Formula 1: L2 = L1 - 20 * LOG (D1/D2) - A

Where: L1 is the sound level at the location where BQM-167 noise was measured
L2 is the sound level at the location of interest (i.e., a noise-sensitive location)
D1 is the distance between the noise source and L1
D2 is the distance between the noise source and L2
A is sound energy (in dB) absorbed by the atmosphere

During launches, the exterior L_{max} at the nearest residence would be approximately 51 dBA (calculated using formula 1), a sound level that would be audible but unlikely to interrupt conversation. Typical residences provide 15 dB of structural sound level attenuation with windows open and 25 dB with windows closed. At the nearest residence (approximately 4.5 miles to the north), noise levels generated by launch activities would not be noticeable indoors.

The West Wendover Equestrian Park is located 4.8 miles north of the launch facility (Table 3-6). Wendover Airport is located approximately 1.5 miles southeast of this park. The L_{max} at the West Wendover Equestrian Park during launches would be approximately 48 dBA. Horses could be frightened by sudden noises such as those generated by SSAT launches. An L_{max} of 48 dBA may or may not be noticeable, depending on the noise generated by other activities occurring simultaneously.

The SEL metric effectively compresses all of the noise energy of a launch event into a single second. Launch SEL was conservatively estimated based on a simplified representation of the

launch sound level time-history. Under this simplified representation, the sound level increases instantaneously to L_{max} when the RATO ignites and then continues at L_{max} for 5 seconds, after which the SSAT would be distant enough that the noise level would have decreased from L_{max} by 10 dB. Sound levels of 10 dB or greater below the L_{max} do not appreciably contribute to the overall sound level. Formula 2 was used to calculate SEL.

Formula 2: $SEL = 10 * LOG (T * 10^{(L2/10)})$

Where: T is the duration (in seconds) of an event with constant noise level

L2 is the sound level (in dBA) at the location of interest

The SEL noise metric was calculated for launch events as an intermediate step to calculating DNL, but is not directly used to predict impacts in this EA. DNL was calculated for a month in which every week includes four flying days with twelve launch and recovery events per day. This scenario is extremely conservative, because that tempo of operations would likely never actually be sustained for more than 1 week at a time. The DNL at the nearest residence and the West Wendover Equestrian Park would be 19 dBA and 16 dBA, respectively. This DNL would be below the land use compatibility threshold of 65 dBA.

Formula 3 was used to calculate DNL. Because DNL associated with SSAT launches is more than 10 dBA below the baseline ambient noise levels at the nearest noise-sensitive locations (approximately 40 dBA), there would not be any measurable increase in overall noise levels.

Formula 3: $DNL = SEL + 10 * LOG(Nday + 10*Nnight) – 49.4$

Where: Nday is the number of events per average day during the time period between 7:00 A.M. and 10:00 P.M.

Nnight is the number of events per average day during the time period between 10:00 P.M. and 7:00 A.M. (Because no launches would occur after 10:00 P.M., this number is zero.)

As described in Section 3.7, the DNL metric takes into account both intensity and duration of a noise, and DNL associated with SSAT launch represents both the event as well as sound levels during portions of the day when SSAT operations are not under way. The calculated DNL is substantially lower than the noise level during SSAT launch events using the L_{max} noise metric.

Recovery of SSATs after launch would involve the SSAT being flown toward the recovery area at 2,500 feet AGL, engine shutdown, and deployment of a parachute. Noise generated by SSATs being flown at low engine power or with engines powered off during the final approach would be minimal.

In conclusion, individual launch and recovery events would generate L_{max} of 51 dBA or lower at noise-sensitive locations. These events would be audible outdoors, but would not be expected to interfere with noise-sensitive activities such as conversation. Launch and recovery events would typically not occur on weekends, and would not occur after 10:00 P.M. These events would occur in the context of an area that is exposed to military aircraft noise and civilian aircraft noise from Wendover Airport on a regular basis under existing conditions. The DNL generated by the proposed launch and recovery events would remain below land use compatibility thresholds. Noise levels generated by construction and day-to-day O&M of ground vehicles and equipment associated with the proposed action would be below background sound levels at the nearest noise-sensitive locations and would therefore not be noticeable. Table 4-2 includes a summary of the noise levels that would occur at the nearest noise-sensitive location as a result of implementing the proposed action. No component of the proposed action would result in any measurable increase in

DNL at the nearest noise-sensitive locations. Implementation of the proposed action would not result in significant noise impacts.

Table 4-2. Summary of Noise Levels at the Nearest Noise-Sensitive Location

Project Component	Outdoor Noise Level[a]	Impact Summary
Construction	L_{max} of 35 dBA	Not noticeable during typical conditions; time-averaged noise levels would not change.
Ground Vehicles and Equipment	L_{max} of 31 dBA	Not noticeable during typical conditions; time-averaged noise levels would not change.
SSAT Launch and Recovery	L_{max} of 51 dBA	Launches would be audible outdoors but unlikely to interrupt conversation; launches would not be noticeable indoors during typical conditions. See below for DNL results.
	DNL[b] of 19 dBA	Well below land use compatibility threshold (DNL of 65 dBA); SSAT launch and recovery noise (DNL of 19 dBA) is more than 10 dBA below baseline/No Action Alternative ambient noise levels at the nearest noise-sensitive locations (approximately 40 dBA), and would not result in any measurable increase in overall noise levels.

[a] Typical residential structures provide 15 dB of noise level reduction with windows open and 25 dB with windows closed.
[b] The SEL noise metric was calculated for launch events as an intermediate step to calculating DNL, but is not directly used to predict impacts in this EA
Note: The nearest noise-sensitive location is a residence located approximately 4.5 miles north of the proposed launch site; noise levels are slightly lower at the West Wendover Equestrian Park located 4.8 miles to the north.

4.7.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site and none of the associated proposed activities would be conducted at the Wendover Site. Existing noise-generating activities at Wendover Airport, on the UTTR, and in the Cities of Wendover and West Wendover would continue, but no new noise-generating activities would occur. Noise levels would not change relative to existing conditions. Implementation of the No Action Alternative would result in no significant noise impacts.

4.8 SAFETY

4.8.1 Proposed Action

4.8.1.1 Ground Safety

Day-to-day construction operations associated with the proposed action would be performed in accordance with all applicable USAF safety regulations, published USAF technical orders, and Air Force Occupational Safety and Health (AFOSH) requirements. Construction and demolition activities would require a jobsite safety plan that explains how tasks would be accomplished while assuring job safety throughout the life of the project. Construction workers would be required to follow applicable Occupational Safety and Health Administration (OSHA) requirements as governed by the terms of the contract, which could include USAF regulations and technical orders, and AFOSH standards.

Capability for fire and emergency response is located in the City of West Wendover and at Wendover Airport. As described in Section 3.8.2.1, the UTTR Fire Department, which is stationed at Oasis Range, would continue to provide fire response for activities on the UTTR, including those near Wendover Airport. HQ UTTR would continue mutual aid agreements with Tooele County, the City of West Wendover, and the City of Wendover's volunteer fire department. HQ UTTR would continue to work with the local fire departments to alert citizens about the

potential for injury should they handle or disturb aircraft or munitions debris associated with military operations. Adherence to all existing safety procedures for training ranges on the UTTR would continue for the proposed activities. HQ UTTR maintains detailed emergency and mishap response plans to react to an accident, should one occur during launch, recovery, or maintenance activities. These plans assign agency responsibilities and prescribe functional activities necessary to react to major mishaps on or off the range. Additionally, as part of Letters of Agreement (LOAs) with Intrepid Potash and the SITLA, guidance for notification and incident response would be established for SSAT operations.

Implementation of the proposed action is not expected to increase ground safety risks beyond those typically associated with construction projects on the UTTR. Contractors would adhere to base and range safety requirements and would follow project-specific health and safety plans. No significant impacts to ground safety are anticipated if all applicable USAF, AFOSH, and OSHA requirements are followed.

4.8.1.2 Explosive Safety

EQSD arcs are separation distances between explosive storage areas (e.g., storage igloos) and handling areas (e.g., maintenance and launch facilities). ESQD arcs are based on the maximum storage capacity of each facility and are used to prevent explosive propagation from one facility to another. Additionally, ESQD arcs provide a safety zone between explosive storage areas and the surrounding areas. ESQD arcs have been established for the proposed maintenance facility, the launch facility, and the explosive storage facilities (Figure 4-1). All ESQD arcs would be located on DoD-controlled areas.

4.8.1.3 Flight Safety

Airspace near the Wendover Site is controlled by ZLC and UTTR Clover Control. A memorandum of agreement between ZLC and Clover Control states that any time Clover Control is open they have control of the airspace. Clover Control would hold and control all SSAT operations at the Wendover Site. All civilian flights into and out of Wendover Airport would have priority over SSAT operations to allow for uninterrupted operations at Wendover Airport. Clover Control would provide real-time deconfliction with flights into and out of Wendover Airport. In addition, visual observers would be present between launch and entry into existing RA.

Adherence to the UTTR BASH Plan would continue and would reduce the risk of bird-aircraft mishaps. Prior to use at the Wendover Site, all SSATs would be required to have established pre-programmed lost-link procedures. A lost link can occur when an SSAT loses communication from its controller. If communication cannot be restored immediately, then the lost-link procedure is implemented. Lost-link procedures vary by aircraft type but generally include pre-programmed actions that the SSAT would complete if it loses its link to the controller. Lost-link procedures could include a predesignated flight profile that sends the SSAT to a pre-determined location until communication can be restored. If communication cannot be restored, then the aircraft would proceed to a designated landing or recovery zone. As described in Section 2.6, because SSAT operation and frequency of operation in existing RA would be the same as operations from the former GLCM site at DPG, this EA does not analyze the potential impacts associated with operating SSAT in existing RA.

Based on historical data from launches and recoveries at Tyndall AFB and the former GLCM site at DPG, approximately 1 percent of SSAT operations result in a mishap. No significant impacts to flight safety would result from the proposed SSAT operations.

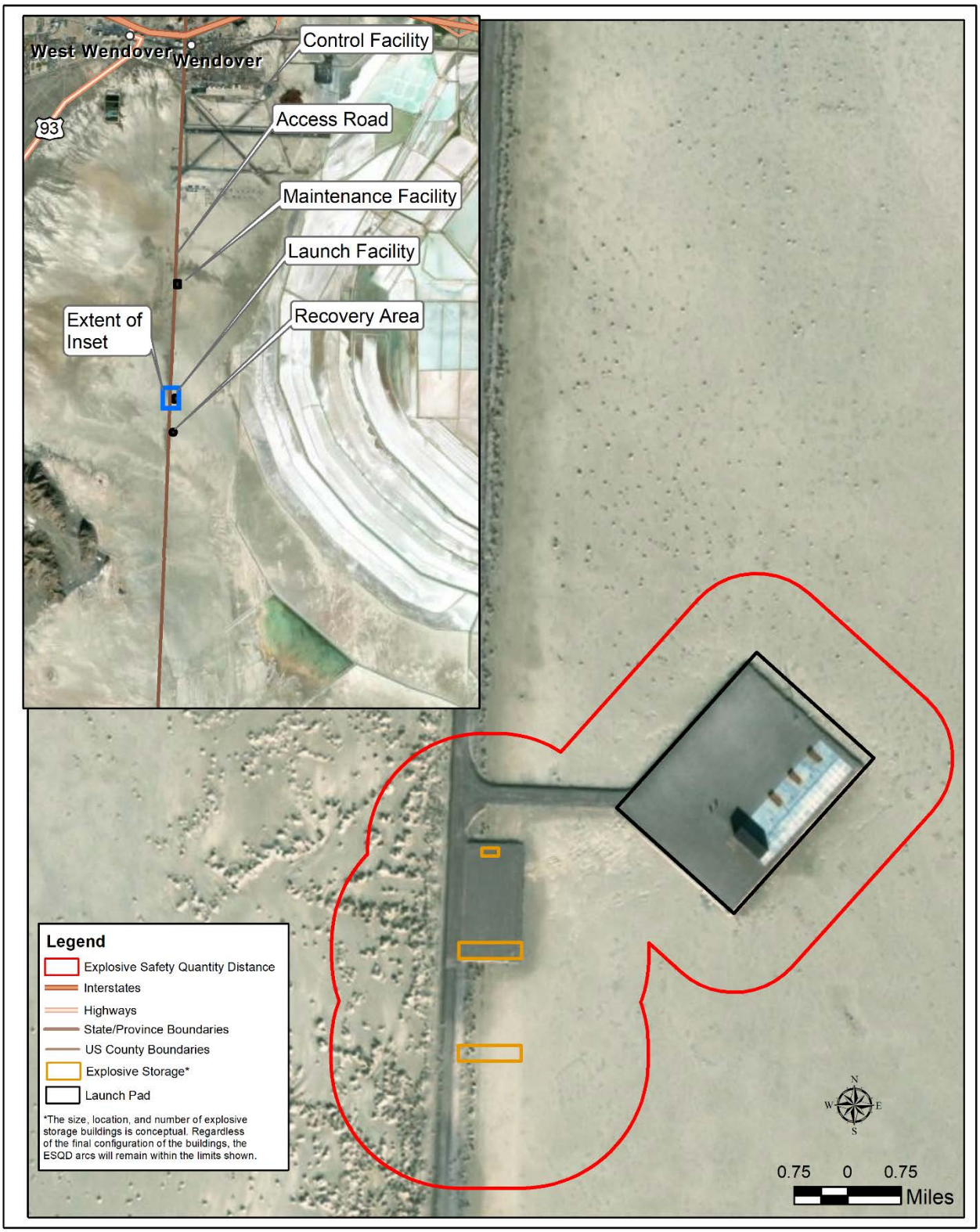

Figure 4-1. ESQD Arcs for the Proposed Wendover Site

4.8.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site and none of the associated proposed activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. All existing safety policies and procedures would remain in place, and SSAT launches would continue from the existing facilities at the former GLCM site at DPG. Implementation of the No Action Alternative would result in no impacts to safety at the UTTR.

4.9 SOCIOECONOMICS

4.9.1 Proposed Action

Construction activities and expenditures associated with the proposed action are expected to be minimal and would have no significant impact on direct, indirect, or induced employment and earnings in the local area surrounding the Wendover Site.

Additional activities and expenditures would result from the influx of 40 additional personnel to conduct the operations associated with the proposed action. These activities and expenditures could result in minor, beneficial impacts to the local economy. The 15 hotels in the area could easily accommodate an influx of 40 additional personnel. Should the additional personnel utilize the local lodging, these personnel would contribute to local hotels and restaurants during the duration of launch, operation, and recovery activities. Because the additional personnel would be temporary (i.e., for the duration of activities only), these beneficial impacts would be short-term and minor.

4.9.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site and no additional personnel would be located in the area associated with the proposed action. The minor, short-term, beneficial impacts that would result from implementation of the proposed action would not occur. Implementation of the No Action Alternative would result in no impacts to socioeconomics in the Wendover/West Wendover region.

4.10 SOIL RESOURCES

Impacts to soil resources would be considered significant if one or more of the following occurs:

- substantial soil loss or compaction precluding the reestablishment of vegetation;
- erosion causing detrimental effects to aquatic life in adjacent waters; or
- a violation of applicable federal or state law, regulation, or permit.

4.10.1 Proposed Action

Implementation of the proposed action would not result in significant, adverse impacts to soils in the area. Minimal impact would result from the installation of the H-97 radio-relay station, which would be assembled and placed on the ground surface. Corner anchor points would be installed on the station to provide stability during high winds. Minimal soil disturbance is anticipated from the installation of these anchor points.

An extension to the existing launch pad would be constructed adjacent to the existing pad. The launch pad extension would be constructed in the same manner as the existing pad and would

include the use of a geotextile fabric laid over existing site soils. Other construction related to the proposed action would occur on existing gravel pads and would not impact underlying soils.

Minor soil disturbance would occur as a result of RATO bottle recovery operations. RATO bottles would not be recovered during wet and muddy conditions.

No impacts to soils are expected to result from the use of the maintenance and control facilities. Minor impacts to soils could occur from vehicles traveling into the range area to recover SSATs. Potential impacts would be associated with the creation of ruts during wet periods or an increase in soil erosion associated with vehicle tracks. These impacts would be minor.

4.10.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site and none of the associated proposed activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. Implementation of the No Action Alternative would result in no impacts to soil resources at the UTTR.

4.11 BIOLOGICAL RESOURCES

4.11.1 Proposed Action

4.11.1.1 Vegetation

No significant impacts to vegetation would result from implementation of the proposed construction activities. Proposed construction activities would occur on USAF property subject to ongoing military operations. Construction-related impacts to vegetation would be limited to those that would result from the construction of the gravel pad extension and the installation of the proposed H-97 radio-relay station. The proposed H-97 radio-relay station would have an estimated impact area of 100 square feet. After installation of the radio-relay equipment, the site would be undisturbed except for periodic maintenance. Because of the remote location of the H-97 radio-relay station, a helicopter would be used to access the site twice per year to perform maintenance on the radio-relay station.

Impacts to vegetation could result from disturbance related to vehicle traffic onto the UTTR to recover SSATs and RATO bottles. No impacts to unique vegetation are anticipated. Therefore, no significant impacts to vegetation would result from implementation of the proposed action.

4.11.1.2 Wildlife

No significant impacts to wildlife or wildlife habitat are anticipated to result from implementation of the proposed construction activities. Proposed construction activities would occur on USAF property subject to ongoing military operations. As described in Section 4.11.1.1, construction-related impacts would be limited to a small, 100-square-foot disturbance area surrounding the proposed H-97 radio-relay station and construction of the new launch pad extension (see Section 2.6.1.2.)

Impacts to wildlife could result from noise generated by SSAT launches, vehicular disturbance within rangelands, SSAT operations, and helicopter flights to conduct maintenance on the proposed H-97 radio-relay station.

Section 4.7.1 describes the noise-related impacts that would result from implementation of the proposed action. As indicated in Section 4.7.1, no significant noise impacts are anticipated to result from implementation of the proposed action. Wildlife within 400 feet of the launch facility would be exposed to short durations of high noise levels (L_{max} of 119.5 dBA). These noise levels would

decrease with distance from the launch facility. Potential wildlife habitat is limited near the launch facility. This area has been used as a military testing range in the past. More recently, the area is used as an active civil airport. Wildlife in this region are adapted to human activities. No significant impacts to wildlife are anticipated to result from SSAT launches at the Wendover Site.

Noise and disturbances that could result from vehicles in the range area, SSAT operations in the area between the launch area and the existing RA, and helicopter flights to the proposed H-97 radio-relay station would be less than those that would result from SSAT launches. Therefore, significant impacts to wildlife are not anticipated to result from implementation of the proposed action.

Avian species protected under the MBTA are discussed further in Section 4.11.1.3.3.

4.11.1.3 Special Status Species

4.11.1.3.1 Endangered Species Act

No federally listed threatened or endangered species have been documented in or near the project area. Additionally, no critical habitat for federally listed species is present in the project area.

4.11.1.3.2 Utah Wildlife Species of Concern

Short-eared Owl. The primary loss of undisturbed land that would result from implementation of the proposed action would be the 100-square-foot area in which the proposed H-97 radio-relay station would be located and the construction area of the gravel pad extension at the Wendover Site. Although the H-97 radio-relay station area is relatively undisturbed, no short-eared owl populations are known in the area and the impact to potential habitat would be minor. Indirect impacts that could result from SSAT launches and operations are also expected to be minor, as described in Section 4.11.1.2. Therefore, no significant impacts to the short-eared owl or short-eared owl habitat would result from implementation of the proposed action. Short-eared owls will continue to be monitored and managed under the Integrated Natural Resources Management Plan (INRMP) and Natural Resource Program (Hill AFB 2014; Lawrence 2017).

Kit Fox. The primary loss of undisturbed land that would result from implementation of the proposed action would be the 100-square-foot area in which the proposed H-97 radio-relay station would be located and the construction area of the gravel pad extension at the Wendover Site. Although the H-97 radio-relay station area is relatively undisturbed, no kit fox populations are known to occur in the area and the impact to potential habitat would be minor. Indirect impacts that could result from SSAT launches and operations are also expected to be minor, as described in Section 4.11.1.2. Therefore, no significant impacts to the kit fox or kit fox habitat would result from implementation of the proposed action. Kit foxes will continue to be monitored and managed under the INRMP and Natural Resource Program (Hill AFB 2014; Lawrence 2017).

4.11.1.3.3 Migratory Birds

Implementation of the proposed action would not increase the frequency of aerial training exercises or traffic that could potentially affect migratory bird species (including BCCs) utilizing the existing airspace near the UTTR. Additionally, for BCCs and raptor species (including the bald eagle, golden eagle, ferruginous hawk, and short-eared owl), the spatial and temporal buffer recommendations of the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (USFWS 2002) would continue to be implemented (Hill AFB 2014). Therefore, no significant impacts to migratory birds (including BCCs) would result from implementation of the proposed action.

4.11.1.3.4 Bald and Golden Eagles

No nesting habitat for bald or golden eagles is located within the proposed project area. Installation and maintenance activities at the proposed H-97 radio-relay station site would require helicopter overflights that could approach eagle nests outside the proposed project area. The USAF would continue to adhere to practices recommended by the *National Bald Eagle Management Guidelines* (USFWS 2007) and employ a 1-mile buffer for any military activities that could disrupt or disturb eagle species.

Additionally, as part of the INRMP and Natural Resource Program, raptor nest surveys and raptor monitoring will continue. Data will continue to be acquired to investigate potential impacts to eagles that could result from military missions at the UTTR. Current partnerships with Hawkwatch International, the USFWS, the UDWR, and local universities will continue. Therefore, significant impacts to bald or golden eagles are not anticipated to result from implementation of the proposed action.

4.11.1.4 Natural Resource Area of Concern

Bear River Migratory Bird Refuge, which is located approximately 120 miles to the northeast of the Wendover Site, is the nearest natural resource area of concern (USFWS 2017b). Therefore, no impacts to natural resource areas of concern would result from implementation of the proposed action.

4.11.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site and none of the associated proposed activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. Implementation of the No Action Alternative would result in no significant impacts to biological resources at the UTTR.

4.12 WATER RESOURCES

4.12.1 Proposed Action

No construction activities associated with the proposed action would occur in areas with surface waters, floodplains, or wetlands; therefore, no impacts to these resources are anticipated to result from implementation of the proposed action. Proposed construction would occur on the ground surface and on existing gravel pads. Therefore, no impacts to groundwater are anticipated. Utah's Storm Water General Permit would apply for construction exceeding 1 acre or for less than 1 acre if part of a common plan of development. At the UTTR, construction activities with a footprint greater than 5,000 square feet must follow EISA Section 438 guidance for long-term stormwater management using the LID methods described in DoD Guidance, UFC 3-210-10 (Hill AFB 2016d).

Operational impacts to surface waters could occur from vehicle traffic on the range. Vehicles would be used to retrieve spent RATO bottles and recover SSATs. Recovery of RATO bottles would not occur during wet or muddy conditions, and impacts would not be significant.

4.12.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site and none of the associated proposed activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. Implementation of the No Action Alternative would result in no impacts to water resources at the UTTR.

5.0 CUMULATIVE EFFECTS

The CEQ regulations stipulate that the cumulative effects analysis in an EA should consider the potential environmental consequences resulting from "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 *CFR* 1508.7).

Actions that have a potential to interact with the proposed actions are included in this cumulative effects analysis. This approach enables decision makers to have the most current information available so that they can evaluate the range of environmental consequences that would result from implementation of the proposed actions.

In this chapter, the USAF has identified past and present actions in the Wendover region. In addition, this analysis also evaluated reasonably foreseeable future actions that are in the planning phase in this region.

The assessment of cumulative effects begins with defining the scope of other project actions and the potential interrelationship with the proposed action (CEQ 1997). The scope of the analysis must consider other projects that coincide with the location and timetable of implementation of the proposed projects. Cumulative effects can arise from single or multiple actions and through additive or interactive processes acting individually or in combination with each other. Actions that are not part of the proposal, but that could be considered as actions connected in time or space (40 *CFR* 1508.25) (CEQ 1997), could include projects that affect areas on or near the project site. This analysis addresses three questions to identify cumulative effects:

1. Does a relationship exist such that elements of the proposed action or alternatives might interact with elements of past, present, or reasonably foreseeable actions?
2. If one or more of the elements of the alternatives and another action could be expected to interact, would the alternative affect or be affected by impacts of the other action?
3. If such a relationship exists, does an assessment reveal any potentially significant impacts not identified when the alternative is considered alone?

For the proposed actions under consideration to have cumulatively significant impacts on an environmental resource, two conditions must be met. First, the combined impacts of all identified past, present, and reasonably foreseeable projects, activities, and processes on a resource, including the impacts of the proposed action, must be significant. Second, the proposed action must make a substantial contribution to that significant cumulative impact. Proposed actions of limited scope do not typically require as comprehensive an assessment of cumulative impacts as proposed actions that have significant environmental impacts over a large area (CEQ 2005).

In the following sections, the cumulative significance is based on the context, intensity, and timing of the projects discussed in Chapter 4, related to the past, present, and reasonably foreseeable actions. A summary of the cumulative effects is provided in a table, followed by a discussion of the resource areas that have potentially significant cumulative effects based on the above evaluation criteria.

5.1 PAST, PRESENT AND REASONABLY FORESEEABLE ACTIONS

This section provides decision makers with the cumulative effects of the proposed action, as well as the incremental contribution of past, present, and reasonably foreseeable actions.

Table 5-1 summarizes past, present, and reasonably foreseeable actions within the region that could interact with implementation of the proposed projects. Table 5-1 briefly describes each identified action, presents the proponent or jurisdiction of the action and the timeframe (e.g., past, present/ongoing, future), and indicates which resources could potentially interact with the proposed action. It is possible that the construction of the facilities to support SSAT launches would lead to additional increased military activities near the project area. However, no plans are known at this time for such activities. No other actions were identified during the data gathering and field survey phases for this EA.

As part of the analysis for this EA, local planning officials were contacted to obtain information regarding reasonably foreseeable actions that could interact with the proposed projects to cause cumulative impacts. Projects are listed in Table 5-1. These development projects are located 3 to 5 miles from the project area.

Past activities are those actions that occurred within the geographic scope of cumulative effects that have shaped the current environmental conditions of the project area. For most resource areas (e.g., soils and water, biological resources, and infrastructure), the impacts of past actions are now part of the existing environment and are incorporated in the description of the affected environment in Chapter 3.

Table 5-1. Past, Present, and Reasonably Foreseeable Actions near Wendover Airport and Associated Region

Action	Proponent/ Location	Timeframe	Description	Possible Resource Interaction
State and Local Actions				
West Wendover Industrial Park	City of West Wendover / US 93A and Industrial Way	2018-Present	Two phased development project for a medical marijuana dispensary. Total development would include approximately 50,000 square feet for a dispensary, storage, and production facility.	Noise, Air Quality, Soils and Water, Biological Resources, Cultural Resources, Land Use
Downtown Development Phase I	Wendover and Pueblo Boulevards	2018-2019	Approximately 40-acre development in the downtown area of West Wendover. Development will include infrastructure improvement, space for small businesses, and a new fire station.	Noise, Air Quality, Safety, Soils and Water, Biological Resources, Cultural Resources, Land Use
Mix Used Residential Development	End of Pueblo Boulevard	Unknown	Possible 10-acre residential development at the end of Pueblo Boulevard and north of the existing golf course. The property is currently in the process of being acquired and development could occur in the near term.	Noise, Air Quality, Soils and Water, Biological Resources, Cultural Resources, Land Use

5.2 CUMULATIVE IMPACT ANALYSIS

This section evaluates the cumulative effects from the past, present, and reasonably foreseeable future actions (see Table 5-1) and the proposed action. Table 5-2 provides a summary of the cumulative effects. As shown in Table 5-2, noise, safety, soils and water, cultural resources, land use, and infrastructure are not anticipated to contribute to cumulative effects. Cumulative effects are discussed for air quality and biological resources.

Table 5-2. Summary of Cumulative Effects

Resource Area	Proposed Action Projects	Past, Present, and Reasonably Foreseeable Actions	Cumulative Effects
Noise	◘	○	○
Air Quality	◘	◘	◘
Safety	○	○	○
Soils and Water	◘	○	○
Biological Resources	◘	◘	◘
Cultural Resources	○	○	○
Land Use	○	○	○
Infrastructure	◘	○	○

Key: ○ – not affected or beneficial impacts, ◘ – affected but not significant, short- to medium-term, impacts that range from low to high intensity

5.2.1 Airspace

The FAA established the LUCIN MOA D over the existing LUCIN MOA A, and the LUCIN MOA E over the existing LUCIN MOA B. These MOAs have the same lateral boundaries of LUCIN MOAs A and B, respectively, except in the northeast corner. The LUCIN D and E MOAs replaced the stationary Altitude Reservations (ALTRVs) (LUCIN A ALTRV and LUCIN B ALTRV). The LUCIN D and E MOAs have the exact same lateral and vertical boundaries as the former ALTRVs. The USAF established new MOAs in response to coordination with the FAA to avoid a conflict with existing procedures in the northeast area of the MOAs.

5.2.2 Air Quality

Construction projects associated with the proposed development projects would take place near other ongoing and future construction projects during the same time periods. Construction projects have been and will continue to be a regular occurrence on and near developing communities such as West Wendover, Nevada, and Wendover, Utah. These projects would generate the same types of construction-related impacts as described for the proposed infrastructure development projects (e.g., fugitive dust emissions, increases in construction-related criteria pollutant emissions). Cumulative impacts to air quality resulting from implementation of the proposed development projects in conjunction with past, present, and reasonably foreseeable future actions on air quality in the region would not be significant.

5.2.3 Biological Resources

The additional construction projects described in Table 5-1 are anticipated to have similar types of impacts to vegetation, wildlife, and special status species as those impacts described for the proposed development projects. Cumulative impacts to biological resources resulting from implementation of the proposed infrastructure development in conjunction with past, present, and reasonably foreseeable future actions in the region would not be significant.

5.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The irreversible environmental changes that would result from implementation of the proposed development involve the consumption of material resources and energy resources. The use of these resources is considered permanent. Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the impacts that use of these resources will have on future generations. Irreversible impacts primarily result from use or destruction of a specific resource that cannot be replaced within a reasonable timeframe (e.g., energy and minerals). Irretrievable resource commitments also involve the loss in value of an affected resource that cannot be restored as a result of the action.

For the proposed development, most resource commitments would be neither irreversible nor irretrievable. Most impacts would be short-term and temporary (e.g., air emissions from construction), or longer lasting but negligible (i.e. use of fuel). Those limited resources that could involve a possible irreversible or irretrievable commitment would be used in a beneficial manner.

Construction activities would continue to involve the consumption of nonrenewable resources, such as gasoline used in vehicles and equipment. None of these activities is expected to significantly decrease the availability of minerals or petroleum resources. Personal vehicle use by construction contractors and vehicles and aircraft used to support the existing missions consumes fuel, oil, and lubricants. Implementation of the proposed action would slightly increase \the amount of these materials used; however, this additional use is not expected to significantly affect the availability of the resources in the region or the nation.

Specific information for each resource area is described below.

5.3.1 Airspace Resources

Use of existing airspace would not result in irreversible or irretrievable impacts.

5.3.2 Air Quality

Impacts to air quality would be neither irreversible nor irretrievable. Should the mission cease, impacts to air quality would also cease and no long-term impacts would occur.

5.3.3 Cultural Resources

No irreversible or irretrievable impacts to cultural resources would occur. Geotextile fabrics were used in the construction of the facilities so the site could be returned to preexisting conditions.

5.3.4 Infrastructure

No irreversible or irretrievable impacts to infrastructure would occur.

5.3.5 Hazardous Materials and Waste

No irreversible or irretrievable impacts related to hazardous materials and waste are anticipated to occur. Should a spill of petroleum products occur, the site would be cleaned up and returned to preexisting conditions.

5.3.6 Land Use

No irreversible or irretrievable impacts to land use would occur. All construction associated with the proposed action is removable and the land could be made available for other land uses as desired.

5.3.7 Noise

No irreversible or irretrievable impacts to the noise environment would occur. Should the mission no longer be required, all noise resulting from the mission would cease.

5.3.8 Safety

No irreversible or irretrievable impacts related to safety would occur.

5.3.9 Socioeconomics

No irreversible or irretrievable impacts related to socioeconomic conditions would occur.

5.3.10 Soil Resources

No irreversible or irretrievable impacts to soil resources would occur. Gravel pads constructed for the proposed action would be underlain with geotextile fabric over the existing site soils. These fabrics were designed so the overlying gravel and concrete could be removed and soils returned to preexisting conditions.

5.3.11 Biological Resources

Minor, irretrievable impacts to plants and wildlife have occurred in the direct footprint of the construction activities. However, these impacts are reversible, because the site was designed to be returned to preexisting conditions should the mission end.

5.3.12 Water Resources

No irreversible or irretrievable impacts related to water resources would occur.

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7.0 LIST OF PREPARERS

Government Agency Development Team	
Name/Title	**Role**
Utah Test & Training Range Michael Shane, Logistical Coordinator	Environmental Planning/Lead EA Development
Utah Test & Training Range Matthew P. Bolduc, Airspace Manager	Proponent

Contractor Development Team			
Name/Title	**Project Role**	**Subject Area**	**Qualifications**
Jay Austin Noise Analyst M.S. Environmental Science B.A. Biology	Section Author	Noise	14 years environmental science
Brad Boykin Environmental Scientist M.S. Biotechnology B.S. Biomedical Science	Section Author	Air Quality	10 years environmental science
Tom Daues, PMP Biologist M.S. Natural Resources B.S. Biology	Project Manager, Section Author, Editor	Infrastructure, Soil and Water, Cumulative Impacts	25 years environmental science
Denise DeLancey Electronic Publishing Specialist B.A. English/Communications	Document Production	Document Production	16 years document production
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Sarah Willis B.A. Fine Arts	Production	Document Production	6 years document production

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Appendix A

USAF CATEX Documents

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REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol
RCS: **24091**

INSTRUCTIONS: ***Section I to be completed by Proponent; Section II and III to be completed by Environmental Planning Function. Continue on seperate sheets as necessary. Reference appropriate item number(s).***

SECTION I - PROPONENT INFORMATION

1. TO (*Environmental Planning Function*)	2. FROM (*Proponent organization and functional address symbo*	2a. TELEPHONE NO.
75 CEG/CEIEA	**ACC UTTR (Michael Shane)**	**586-2551**

3. TITLE OF PROPOSED ACTION
WSEP Launch site

4. PURPOSE AND NEED FOR ACTION *(Identify decision to be made and need date)*
See Page 2

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES *(DOPAA) (Provide sufficient details for evaluation of the total action.)*
See Page 2

6. PROPONENT APPROVAL *(Name and Grade)*	6a. SIGNATURE	6b. DATE
Michael Shane	**Michael.Shane**	**01-Aug-2014**

SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY. *(Check appropriate box and describe potential environmental effects Including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown*	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE *(Noise, accident potential, encroachment, etc.)*	☐	☒	☐	☐
8. AIR QUALITY *(Emissions, attainment status, state implementation plan, etc.)*	☐	☒	☐	☐
9. WATER RESOURCES *(Quality, quantity, source, etc.)*	☐	☒	☐	☐
10. SAFETY AND OCCUPATIONAL HEALTH *(Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)*	☐	☒	☐	☐
11. HAZARDOUS MATERIALS/WASTE *(Use/storage/generation, solid waste, etc.)*	☐	☒	☐	☐
12. BIOLOGICAL RESOURCES *(Wetlands/floodplains, threatened or endangered species, etc.)*	☐	☒	☐	☐
13. CULTURAL RESOURCES *(Native American burial sites, archeological, historical, etc.)*	☐	☒	☐	☐
14. GEOLOGY AND SOILS *(Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)*	☐	☒	☐	☐
15. SOCIOECONOMIC *(Employment/population projections, school and local fiscal impacts, etc.)*	☐	☒	☐	☐
16. OTHER *(Potential impacts not addressed above.)*	☐	☒	☐	☐

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17. ☒ PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION *(CATEX)* (see below for list of CATEXs); OR
☐ PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.

18. REMARKS

32 CFR 989 CATEX A2.3.13 Installing or modifying airfield operational equipment (such as runway visual range equipment, visual glide path systems, and remote transmitter or receiver facilities) on airfield property and usually accessible only to maintenance personnel.

32 CFR 989 CATEX A2.3.14 Installing on previously developed land, equipment that does not substantially alter land use (i.e., land

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION *(Name and Grade)*	19a. SIGNATURE	19b. DATE
Samuel Johnson	**//E-SIGNED 9-29-14// Johnson, Samuel**	**29-Sep-2014**

AF IMT 813, SEP 99, CONTINUATION SHEET

4. PURPOSE AND NEED FOR ACTION *(Identify decision to be made and need date)*

4.1 Objective:

To locate a new drone launch site south of the Wendover Airfield

4.2 Need Back:

15-AUG-14

4.3 Who Wants the Project:

The UTTR has been asked by the 86th Weapons evaluation Group to work this project

4.4 Why is the action required:

The UTTR has been approached by a customer to develop a new drone launch pad south of Wendover UT. The site would allow for multiple drone launches from the west side of the range for use during Combat Archer exercises performed on the UTTR. The current launch site is on Dugway Proving Grounds and its location creates issues with launch and recovery processes. The new facility would allow for more efficient and safer operations.

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES *(DOPAA) (Provide sufficient details for evaluation of the total action.)*

5.1 What is the proposed Action:

To build a new drone launch faciltiy for use on the UTTR.

5.2 Where is the proposed work to be done:

South of Wendeover airfield

5.3 How will the proposed work be done:

See attached document

5.4 Alternatives

Alternative A - No Action:

N/A

Alternative B - Other Locations Considered:

N/A

Alternative C - Other Alternatives:

Option 1: No Action:

The no-action alternative would be to not allow these operations on the UTTR. Since the UTTR is capable of testing multiple weapons systems and programs. Not allowing this operation would prevent WSEP from providing full evaluation capabilities. The no-action alternative would lead to a limited evaluation capabilities and severely effect range operations if a new facility is not allowed at this location.

Option 2: Select another facility or another location on the UTTR.

Other locations fly drones however none have the capabilities, landscape and infrastructure of the UTTR, for this reason other facilities or locations were not evaluated. Other locations on the UTTR were evaluated however due to the cost to bring in the required infrastructure and facilities and the effect that this operation would have on other operations on the range this option was not further evaluated.

Option 3: Preferred Action:

The preferred action alternative would be to approve the planned test at the location identified. The current selected location south of Wendover on the UTTR has been selected based on the proximity to the UTTR and existing infrastructure in the area to allow for safe operations and better utilization of the UTTR.

Electronic 813 Comments:

Remarks:

Comments:	Provided By:	Assigned:	Provided:
75 CEG/CEIEA-HW-Hazardous Waste	Karl Nieman		05-Aug-2014
No haz waste concerns. Waste management protocols for excess fuel or other maintenance wastes associated with the facility will have to be established.			
75 CEG/CEU-Range Support Division	Roger Montoya		04-Aug-2014
No Concerns			
75 CEG/CEIE-CR-Cultural Resources	Anya Kitterman		13-Aug-2014
Cultural Resources - potential to impact an eligible site and requires a small amount of additional CR survey. Coordinate with Cultural Resources to complete Section 106.			
75 CEG/CEIEA-NR-Natural Resources	Russ Lawrence		04-Aug-2014
No Natural Resource Concerns			
75 CEG/CEIEA-AQ-Air Quality	Glenn Palmer		04-Aug-2014
No air quality issues			
AFCEC/CZOM-UTTR-Range Restoration	Dennis Weder		08-Aug-2014
This area has been surface cleared by the MMRP, but there is potential for subsurface UXO. Otherwise no concerns.			
75 CEG/CEIE-ST-Storage Tanks	Mark Roginske		05-Aug-2014
No water quality or tank compliance concerns			
OO-ALC/JACE-Legal-JACE	Joseph Linford		26-Sep-2014
See attached legal review.			
75 CEG/CEIEA-HM-Hazardous Materials	Michelle Cottle		04-Aug-2014
No concerns with Hazmat, but if there are any hazardous materials used, please make sure that they are properly tracked in EESOH-MIS.			
75 CEG/CEIEA-AC-Air Conformity	Allyson Morrison		04-Aug-2014
No conformity concerns			
75 CEG/CEIEA-Environmental Management	Samuel Johnson		29-Sep-2014
No comments available			

MEMORANDUM FOR RECORD

WSEP LAUNCH SITE INFORMATION

The following data is to fill section 5 of the #813 titled WSEP launch site Wendover UT

The proposed plan is to widen the existing road that goes south of the Wendover Airport past the Historic launch pads. The current road is sufficient for a single vehicle the road will be widened to approximately 25ft to allow for larger vehicles to pass. There will be 2 structures built approx.7 miles south of the launch pads the first will be a maintenance facility on a gravel pad that will be approximately 500' x 500'. At this location maintenance will be performed to prepare drones for launch, there will be 2 600 gallon fuel tanks for used fuel that will have secondary containment. There will be 1 60kw generator at this location to run electrical power for the equipment. The second pad will be approximately 3000' SE of the pad at a location shown on the map, this will be the launch rails. The Launch rails will be constructed facing in a southerly direction to allow for launch of the drones over DOD land. The pad will be 500' x 500' and will be packed gravel a road from the existing road to the launch pad will be constructed using packed gravel and will be approximately 16ft wide and 2-3ft in depth. There will be a 350 x 50ft concrete pad pored for the launch rails. There will be 2 60 KW and 1 100 KW generators to provide power for launch operations. Power (Blue line) will be run from the Airport underground at a future time to reduce the need for generators on site. Fiber (Yellow line) will be run underground from the east side of Wendover Field to the launch and maintenance areas. The Fiber will come from an existing DOD facility and will allow for real time secure communication capabilities. The exact path for both is still to be determined however general areas are shown on the attached map. An existing munitions bunker will be used to store RATO bottles, this is a historic facility and coordination will take place with base archeologist prior to use. At this time the only modification that is required is grounding rods to be installed inside the bay to allow for proper grounding of the equipment no other modifications will occur without coordination. A drone recover area will be established approximately ½ mile south west of the launch rails. No construction will occur in this location however impacts will happen in this area.

MEMORANDUM FOR RECORD

WSEP LAUNCH SITE INFORMATION

The following data is to fill section 5 of the #813 titled WSEP launch site Wendover UT

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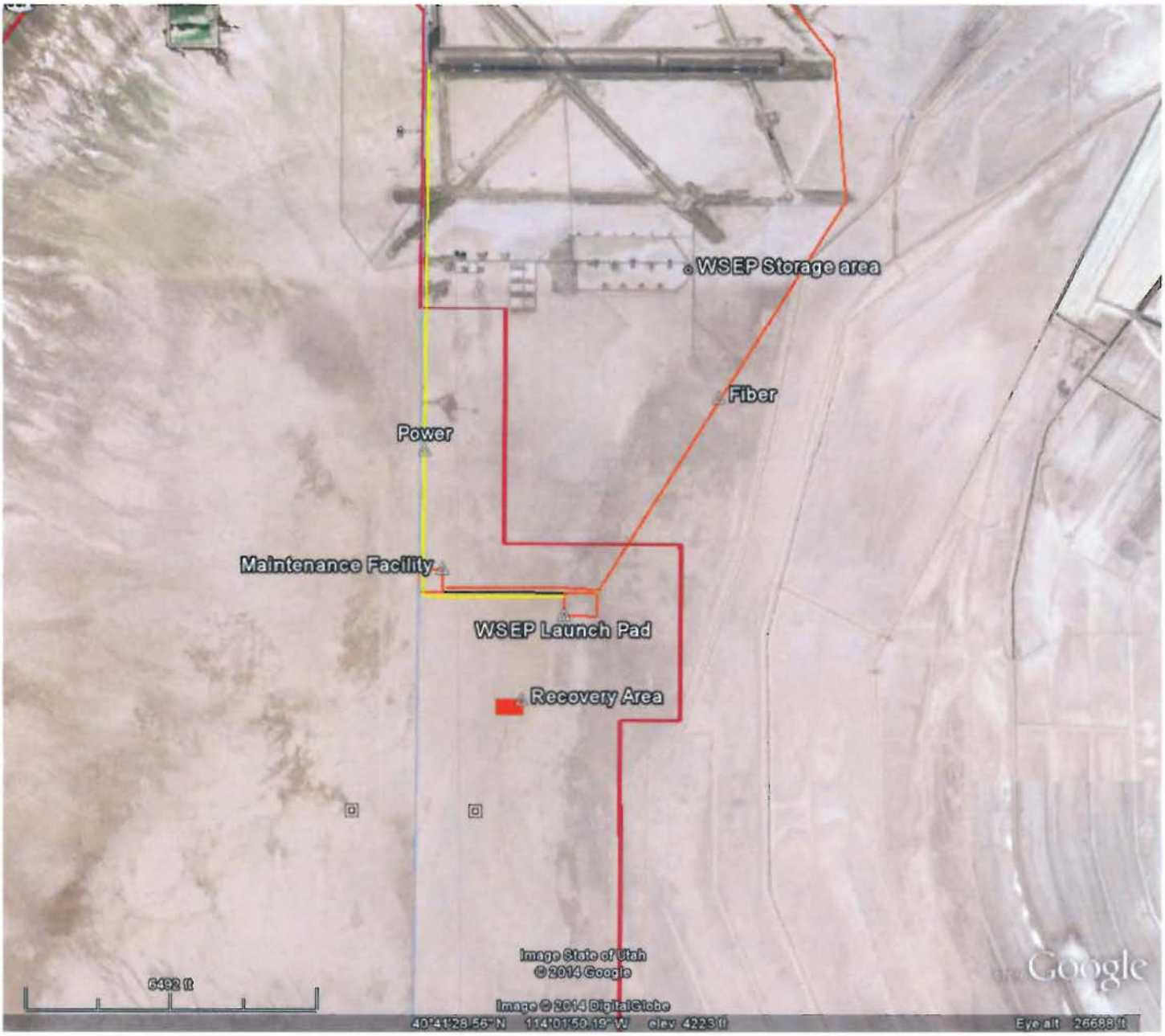
WSEP Storage area
Fiber
Power
Maintenance Facility
WSEP Launch Pad
Recovery Area
Image State of Utah
© 2014 Google
Image © 2014 DigitalGlobe
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40°41'28.56" N 114°01'50.19" W elev 4223 ft
Eye alt 26688 ft
Google

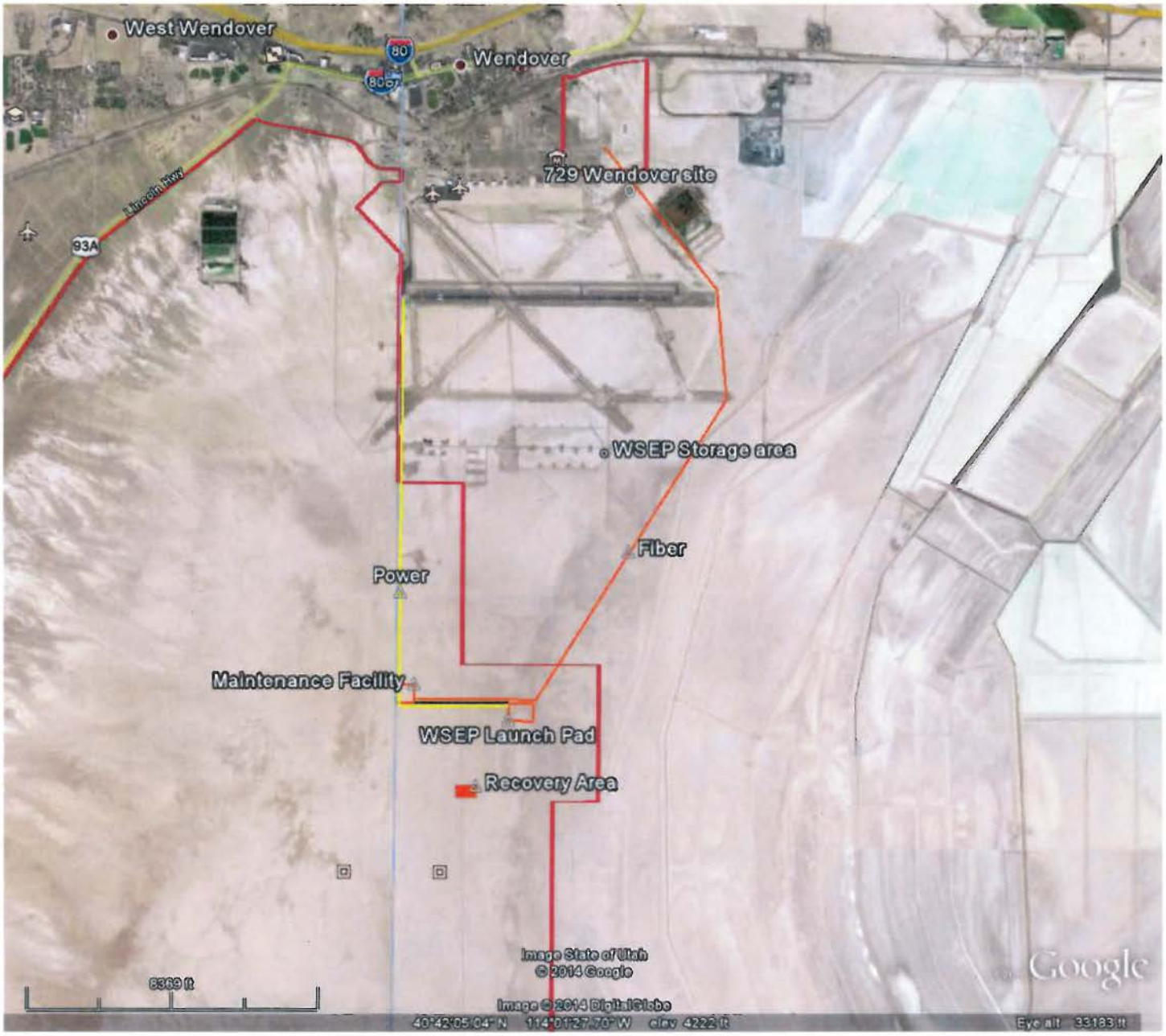
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Image State of Utah
© 2014 Google
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6369 ft
40°42'05.04" N 114°01'27.70" W elev 4222 ft
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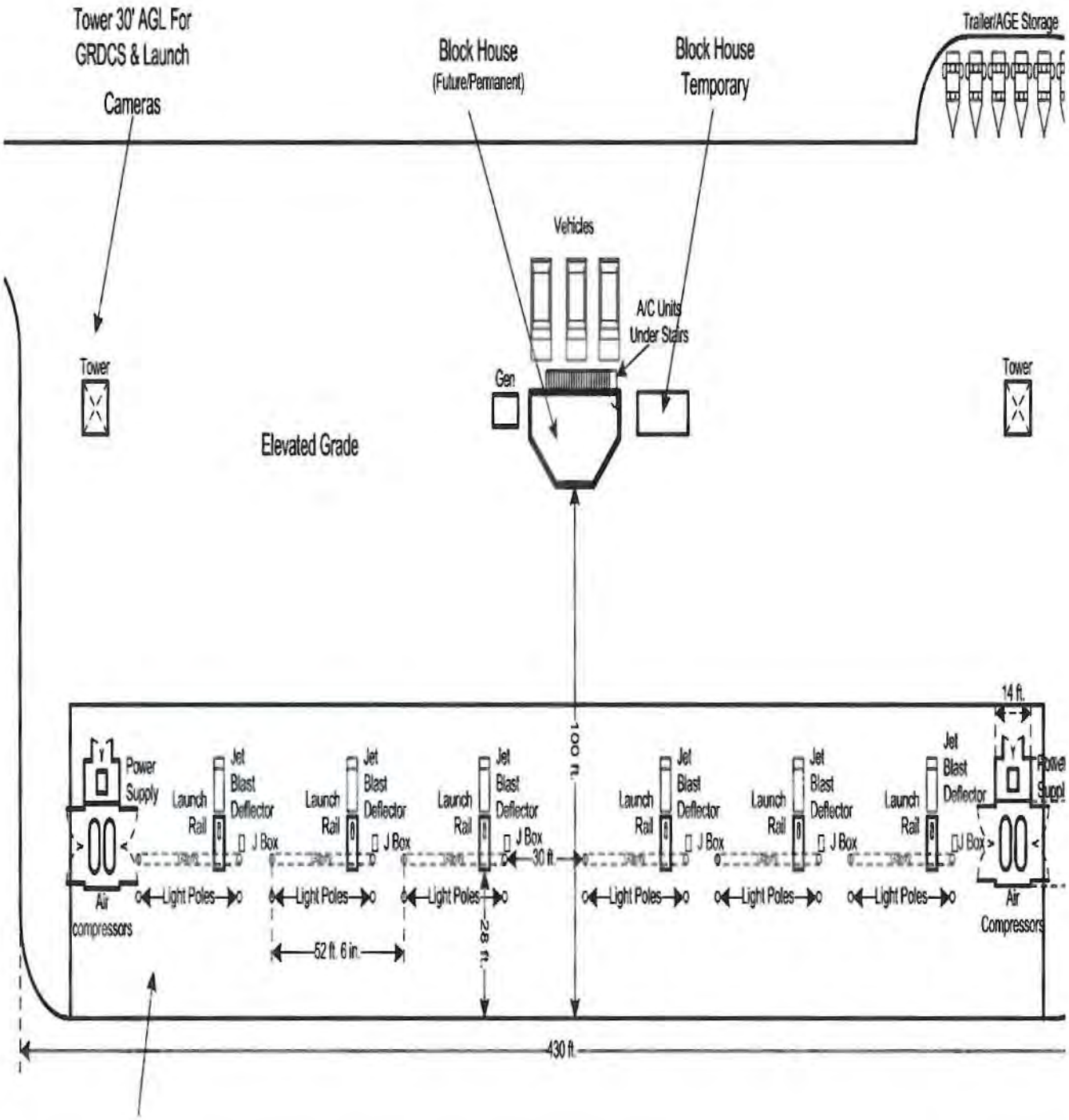
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Tower
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14 ft.
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Air
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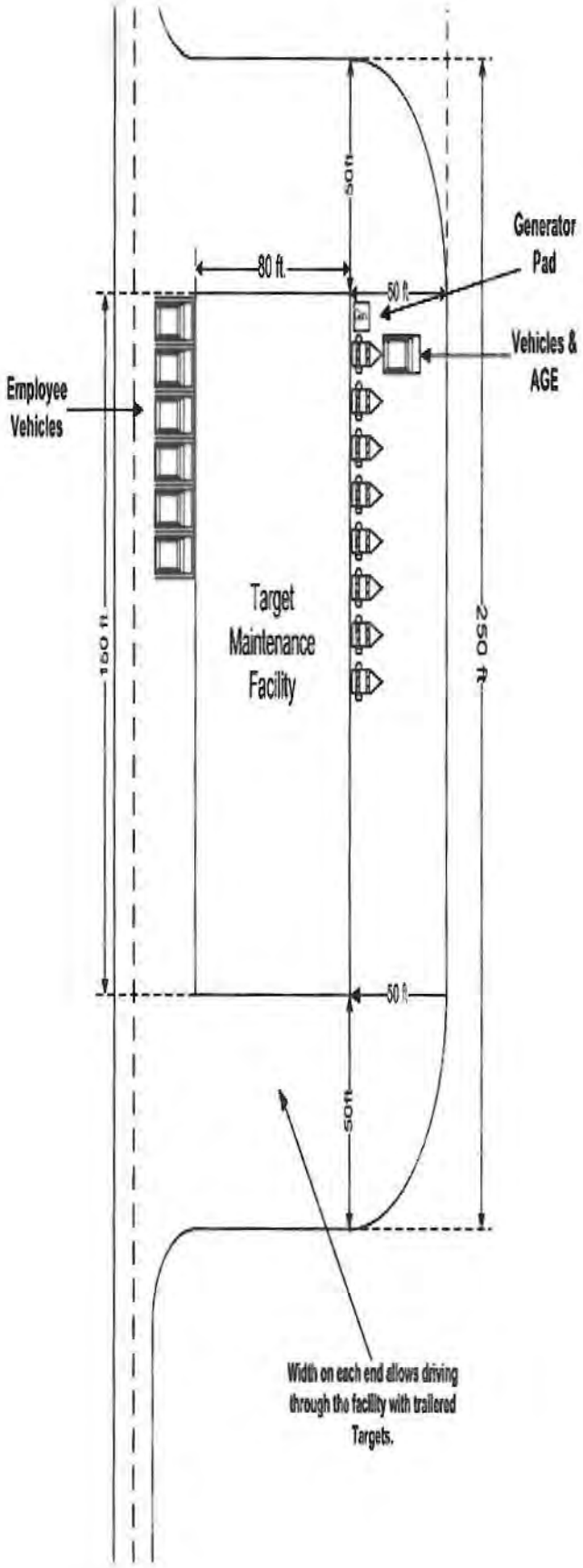
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150 ft
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50 ft
50 ft
Width on each end allows driving
through the facility with trailered
Targets.

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 75TH AIR BASE WING (AFMC)
HILL AIR FORCE BASE UTAH

26 September 2014

MEMORANDUM FOR 75 CEG/CEIEA

FROM: 75 ABW/JACE

SUBJECT: Legal Review, 813 no. 24091, Wendover drone launch site

1. This 813 and application of CATEXs A2.3.13 and A2.3.14 are legally sufficient, IAW 40 C.F.R. 1508.4, 32 C.F.R. 989.13 and Appendix B to Part 989, provided the requirements and concerns of all other reviewers are met. Specifically, cultural resources concerns have yet to be met.

2. **Recommendation**: I recommend application of CATEXs A2.3.13 and A2.3.14 to the proposed action.

//Signed 26 Sep 2014//
JOSEPH G. LINFORD, DAFC
Environmental Attorney

FOR OFFICIAL USE ONLY - NOT FOR PUBLIC RELEASE. This document contains information EXEMPT FROM MANDATORY DISCLOSURE under the Freedom of Information Act (FOIA) (5 USC 552(b)). This is a draft review document which includes pre-decisional information to which Exemption 5, the deliberative process privilege, applies. This document may also contain attorney work-product or information protected under the attorney-client privilege, both of which are protected from disclosure under FOIA.

813 REVIEW – WORK REQUEST #24091
WSEP LAUNCH SITE - UTTR
CULTURAL RESOURCES REVIEW

The Utah Test and Training Range (UTTR) houses numerous cultural and archaeological sites. The current proposed action potentially places the road expansion within a National Register eligible site (42To2749). Therefore, the work may constitute an **ADVERSE EFFECT** to historic resources. The Utah State Historic Preservation Office (SHPO) has specific guidelines and requirements on mitigating adverse effects to historic sites. Additionally, there is a small area that has not been surveyed for cultural resources. Due to the size this could be undertaken in-house. This is necessary to fulfill Section 106 requirements.

Please coordinate with cultural resources management with additional information to determine effect and complete the Section 106 review. It is **NOT RECOMMENDED** the proposed project proceed until full survey has been completed and mitigation measures, if necessary, have been coordinated with the SHPO. Please contact Anya Kitterman (586-2464) to discuss the project or if there are any questions.

24 October 2013 Charlene Brown

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Julie Fisher
Executive Director
Department of
Heritage & Arts

Utah Division of
State History

Brad Westwood
Director

November 24, 2014

Joseph A. Martone, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base, Utah 84056-5137

RE: Drone Facility at the UTTR

For future correspondence, please reference Case No. 14-1656

Dear Dr. Martone:

The Utah State Historic Preservation Office received your request for our comment on the above-referenced undertaking on November 21, 2014.

We concur with your determination of effect for this undertaking.

This letter serves as our comment on the determinations you have made, within the consultation process specified in §36CFR800.4. If you have questions, please contact me at 801-245-7263 or Lori Hunsaker at 801-245-7241 *lhunsaker@utah.gov*.

Sincerely,

Chris Merritt, Ph.D.
Deputy State Historic Preservation Officer
Archaeology
cmerritt@utah.gov

Standard Operating Procedure

UNANTICIPATED DISCOVERY OF ARCHAEOLOGICAL DEPOSITS

APPLICABLE LAWS AND REGULATIONS

- National Historic Preservation Act
- National Environmental Policy Act
- Native American Graves Protection and Repatriation Act
- AFI 32–7065 (June 2004), *Cultural Resources Management Program*

OVERVIEW

All undertakings that disturb the ground surface have the potential to discover buried and previously unknown archaeological deposits. The accidental discoveries of archaeological deposits during an undertaking can include but are not limited to:

- Undiscovered/undocumented structural and engineering features; and
- Undiscovered/undocumented archaeological resources such as foundation remains, burials, artifacts, or other evidence of human occupation.

POLICY

When cultural resources are discovered during the construction of any undertaking or ground-disturbing activities, Hill AFB shall:

- Evaluate such deposits for NRHP eligibility.
- Treat the site as potentially eligible and avoid the site insofar as possible until an NRHP eligibility determination is made.
- Make reasonable efforts to minimize harm to the property until the Section 106 process is completed.
- **The BHPO will ensure that the provisions of NAGPRA are implemented first if any unanticipated discovery includes human remains, funerary objects, or American Indian sacred objects (see SOP #6).**

PROCEDURE

Step 1: Work shall cease in the area of the discovery (Figure 5-5). Work may continue in other areas.

- The property is to be treated as eligible and avoided until an eligibility determination is made. Hill AFB will continue to make reasonable efforts to avoid or minimize harm to

Further construction activities in the vicinity of the site will be suspended until an agreed-upon testing strategy has been carried out and sufficient data have been gathered to allow a determination of eligibility. The size of the area in which work should be stopped shall be determined in consultation with the **BHPO**.

the property until the Section 106 process is completed.

Step 2: Immediately following the discovery, the **Project Manager** shall notify the installation **BHPO**.

Step 3: The **BHPO** or a professional archaeologist shall make a field evaluation of the context of the deposit and its probable age and significance, record the findings in writing, and document with appropriate photographs and drawings.

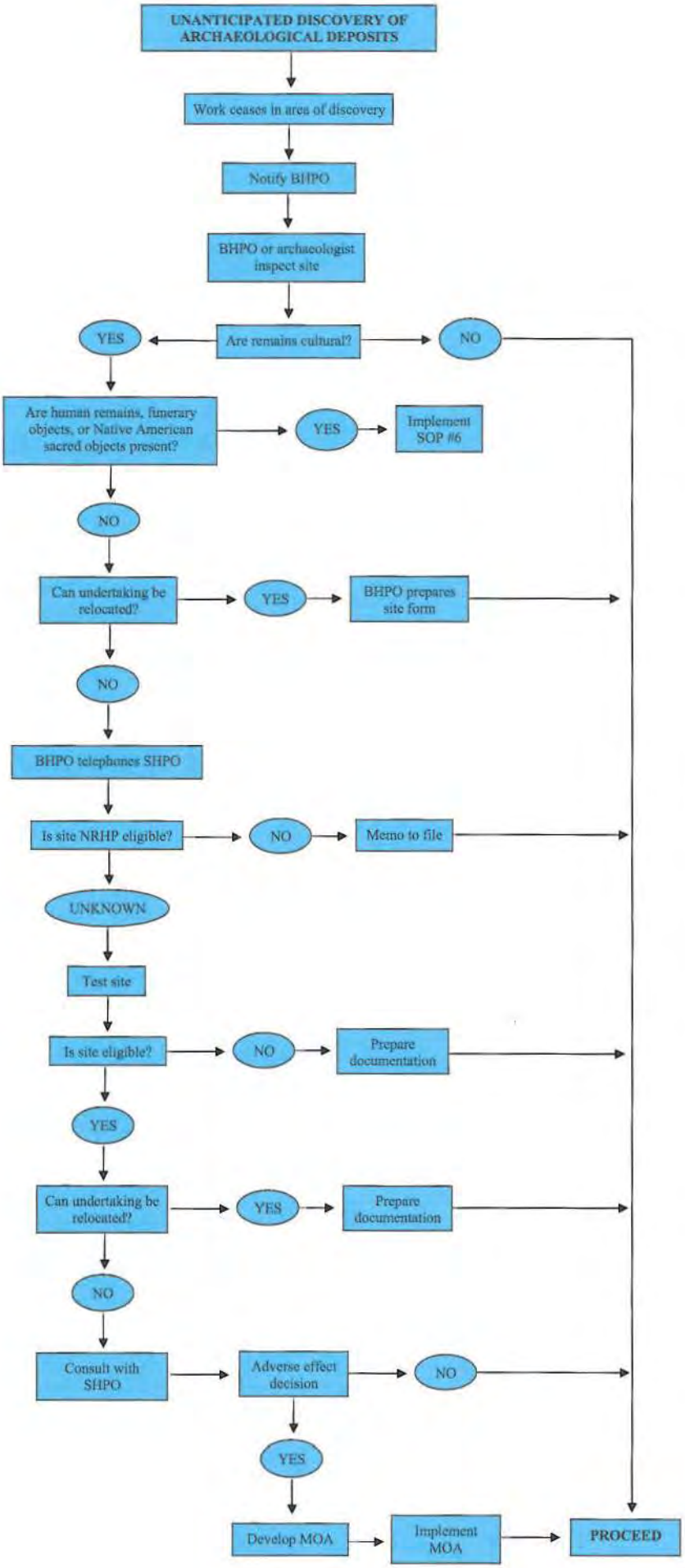
- If disturbance of the deposits is minimal and the excavation can be relocated to avoid the site, the **BHPO** will file appropriate site forms in a routine manner.
- If the excavation cannot be relocated, the **BHPO** shall notify the office of the **SHPO** to report the discovery and to initiate an expedited consultation.

The Section 106 review process is initiated at this point.

- If the deposits are determined to be ineligible for inclusion in the NRHP, then Hill AFB **BHPO** will prepare a memorandum for record and the construction may proceed.
- If the existing information is inadequate for an NRHP eligibility determination, Hill AFB **BHPO** shall develop an emergency testing plan in coordination with the SHPO.

Step 4: Hill AFB shall have qualified personnel conduct test excavations of the deposits to determine NRHP eligibility.

- Hill AFB BHPO, in consultation with the SHPO, will determine appropriate methodology for NRHP eligibility determination.
- If the SHPO and Hill AFB agree that the deposits are ineligible for inclusion in the NRHP, then work on the undertaking may proceed.
- If the deposits appear to be eligible, or Hill AFB and the SHPO cannot agree on the question of eligibility, then Hill AFB shall implement alternative actions, depending on the urgency of the proposed action.
  - Hill AFB may relocate the project to avoid the adverse effect.
  - Hill AFB may request the Keeper of the National Register to provide a determination.
  - Hill AFB may proceed with a data recovery plan under a MOA developed in coordination with the SHPO and possibly the ACHP and interested parties.
  - **Hill AFB may request comments from the ACHP and may develop and implement actions that take into account the effects of the undertaking on the property to the extent feasible and the comments of the SHPO, ACHP, and interested parties. Interim comments must be provided to Hill AFB within 48 hours; final comments must be provided within 30 days.**


UNANTICIPATED DISCOVERY OF ARCHAEOLOGICAL DEPOSITS
Work ceases in area of discovery
Notify BHPO
BHPO or archaeologist inspect site
Are remains cultural?
YES
NO
Are human remains, funerary objects, or Native American sacred objects present?
YES
Implement SOP #6
NO
Can undertaking be relocated?
YES
BHPO prepares site form
NO
BHPO telephones SHPO
Is site NRHP eligible?
NO
Memo to file
UNKNOWN
Test site
Is site eligible?
NO
Prepare documentation
YES
Can undertaking be relocated?
YES
Prepare documentation
NO
Consult with SHPO
Adverse effect decision
NO
YES
Develop MOA
Implement MOA
PROCEED

From: KITTERMAN, ANYA D GS-12 USAF AFMC 75 CEG/CEIE
To: JOHNSON, SAMUEL A GS-12 USAF AFMC 75 CEG/CEIEA
Cc: SHANE, MICHAEL P GS-11 USAF ACC UTTR/DOO
Subject: WSEP Launch Pad; 813 24091
Date: Thursday, September 11, 2014 8:45:22 AM

Good morning,

This project is currently being coordinated with the Cultural Resource Program in order to complete Section 106. It is understood by the proponent that further work and SHPO consultation must be completed prior to any of the proposed work being completed. As coordination has been started and is ongoing, cultural resources feels the 813 can proceed forward. Thank you.

Anya Kitterman
Archaeologist/Cultural Resource Manager
75th CEG/CEIE
Hill Air Force Base
7290 Weiner St.
Bldg 383
Hill AFB, UT 84056-5003
(801) 586-2464
anya.kitterman@us.af.mil

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Ms. Lori Hunsaker
Deputy State Historic Preservation Officer
300 Rio Grande
Salt Lake City Utah 84101

Dear Ms. Hunsaker,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile layer will be laid and follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future (Attachment 2, Details of Geotextile Layer). An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. This is in order to ground the building. A recovery area will be established near the maintenance facility and launch site, though have no new construction itself.

The proposed area of work on the UTTR has been surveyed according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation (Attachment 1). The survey (U-12-UI-0371m) was completed in 2012. Two known eligible archaeological sites are near the area of potential effect (APE). Site 42TO2749 has been avoided and will not be impacted by this project. Site42TO708, the Deep Creek Railroad, will have minimal impact and follow the stipulations listed below.

On October 27th, 2014, Chris Merritt from the SHPO visited in order to discuss options to minimize impacts. The following approaches were discussed:

- The road bed will be maintained at its current width but will be repaired and re-graded as needed. This will be done with gravel and materials similar to what are already in place.
- The two access routes for the proposed pads will utilize a non-permanent geotextile base where the proposed work encounters the slope and former railroad grade. There will be no alteration to the current grade in order that the grade could return to its original condition should the site be disbanded in the future.
- The culvert C-29, C-30, and C-31 will be upgraded with the condition that the exterior view remains the same and utilizes historic materials as much as feasible. A qualified archaeologist or architectural historian will be on site during the deconstruction of C-29, and if modifications are necessary, C-31 (Attachment 3, Details on Culverts to be Upgraded). This will allow for the original design to be recorded during any deconstruction. No modern construction will be visible. C-31 will contain a central interior beam in order to maintain the design. The rocks to the base of the culvert will be retained, though neither the historic beams nor rocks will need to be load bearing.
- If possible, historic materials will be stored for future maintenance of the culverts.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 4).

Archaeological surveys, including Utah State Historic Site Forms have been completed for this area and are on file in your office.

In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

Michelle L Cotte

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Details of Geotextile Layer
3. Details of Culverts to be Upgraded
4. Unanticipated Discovery Protocol

Distribution List:
Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
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Paiute Indian Tribe of Utah
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Shoshone-Bannock Tribes of the Fort Hall Reservation
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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Chairman Willie A. Sharp, Jr.
Blackfeet Tribal Business Council
P.O. Box 850
Browning, MT 59417

Dear Chairman Sharp,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

The proposed area of work on the UTTR has been surveyed according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The survey (U-12-UI-0371m) was completed in 2012. Two known eligible historic archaeological sites are near the area of potential effect (APE). Site 42TO2749 has been avoided and will not be impacted by this project. Site42TO708, the Deep Creek Railroad and will have minimal impact.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with

direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 2).

Archaeological surveys, including Utah State Historic Site Forms have been completed for this area and are on file in your office.

In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc:
John Murray, Tribal Historic Preservation Officer, Blackfeet Tribe

Distribution List:
Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Madeline Greymountain
Chairperson, Confederated Tribes of the Goshute Indian Reservation
PO Box 6104
Ibapah, UT 84034

Dear Chairperson Greymountain,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

The proposed area of work on the UTTR has been surveyed according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The survey (U-12-UI-0371m) was completed in 2012. Two known eligible historic archaeological sites are near the area of potential effect (APE). Site 42TO2749 has been avoided and will not be impacted by this project. Site42TO708, the Deep Creek Railroad and will have minimal impact.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with

direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 2).

Archaeological surveys, including Utah State Historic Site Forms have been completed for this area and are on file in your office.

In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

Michelle L Cottle

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Darrin Old Coyote
Chairman, Crow Tribe of Montana
PO Box 159
Crow Agency, MT 59022

Dear Chairman Old Coyote,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Emerson Bull Chief, Crow Tribe Tribal Historic Preservation Officer

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Virginia Sanchez
Chairwoman, Duckwater Shoshone Tribe
PO Box 140068
Duckwater, NV 89314

Dear Chairwoman Sanchez,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

Michelle L Cottle

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Maurice Churchill, Duckwater Shoshone Tribe, Cultural Resources

Distribution List:
Blackfeet Indian Tribe
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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Darwin St. Clair Jr.
Chairman, Eastern Shoshone Tribe
PO Box 538
Fort Washakie, WY 82514

Dear Chairman St. Clair,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

Michelle L Cottle

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Wilford Ferris III, Eastern Shoshone Tribal Historic Preservation Officer

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Alvin S. Marques
Chairman, Ely Shoshone Tribe
16 Shoshone Circle
Ely, NV 89301

Dear Chairman Marques,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

The proposed area of work on the UTTR has been surveyed according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The survey (U-12-UI-0371m) was completed in 2012. Two known eligible historic archaeological sites are near the area of potential effect (APE). Site 42TO2749 has been avoided and will not be impacted by this project. Site42TO708, the Deep Creek Railroad and will have minimal impact.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with

direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 2).

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In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Cindy Marques, Ely Shoshone Cultural Resources

Distribution List:
Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
Duckwater Shoshone Tribe
Eastern Shoshone Tribe
Ely Shoshone Tribe
Hopi Tribe
Navajo Nation
Northern Arapaho Tribe
Northwestern Band of the Shoshone Nation
Paiute Indian Tribe of Utah
Pueblo of Zuni
San Juan Southern Paiute Tribe
Shoshone-Bannock Tribes of the Fort Hall Reservation
Shoshone-Paiute Tribes of the Duck Valley Reservation
Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone Indians
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

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

Dear Chairman Honanie,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with

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Sincerely

Michelle L Cottle

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Mr. Leigh Kuwanisiwma, Hopi Tribe Director of Cultural Preservation

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Ute Mountain Ute Tribe
Wells Band of Western Shoshone

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Ben Shelly
President, Navajo Nation
PO Box 9000
Hwy 264, Tribal Hills Dr.
Window Rock, AZ 86515-9000

Dear President Shelly,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with

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Sincerely

Michelle L Cottle

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Timothy Begay, Navajo Nation Tribal Historic Preservation Officer

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Darrell O'Neal, Sr.
Chairman, Northern Arapaho Tribe
PO Box 396
Fort Washakie, WY 82514

Dear Chairman O'Neal,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with

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Sincerely

Michelle L Cottle

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Corinne Headley, Northern Arapaho Tribal Historic Preservation Officer

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Jason Walker
Chairman, Northwestern Band of the Shoshone Nation
707 North Main Street
Brigham City, UT 84302

Dear Chairman Walker,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

Michelle L Cottle

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
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2. Unanticipated Discovery Protocol

cc: Patty Timbimboo-Madsen, Northwestern Band of Shoshone Cultural and Natural Resources Manager

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Gari Lafferty
Chairperson, Paiute Tribe of Utah
440 North Paiute Drive
Cedar City, UT 84721

Dear Chairperson Lafferty,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

Michelle L Cottle

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
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cc: Dorena Martineau, Paiute Tribe Cultural Resources Director

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Arlen P. Quetawki Sr.
Governor, Pueblo of Zuni
PO Box 339
Zuni, NM 87327

Dear Governor Quetawki,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

Michelle L Cottle

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

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cc: Kurt Dongoske, Zuni Tribal Historic Preservation Officer

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

May Preston
President, San Juan Southern Paiute Tribe
PO Box 1989
Tuba City, AZ 86045

Dear President Preston,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

Michelle L Cottle

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Nathan Small
Chair, Shoshone-Bannock Tribes of the Fort Hall Reservation
PO Box 306
Fort Hall, ID 83203

Dear Chairman Small,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

Michelle L Cottle

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Carolyn Smith, Shoshone-Bannock Cultural Resources Coordinator

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Lindsey Manning
Chairman, Shoshone-Paiute Tribes of the Duck Valley Reservation
PO Box 219
Owyhee, NV 89832

Dear Chairman Manning,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

Michelle L Cottle

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Lori Bear
Chairwoman, Skull Valley Band of Goshute Indians
PO Box 448
Grantsville, UT 84029

Dear Chairwoman Bear,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Davis Gonzales
Chairman, Te-Moak Tribe of Western Shoshone
525 Sunset Street
Elko, NV 89801

Dear Chairman Gonzales,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Gordon Howell
Chairman, Ute Indian Tribe
PO Box 190
Fort Duchesne, UT 84026

Dear Chairman Howell,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

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cc: Betsy Chapoose, Ute Indian Tribe Cultural Rights and Protection

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Manuel Heart
Chairman, Ute Mountain Ute tribe
PO Box 248
Towaoc, CO 81334-0248

Dear Chairman Heart

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Chief, Environmental Quality Branch
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cc: Terry Knight, Ute Mountain Ute NAGPRA Specialist

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Michelle Cure
Chairperson, Wells Band of Western Shoshone
PO Box 809
Wells, NV 89835

Dear Chairperson Cure,

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Sincerely

Michelle L Cotto

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Chief, Environmental Quality Branch
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REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol
*RCS:***24976**

INSTRUCTIONS: ***Section I to be completed by Proponent; Section II and III to be completed by Environmental Planning Function. Continue on seperate sheets as necessary. Reference appropriate item number(s).***

SECTION I - PROPONENT INFORMATION

1. TO (*Environmental Planning Function*)	2. FROM (*Proponent organization and functional address symbo*	2a. TELEPHONE NO.
75 CEG/CEIEA	**ACC UTTR (Michael Shane)**	**586-2551**

3. TITLE OF PROPOSED ACTION
WSEP Wendover modified Launch Site

4. PURPOSE AND NEED FOR ACTION *(Identify decision to be made and need date)*
See Page 2

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES *(DOPAA) (Provide sufficient details for evaluation of the total action.)*
See Page 2

6. PROPONENT APPROVAL *(Name and Grade)*	6a. SIGNATURE	6b. DATE
Michael Shane	**Michael.Shane**	**11-Feb-2015**

SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY. *(Check appropriate box and describe potential environmental effects Including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown*	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE *(Noise, accident potential, encroachment, etc.)*	☐	☒	☐	☐
8. AIR QUALITY *(Emissions, attainment status, state implementation plan, etc.)*	☐	☒	☐	☐
9. WATER RESOURCES *(Quality, quantity, source, etc.)*	☐	☒	☐	☐
10. SAFETY AND OCCUPATIONAL HEALTH *(Asbestos/radiation/chemical exposure, explosives safety quantity-distance, birdwildlife aircraft hazard, etc.)*	☐	☒	☐	☐
11. HAZARDOUS MATERIALS/WASTE *(Use/storage/generation, solid waste, etc.)*	☐	☒	☐	☐
12. BIOLOGICAL RESOURCES *(Wetlands/floodplains, threatened or endangered species, etc.)*	☐	☒	☐	☐
13. CULTURAL RESOURCES *(Native American burial sites, archeological, historical, etc.)*	☐	☒	☐	☐
14. GEOLOGY AND SOILS *(Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)*	☐	☒	☐	☐
15. SOCIOECONOMIC *(Employment/population projections, school and local fiscal impacts, etc.)*	☐	☒	☐	☐
16. OTHER *(Potential impacts not addressed above.)*	☐	☒	☐	☐

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17. ☒ PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION *(CATEX)* (see below for list of CATEXs); OR
☐ PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.

18. REMARKS

32 CFR 989 CATEX A2.3.13 Installing or modifying airfield operational equipment (such as runway visual range equipment, visual glide path systems, and remote transmitter or receiver facilities) on airfield property and usually accessible only to maintenance personnel.

32 CFR 989 CATEX A2.3.14 Installing on previously developed land, equipment that does not substantially alter land use (i.e., land

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION *(Name and Grade)*	19a. SIGNATURE	19b. DATE
Samuel Johnson	**//E-SIGNED 2-19-15//** **Johnson, Samuel**	**19-Feb-2015**

AF IMT 813, SEP 99, CONTINUATION SHEET

4. PURPOSE AND NEED FOR ACTION *(Identify decision to be made and need date)*

4.1 Objective:

This is a modification to RCS 24091. The Launch site needed to be relocated 1.5 miles south of the proposed maintenance facility.

4.2 Need Back:

25-FEB-15

4.3 Who Wants the Project:

HQ UTTR in support of the 86th Weapons Evaluation Group

4.4 Why is the action required:

The launch pad needs to be moved south to a larger FAA clearance zone from the Wendover Airfield

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES *(DOPAA) (Provide sufficient details for evaluation of the total action.)*

5.1 What is the proposed Action:

Work will be done as stated in the original 813 with the exception of the widening of the exiting roads, they will stay as is due to thier historical status. The road going east from the maintenance pad will not be constructed due to the new location. The new launch pad will be the same size as original just at a new location. All other functions will be as stated in the original 813

5.2 Where is the proposed work to be done:

South of Wendover Airfield UT

5.3 How will the proposed work be done:

See Original 813

5.4 Alternatives

Alternative A - No Action:

N/A

Alternative B - Other Locations Considered:

N/A

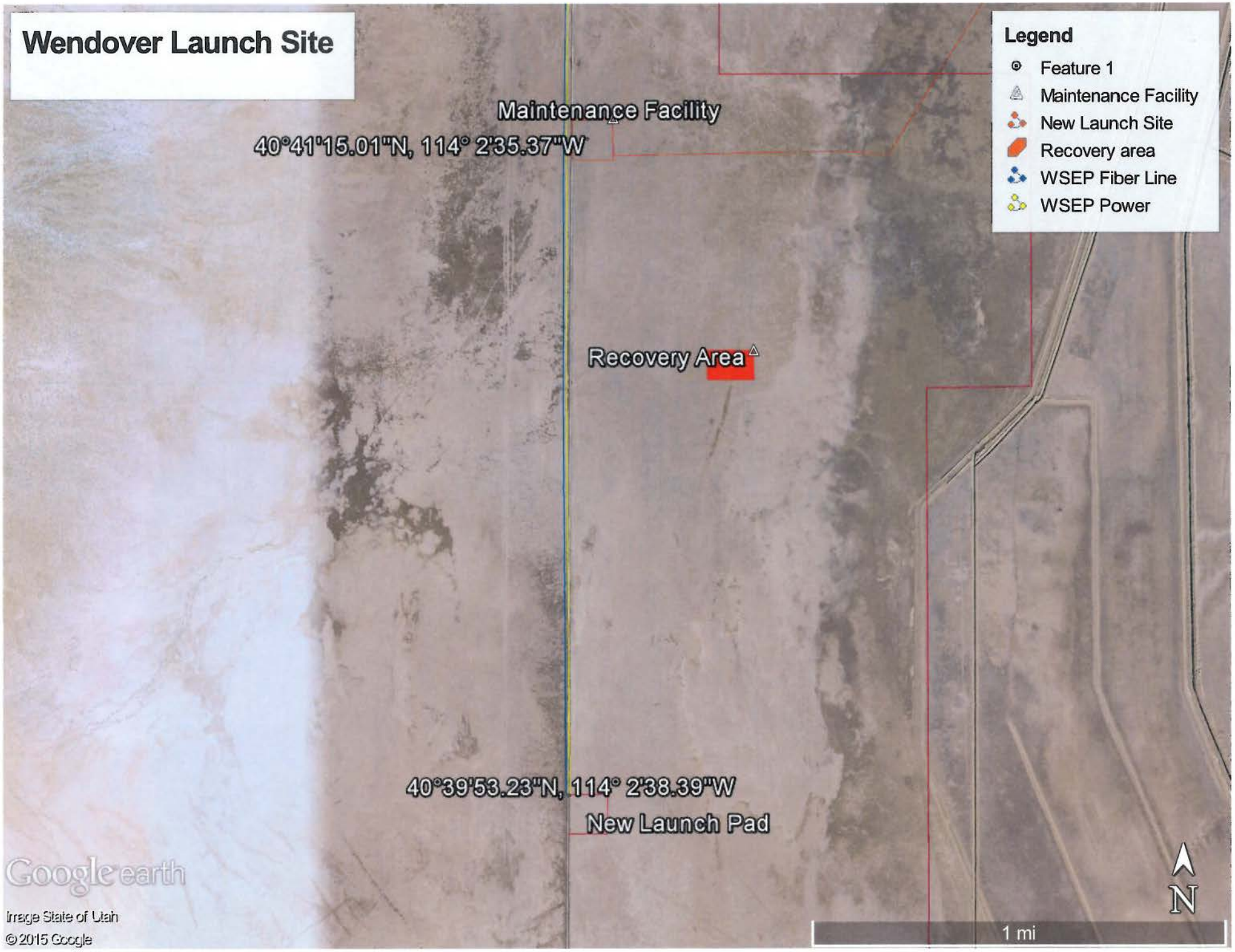
Alternative C - Other Alternatives:

See original 813

Electronic 813 Comments:

Remarks:

Comments:	Provided By:	Assigned:	Provided:
75 CEG/CEIEA-NR-Natural Resources	Russ Lawrence		18-Feb-2015
OK with the modification			
75 CEG/CEIE-CR-Cultural Resources	Anya Kitterman		11-Feb-2015
Cultural Resources - new site area has been resurveyed and there are no concerns. There will be no adverse effects based on new location. All previous stipulations agreed upon with the SHPOs office hold for this project as well. This includes minimizing impacts to culverts and Deep Creek railroad grade.			
75 CEG/CEIEA-Environmental Management	Samuel Johnson		19-Feb-2015
No comments available			


Wendover Launch Site
Legend
Feature 1
Maintenance Facility
New Launch Site
Recovery area
WSEP Fiber Line
WSEP Power
Maintenance Facility
40°41'15.01"N, 114° 2'35.37"W
Recovery Area
40°39'53.23"N, 114° 2'38.39"W
New Launch Pad
Google earth
Image State of Utah
© 2015 Google
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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 75TH AIR BASE WING (AFMC)
HILL AIR FORCE BASE UTAH

26 September 2014

MEMORANDUM FOR 75 CEG/CEIEA

FROM: 75 ABW/JACE

SUBJECT: Legal Review, 813 no. 24091, Wendover drone launch site

1. This 813 and application of CATEXs A2.3.13 and A2.3.14 are legally sufficient, IAW 40 C.F.R. 1508.4, 32 C.F.R. 989.13 and Appendix B to Part 989, provided the requirements and concerns of all other reviewers are met. Specifically, cultural resources concerns have yet to be met.

2. **Recommendation**: I recommend application of CATEXs A2.3.13 and A2.3.14 to the proposed action.

//Signed 26 Sep 2014//
JOSEPH G. LINFORD, DAFC
Environmental Attorney

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REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol
RCS: **24091**

INSTRUCTIONS: ***Section I to be completed by Proponent; Section II and III to be completed by Environmental Planning Function. Continue on seperate sheets as necessary. Reference appropriate item number(s).***

SECTION I - PROPONENT INFORMATION

1. TO (*Environmental Planning Function*)	2. FROM (*Proponent organization and functional address symbo*	2a. TELEPHONE NO.
75 CEG/CENE-EM	**388 FW (Michael Shane)**	**586-2551**

3. TITLE OF PROPOSED ACTION
WSEP Launch site

4. PURPOSE AND NEED FOR ACTION *(Identify decision to be made and need date)* More details on page #2

4.1 Objective:
To locate a new drone launch site south of the Wendover Airfield

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES *(DOPAA) (Provide sufficient details for evaluation of the total action.)*

5.1 What is the proposed Action:
To build a new drone launch facilitiy for use on the UTTR.

6. PROPONENT APPROVAL *(Name and Grade)*	6a. SIGNATURE	6b. DATE
Michael Shane	**Michael.Shane**	**01-Aug-2014**

SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY. *(Check appropriate box and describe potential environmental effects Including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown*	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE *(Noise, accident potential, encroachment, etc.)*	☐	☒	☐	☐
8. AIR QUALITY *(Emissions, attainment status, state implementation plan, etc.)*	☐	☒	☐	☐
9. WATER RESOURCES *(Quality, quantity, source, etc.)*	☐	☒	☐	☐
10. SAFETY AND OCCUPATIONAL HEALTH *(Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)*	☐	☒	☐	☐
11. HAZARDOUS MATERIALS/WASTE *(Use/storage/generation, solid waste, etc.)*	☐	☒	☐	☐
12. BIOLOGICAL RESOURCES *(Wetlands/floodplains, threatened or endangered species, etc.)*	☐	☒	☐	☐
13. CULTURAL RESOURCES *(Native American burial sites, archeological, historical, etc.)*	☐	☒	☐	☐
14. GEOLOGY AND SOILS *(Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)*	☐	☒	☐	☐
15. SOCIOECONOMIC *(Employment/population projections, school and local fiscal impacts, etc.)*	☐	☒	☐	☐
16. OTHER *(Potential impacts not addressed above.)*	☐	☒	☐	☐

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17. ☒ PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION *(CATEX)* (see below for list of CATEXs); OR
☐ PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.

18. REMARKS

32 CFR 989 CATEX A2.3.13 Installing or modifying airfield operational equipment (such as runway visual range equipment, visual glide path systems, and remote transmitter or receiver facilities) on airfield property and usually accessible only to maintenance personnel.

32 CFR 989 CATEX A2.3.14 Installing on previously developed land, equipment that does not substantially alter land use (i.e., land

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION *(Name and Grade)*	19a. SIGNATURE	19b DATE
Samuel Johnson	**//E-SIGNED 9-29-14//** **Johnson, Samuel**	**29-Sep-2014**

AF IMT 813, SEP 99, CONTINUATION SHEET

4. PURPOSE AND NEED FOR ACTION *(Identify decision to be made and need date)*

4.1 Objective:
To locate a new drone launch site south of the Wendover Airfield
4.2 Need Back:
15-AUG-14
4.3 Who Wants the Project:
The UTTR has been asked by the 86th Weapons evaluation Group to work this project
4.4 Why is the action required:
The UTTR has been approached by a customer to develop a new drone launch pad south of Wendover UT. The site would allow for multiple drone launches from the west side of the range for use during Combat Archer exercises performed on the UTTR. The current launch site is on Dugway Proving Grounds and its location creates issues with launch and recovery processes. The new facility would allow for more efficient and safer operations.

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES *(DOPAA) (Provide sufficient details for evaluation of the total action.)*

5.1 What is the proposed Action:
To build a new drone launch facilty for use on the UTTR.
5.2 Where is the proposed work to be done:
South of Wendeover airfield
5.3 How will the proposed work be done:
See attached document
5.4 Alternative Considerations:
Option 1: No Action:

The no-action alternative would be to not allow these operations on the UTTR. Since the UTTR is capable of testing multiple weapons systems and programs. Not allowing this operation would prevent WSEP from providing full evaluation capabilities. The no-action alternative would lead to a limited evaluation capabilities and severely effect range operations if a new facility is not allowed at this location.

Option 2: Select another facility or another location on the UTTR.

Other locations fly drones however none have the capabilities, landscape and infrastructure of the UTTR, for this reason other facilities or locations were not evaluated. Other locations on the UTTR were evaluated however due to the cost to bring in the required infrastructure and facilities and the effect that this operation would have on other operations on the range this option was not further evaluated.

Option 3: Preferred Action:

The preferred action alternative would be to approve the planned test at the location identified. The current selected location south of Wendover on the UTTR has been selected based on the proximity to the UTTR and existing infrastructure in the area to allow for safe operations and better utilization of the UTTR.

Electronic 813 Comments:

Remarks:

32 CFR 989 CATEX A2.3.13 Installing or modifying airfield operational equipment (such as runway visual range equipment, visual glide path systems, and remote transmitter or receiver facilities) on airfield property and usually accessible only to maintenance personnel.

32 CFR 989 CATEX A2.3.14 Installing on previously developed land, equipment that does not substantially alter land use (i.e., land use of more than one acre). This includes outgrants to private lessees for similar construction.

Comments:	Provided By:	Assigned:	Provided:
75 CEG/CENE-HM-Hazardous Materials	Michelle Cottle		04-Aug-2014
No concerns with Hazmat, but if there are any hazardous materials used, please make sure that they are properly tracked in EESOH-MIS.			
75 CEG/CENE-AC-Air Conformity	Allyson Morrison		04-Aug-2014
No conformity concerns			
75 CEG/CEN-HW-Hazardous Waste	Karl Nieman		05-Aug-2014
No haz waste concerns. Waste management protocols for excess fuel or other maintenance wastes associated with the facility will have to be established.			
75 CEG/CEU-Range Support Division	Roger Montoya		04-Aug-2014
No Concerns			
75 CEG/CENE-CR-Cultural Resources	Anya Kitterman		13-Aug-2014
Cultural Resources - potential to impact an eligible site and requires a small amount of additional CR survey. Coordinate with Cultural Resources to complete Section 106.			
75 CEG/CENE-NR-Natural Resources	Russ Lawrence		04-Aug-2014
No Natural Resource Concerns			
75 CEG/CENE-AQ-Air Quality	Glenn Palmer		04-Aug-2014
No air quality issues			
75 CEG/CENR-UTTR-Range Restoration	Dennis Weder		08-Aug-2014
This area has been surface cleared by the MMRP, but there is potential for subsurface UXO. Otherwise no concerns.			
75 CEG/CENE-ST/WQ-Storage Tanks/Water Quality	Mark Roginske		05-Aug-2014
No water quality or tank compliance concerns			
OO-ALC/JACE-Legal-JACE	Joseph Linford		26-Sep-2014
See attached legal review			
75 CEG/CENE-EM-Environmental Management	Samuel Johnson		29-Sep-2014
No comments available			

813 REVIEW – WORK REQUEST #24091
WSEP LAUNCH SITE - UTTR
CULTURAL RESOURCES REVIEW

The Utah Test and Training Range (UTTR) houses numerous cultural and archaeological sites. The current proposed action potentially places the road expansion within a National Register eligible site (42To2749). Therefore, the work may constitute an **ADVERSE EFFECT** to historic resources. The Utah State Historic Preservation Office (SHPO) has specific guidelines and requirements on mitigating adverse effects to historic sites. Additionally, there is a small area that has not been surveyed for cultural resources. Due to the size this could be undertaken in-house. This is necessary to fulfill Section 106 requirements.

Please coordinate with cultural resources management with additional information to determine effect and complete the Section 106 review. It is **NOT RECOMMENDED** the proposed project proceed until full survey has been completed and mitigation measures, if necessary, have been coordinated with the SHPO. Please contact Anya Kitterman (586-2464) to discuss the project or if there are any questions.

24 October 2013 Charlene Brown

Standard Operating Procedure

UNANTICIPATED DISCOVERY OF ARCHAEOLOGICAL DEPOSITS

APPLICABLE LAWS AND REGULATIONS

- National Historic Preservation Act
- National Environmental Policy Act
- Native American Graves Protection and Repatriation Act
- AFI 32–7065 (June 2004), *Cultural Resources Management Program*

OVERVIEW

All undertakings that disturb the ground surface have the potential to discover buried and previously unknown archaeological deposits. The accidental discoveries of archaeological deposits during an undertaking can include but are not limited to:

- Undiscovered/undocumented structural and engineering features; and
- Undiscovered/undocumented archaeological resources such as foundation remains, burials, artifacts, or other evidence of human occupation.

POLICY

When cultural resources are discovered during the construction of any undertaking or ground-disturbing activities, Hill AFB shall:

- Evaluate such deposits for NRHP eligibility.
- Treat the site as potentially eligible and avoid the site insofar as possible until an NRHP eligibility determination is made.
- Make reasonable efforts to minimize harm to the property until the Section 106 process is completed.
- **The BHPO will ensure that the provisions of NAGPRA are implemented first if any unanticipated discovery includes human remains, funerary objects, or American Indian sacred objects (see SOP #6).**

PROCEDURE

Step 1: Work shall cease in the area of the discovery (Figure 5-5). Work may continue in other areas.

- The property is to be treated as eligible and avoided until an eligibility determination is made. Hill AFB will continue to make reasonable efforts to avoid or minimize harm to

Further construction activities in the vicinity of the site will be suspended until an agreed-upon testing strategy has been carried out and sufficient data have been gathered to allow a determination of eligibility. The size of the area in which work should be stopped shall be determined in consultation with the **BHPO**.

the property until the Section 106 process is completed.

Step 2: Immediately following the discovery, the **Project Manager** shall notify the installation **BHPO**.

Step 3: The **BHPO** or a professional archaeologist shall make a field evaluation of the context of the deposit and its probable age and significance, record the findings in writing, and document with appropriate photographs and drawings.

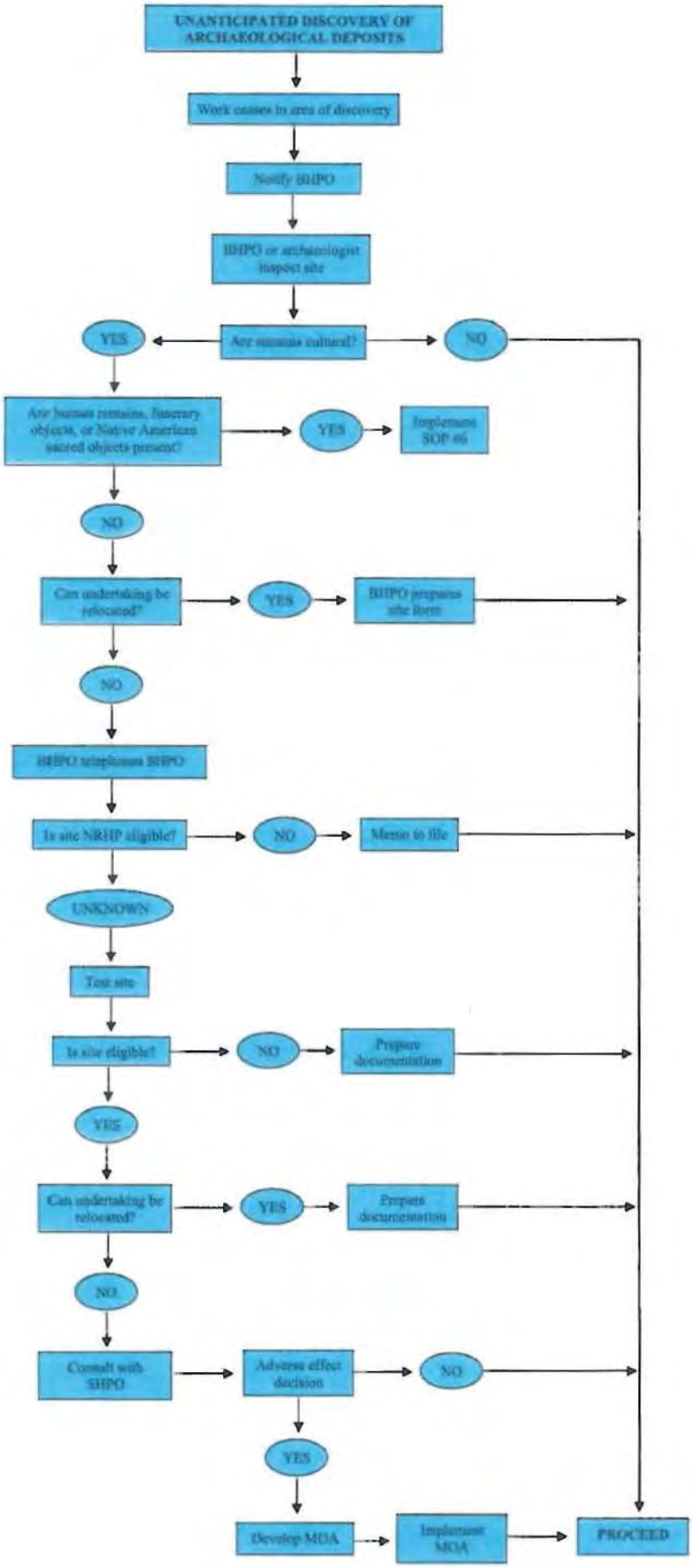
- If disturbance of the deposits is minimal and the excavation can be relocated to avoid the site, the **BHPO** will file appropriate site forms in a routine manner.
- If the excavation cannot be relocated, the **BHPO** shall notify the office of the **SHPO** to report the discovery and to initiate an expedited consultation.

The Section 106 review process is initiated at this point.

- If the deposits are determined to be ineligible for inclusion in the NRHP, then Hill AFB **BHPO** will prepare a memorandum for record and the construction may proceed.
- If the existing information is inadequate for an NRHP eligibility determination, Hill AFB **BHPO** shall develop an emergency testing plan in coordination with the SHPO.

Step 4: Hill AFB shall have qualified personnel conduct test excavations of the deposits to determine NRHP eligibility.

- Hill AFB BHPO, in consultation with the SHPO, will determine appropriate methodology for NRHP eligibility determination.
- If the SHPO and Hill AFB agree that the deposits are ineligible for inclusion in the NRHP, then work on the undertaking may proceed.
- If the deposits appear to be eligible, or Hill AFB and the SHPO cannot agree on the question of eligibility, then Hill AFB shall implement alternative actions, depending on the urgency of the proposed action.
  - Hill AFB may relocate the project to avoid the adverse effect.
  - Hill AFB may request the Keeper of the National Register to provide a determination.
  - Hill AFB may proceed with a data recovery plan under a MOA developed in coordination with the SHPO and possibly the ACHP and interested parties.
  - **Hill AFB may request comments from the ACHP and may develop and implement actions that take into account the effects of the undertaking on the property to the extent feasible and the comments of the SHPO, ACHP, and interested parties. Interim comments must be provided to Hill AFB within 48 hours; final comments must be provided within 30 days.**


UNANTICIPATED DISCOVERY OF ARCHAEOLOGICAL DEPOSITS
Work ceases in area of discovery
Notify BHPO
BHPO or archaeologist inspect site
Are remains cultural?
YES
NO
Are human remains, funerary objects, or Native American sacred objects present?
YES
Implement SOP #6
NO
Can undertaking be relocated?
YES
BHPO prepares site form
NO
BHPO telephones SHPO
Is site NRHP eligible?
NO
Memo to file
UNKNOWN
Test site
Is site eligible?
NO
Prepare documentation
YES
Can undertaking be relocated?
YES
Prepare documentation
NO
Consult with SHPO
Adverse effect decision
NO
YES
Develop MOA
Implement MOA
PROCEED

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol
RCS: **25716**

INSTRUCTIONS: ***Section I to be completed by Proponent; Section II and III to be completed by Environmental Planning Function. Continue on seperate sheets as necessary. Reference appropriate item number(s).***

SECTION I - PROPONENT INFORMATION

1. TO (*Environmental Planning Function*)	2. FROM (*Proponent organization and functional address symbo*	2a. TELEPHONE NO.
75 CEG/CEIEA	**ACC UTTR (Michael Shane)**	**586-2551**

3. TITLE OF PROPOSED ACTION
Creation of a Temporary Restricted Airspace over the Wendover area

4. PURPOSE AND NEED FOR ACTION *(Identify decision to be made and need date)*
See Page 2

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES *(DOPAA) (Provide sufficient details for evaluation of the total action.)*
See Page 2

6. PROPONENT APPROVAL *(Name and Grade)*	6a. SIGNATURE	6b. DATE
Michael Shane	**Michael.Shane**	**02-Jun-2015**

SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY. *(Check appropriate box and describe potential environmental effects Including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown*	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE *(Noise, accident potential, encroachment, etc.)*	☐	☒	☐	☐
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10. SAFETY AND OCCUPATIONAL HEALTH *(Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)*	☐	☒	☐	☐
11. HAZARDOUS MATERIALS/WASTE *(Use/storage/generation, solid waste, etc.)*	☐	☒	☐	☐
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15. SOCIOECONOMIC *(Employment/population projections, school and local fiscal impacts, etc.)*	☐	☒	☐	☐
16. OTHER *(Potential impacts not addressed above.)*	☐	☒	☐	☐

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17. ☒ PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION *(CATEX)* (see below for list of CATEXs); OR
☐ PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.

18. REMARKS
32 CFR 989 CATEX A2.3.35 Formal requests to the FAA, or host-nation equivalent agency, to establish or modify special use airspace (for example, restricted areas, warning areas, military operating areas) and military training routes for subsonic operations that have a base altitude of 3,000 feet above ground level or higher. The EPF must document application of this CATEX on AF Form 813, which must accompany the request to the FAA.

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION *(Name and Grade)*	19a. SIGNATURE	19b. DATE
Samuel Johnson	**//E-SIGNED 6- 4-15//** **Johnson, Samuel**	**04-Jun-2015**

AF IMT 813, SEP 99, CONTINUATION SHEET

4. PURPOSE AND NEED FOR ACTION *(Identify decision to be made and need date)*

4.1 Objective:

To establish a restricted airspace to allow for the launch of drones from the Wendover Stem area onto the UTTR. This is in conjunction with RCS 24091.

4.2 Need Back:

16-JUN-15

4.3 Who Wants the Project:

This project is being accomplished by the HQ UTTR in support of the 53d Weapons Evaluation Group (WEG), through the 83rd Fighter Weapons Squadron the 82nd Aerial Target Squadron

4.4 Why is the action required:

To provide a controlled airspace avenue to launch drones for training missions on the UTTR from the Wendover Launch area. To also provide a controlled airspace for the recovery of these items.

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES *(DOPAA) (Provide sufficient details for evaluation of the total action.)*

5.1 What is the proposed Action:

Create a small Temporary Restricted Area. Federal Aviation Administration Order JO 7400.2K, para 23-1-6, a. states, "Temporary restricted areas may be designated when necessary to accommodate hazardous activities associated with military exercises, test programs, etc." The type of operations the proponent will be conducting is precisely the reason the provision in JO 7400.2K was created. This action will connect the projected site with R-6405 and R-6406A

5.2 Where is the proposed work to be done:

Airspace South of Wendover UT

5.3 How will the proposed work be done:

This is an airspace action so work will be done with the FAA to get approval

5.4 Alternatives

Alternative A - No Action:

Under this alternative, HQ UTTR would be forced to launch the test aircraft at another location located within the UTTR. This is not optimal because the continued operation at the current launch site severely reduces training capabilities on the UTTR.

Alternative B - Other Locations Considered:

The UTTR has conducted a search for other airspace that is within 125 miles of home station, but due to the unique flight profile and characteristics of the unmanned aircraft this is not a feasible option. The proposed airspace will adjoin well established Restricted Airspace

Alternative C - Other Alternatives:

Other locations were evaluated however the site that was selected provides the safest and most useful site.

Electronic 813 Comments:

Remarks:

Comments:	Provided By:	Assigned:	Provided:
75 CEG/CEIE-CR-Cultural Resources	Anya Kitterman		03-Jun-2015
Cultural Resources - As this is only dealing with airspace there will be no potential to impact cultural resources. No Adverse Effect.			
AFCEC/CZOM-UTTR-Range Restoration	Scott Stoddard		02-Jun-2015
See attached EMR Comment			
75 CEG/CENPP-Community Planner/AICUZ (Site Approv	Krista Ligman		02-Jun-2015
No concerns, but marked unknown AICUZ effects due to unknown accident potential.			
75 CEG/CEU-Range Support Division	Hal Sagers		02-Jun-2015
No Concerns			
75 CEG/CEIEA-AC-Air Conformity	Megan Evans		03-Jun-2015
No conformity concerns			
75 CEG/CEIEA-AQ-Air Quality	Glenn Palmer		02-Jun-2015
no air quality issue			
75 CEG/CEIEA-NR-Natural Resources	Russ Lawrence		04-Jun-2015
No NR Concerns			
75 CEG/CEIEA-Environmental Management	Samuel Johnson		04-Jun-2015
No comments available			

ENVIRONMENTAL MANAGEMENT DIVISION, RESTORATION BRANCH (EMR)

AF Form 813 Review
Requestor: Michael Shane
Work Request: 25716 – UTTR – Temporary restricted air space over Wendover stem

EMR Concerns:

Restoration must maintain access to our sites in the stem area (as with all our sites at the UTTR).

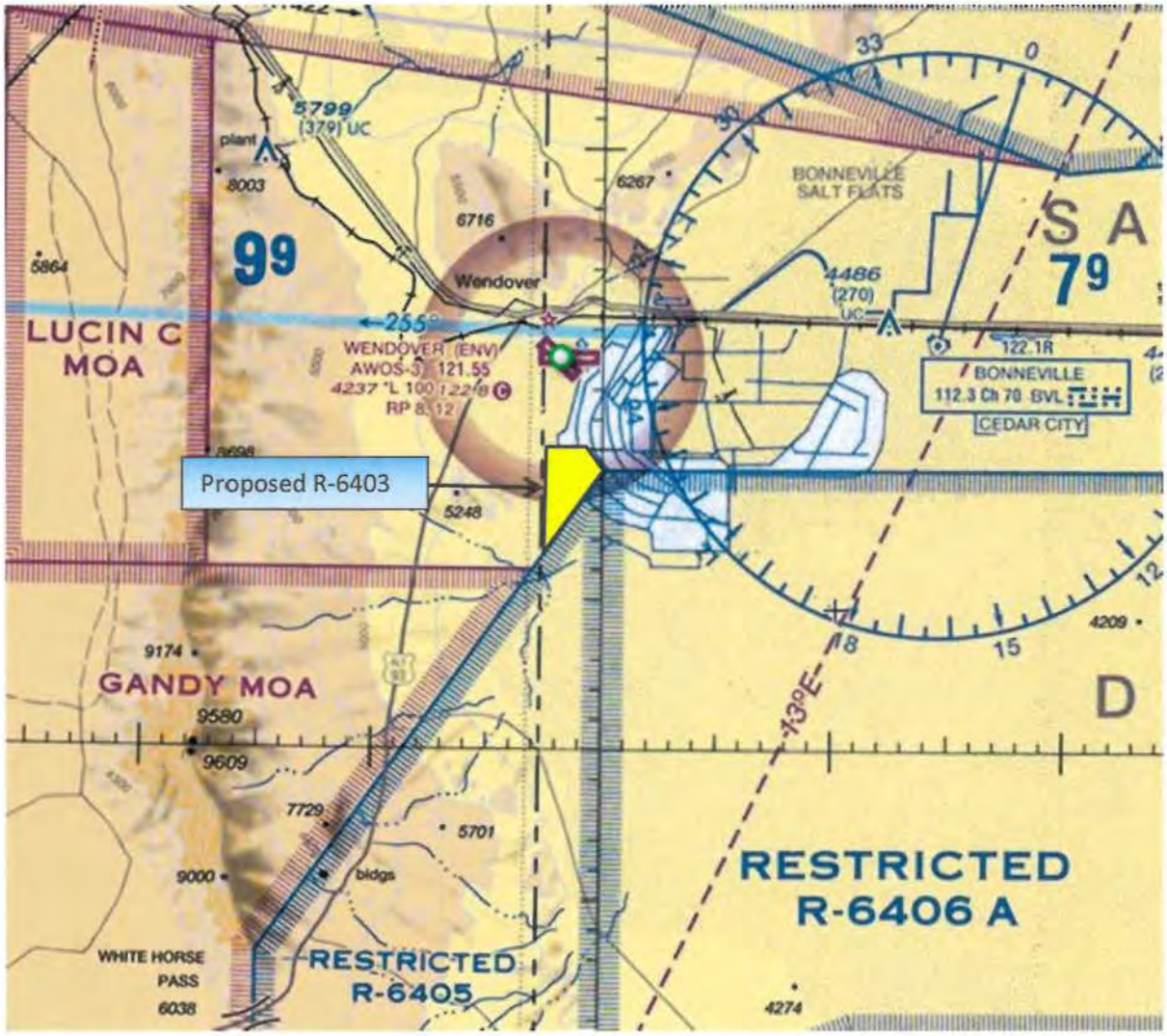
There are known and unknown surface and subsurface explosives and ordinance contamination in the vicinity of this site. However, any excavation in an area of industrial activity presents the potential to encounter contamination. In the event that explosives or ordinance contamination is encountered OR if unusual odors or soil discoloration are observed during any excavation or trenching necessary to complete this project and/or if any monitoring points are encountered, please contact the Environmental Restoration POC, Ms. Elizabeth Tevault, 777-3804.

Excavations that result in the need for soil disposal will either dispose of clean soil at a permitted landfill or use as fill for another on-base project. If excavated soil is to be taken to a permitted landfill a tipping receipt must be provided to the project proponent. Please note, that each landfill may have its own requirements for certification on the material they receive; therefore, prior to excavated soil leaving HAFB it is advisable to understand and comply with those requirements.

Environmental Restoration Reviewer: Scott Stoddard (775-6893)

Reviewed on: 10/26/2016

Proposed Structure (Future Design – R-6403).



Type Boundary	Designation	Altitudes
Proposed Boundary line. (Black Solid)	R-6403.	**Proposed:** SFC-5000' AGL.

ACC 15-XXX

388 FW/HQ UTTR, HILL AFB, USA

Creation of Temporary Restricted Airspace

Proponent's Names:
Col Lance K. Landrum, 388th Fighter Wing Commander
Col Paul R. Delmonte, HQ Utah Test & Training Range Commander
Matthew P. Bolduc, HQ Utah Test & Training Range Airspace Manager

HQ UTTR
6066 Cedar Lane, Bldg 1274 Suite 6B
Hill AFB, UT 84056-5812
Comm (801) 777-9384
DSN 777-9384

Updated on: 28 May 2015

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1.3. Proposal

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2.1. Unit and Mission
2.2. Need for Temporary Restricted Area

3. Concept/Proposed Actions

4. Alternatives
4.1. No Action Alternative
4.2. Use of Other Airspace – Including Utilization

5. Aeronautical Coordination

6. Other Interest Potential

7. Engagement Plan

Attachment 1 – Proposed Boundaries

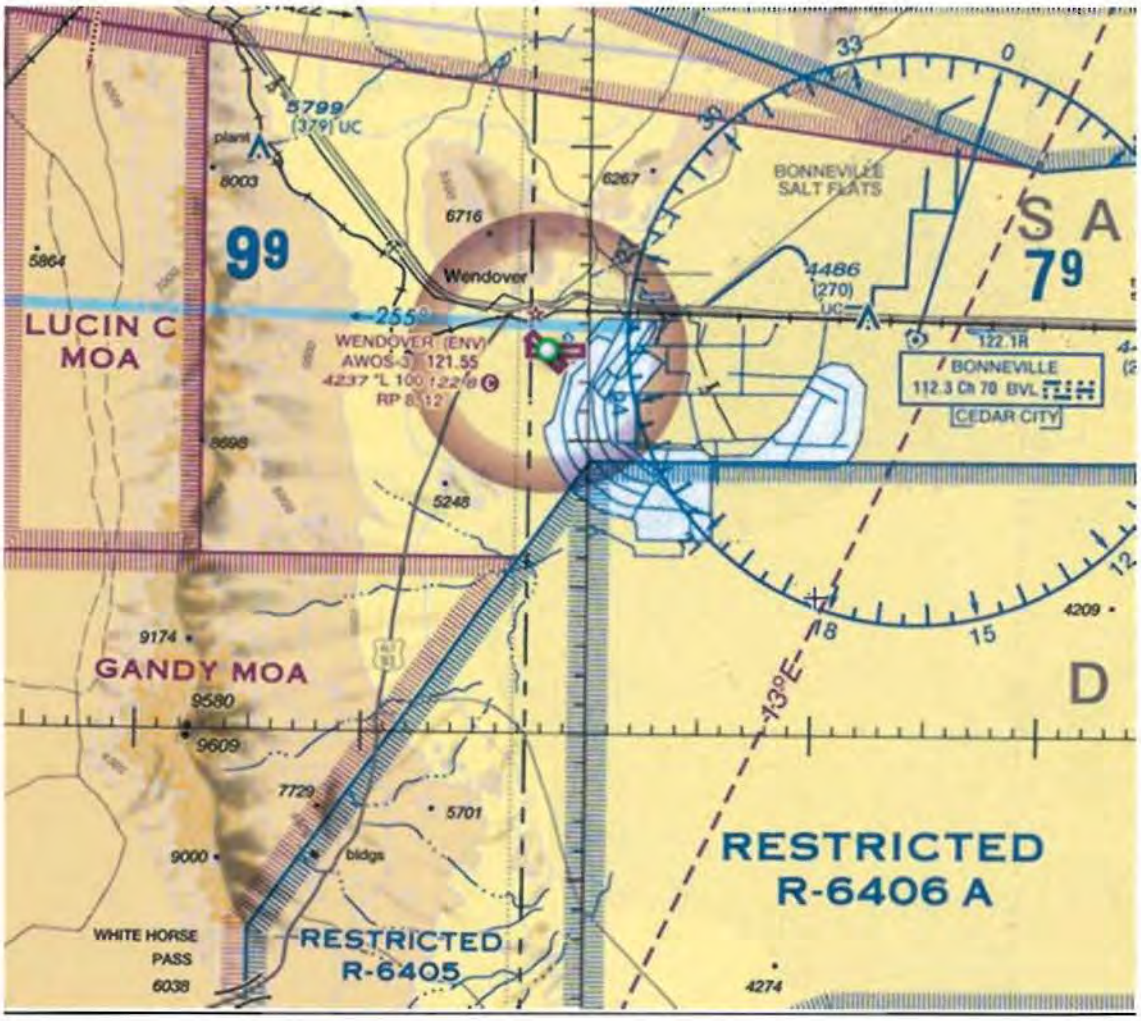
TEST/TRAINING SPACE NEEDS STATEMENT

HQ UTTR

1. Overview.

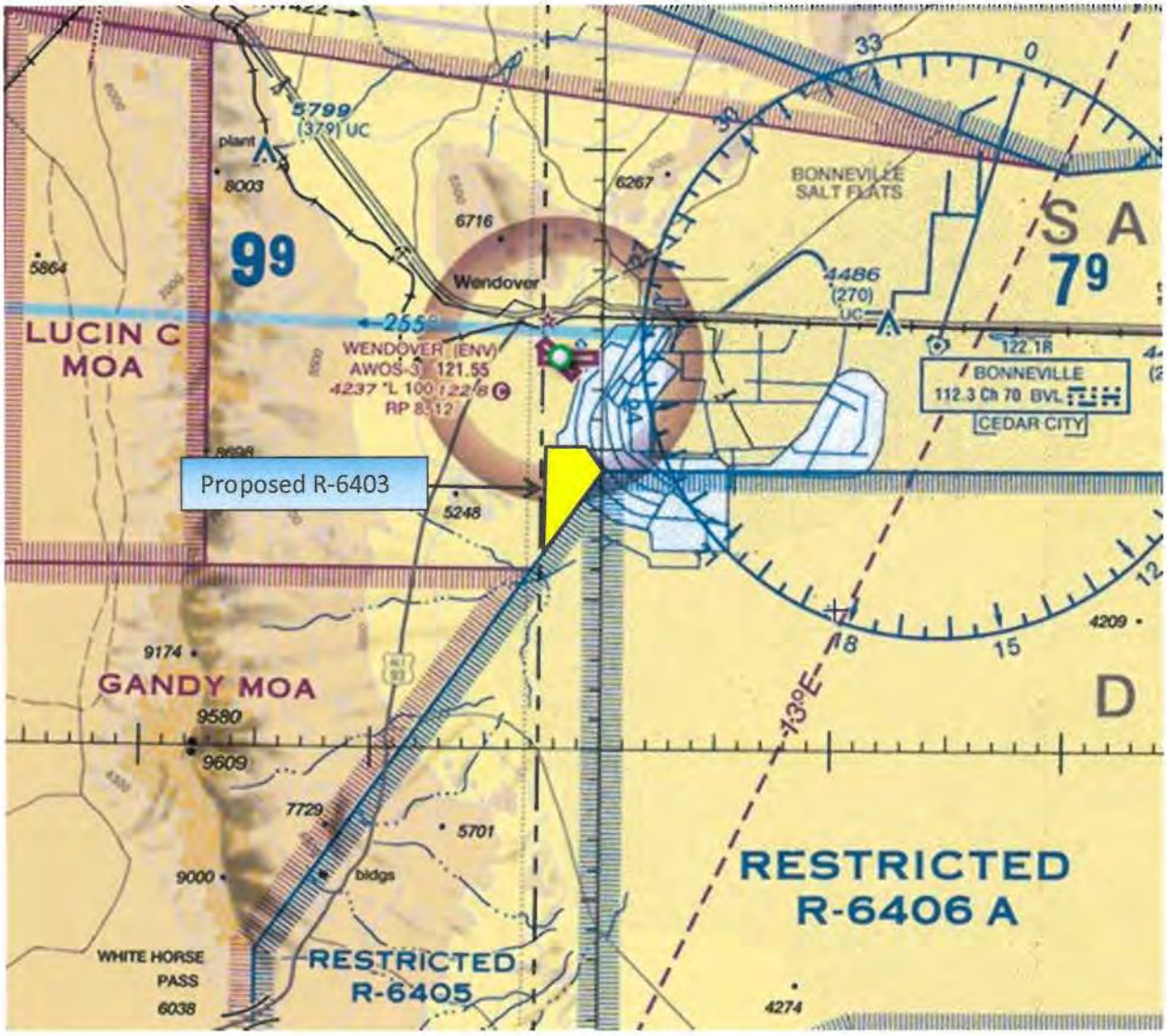
1.1 Concept /Purpose. This T/TSNS addresses the requirement to establish airspace sufficient to accommodate the launch and recovery of unmanned, rocket launched, jet propelled, parachute recovered, aircraft into and out of adjoining restricted airspace (R-6405). These aircraft will be used as targets for air-to-air missile testing. The land which lies underneath the proposed airspace is owned by the Air Force. The expected utilization of the airspace and launch facility would be four periods annually, not to exceed one week per period.

1.2 Existing Structure (Current Map).



Type Boundary	Designation	Altitudes
Current Boundary line N/A.	Airspace doesn't exist now but will adjoin at the north tip of R-6405.	N/A.

1.3 Proposed Structure (Future Design – R-6403).



Type Boundary	Designation	Altitudes
Proposed Boundary line. (Black Solid)	R-6403.	**Proposed:** SFC-5000' AGL.

2. Operational Requirements/Justification

2.1 Unit and Mission. The 53d Weapons Evaluation Group (WEG), through the 83rd Fighter Weapons Squadron the 82nd Aerial Target Squadron and other support assets conducts the Air Force's air-to-air Weapon System Evaluation Program (WSEP), known as Combat Archer. It also supports Weapons Instructor Course (WIC) air-to-air formal training syllabi. For the last few years they have launched the BQM-167 aerial target; an unmanned, rocket-launched, jet powered aircraft; from a location inside the South UTTR restricted airspace. That site is operated by the US Army. This location has limited the operational flexibility and capacity to provide aerial targets for WIC syllabi events, Operational/Developmental Test events and additional WSEP periods. This location provides the most versatile location, providing WSEP and the UTTR with numerous variables for test and training.

Its location provides needed support functions close at hand and also provides a larger safety area for launch and recovery. The expected utilization of the airspace and launch facility would be four periods annually, not to exceed one week per period.

3. Concept/Proposed Actions.

3.1 Create a small Temporary Restricted Area. Federal Aviation Administration Order JO 7400.2K, para 23-1-6, a. states, "Temporary restricted areas may be designated when necessary to accommodate hazardous activities associated with military exercises, test programs, etc." The type of operations the proponent will be conducting is precisely the reason the provision in JO 7400.2K was created.

4. Alternatives.

4.1. No Action Alternative.
Under this alternative, HQ UTTR would be forced to launch the test aircraft at another location located within the UTTR. This is not optimal because the continued operation at the current launch site severely reduces training capabilities on the UTTR.

4.2. Use of Other Airspace.
The UTTR has conducted a search for other airspace that is within 125 miles of home station, but due to the unique flight profile and characteristics of the unmanned aircraft this is not a feasible option. As depicted, the proposed airspace will adjoin well established Restricted Airspace.

5. Aeronautical Coordination.

A formal coordination meeting was held with the FAA on March 18, 2015, between Salt Lake ARTCC (Wayne Vandegraaff, Robert Davis), (Dennis Bee FAA ATREP), other local FAA representatives, and UTTR representatives. Salt Lake ARTCC recommended that the airspace be given a unique naming nomenclature, and that the Utah/Nevada boarder be used as the western boundary of the airspace.

6. Competing Interest Potential.

The conceptualized action and alternatives may impact the following:

6.1. Recreational Areas: (Parks – federal, state, and local). There are no anticipated concerns for recreational areas under the proposed airspace, the land under the projected airspace is privately owned. An agreement will be put into place with the land owner for this operation. However, upon HQ AF approval of this T/TSNS, the follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.2. Native American Reservations, Lands, or areas of special interest. There are no anticipated concerns for Native American Reservations, lands, or areas of special interest under the proposed airspace as this resource area is already owned by the Air Force. Proper consultation will be taken prior to implementing this agreement to ensure there are no concerns. However, upon HQ AF approval of this T/TSNS, the follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.3. Grazing and/or farming. There are no anticipated concerns for grazing and farming areas under the proposed airspace, the land under the projected airspace is privately owned. An agreement will be put into place with the land owner for this operation. However, upon HQ AF approval of this T/TSNS, the follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.4. Endangered species. There are no additional anticipated concerns for any endangered or threatened species under the proposed airspace, the area has been evaluated by the base Natural Resources office and there are no species of concern located under the projected airspace. However, upon HQ AF approval of this T/TSNS, the

follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.5. Wildlife refuges. There are no additional anticipated concerns for the wildlife refuge areas under the proposed R-6403, the land under the projected airspace is privately owned. An agreement will be put into place with the land owner for this operation. However, upon HQ AF approval of this T/TSNS, the follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.6. Hunting and fishing. There are no additional anticipated concerns for the hunting and fishing areas under the proposed R-6403, the land under the projected airspace is privately owned. An agreement will be put into place with the land owner for this operation. However, upon HQ AF approval of this T/TSNS, the follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.7. Archaeological sites. There are no additional anticipated concerns for the archaeological sites under the proposed R-6403, there are areas of historical significance in the area however the land under this airspace is privately owned and our actions will have no adverse effect on anything on the ground. However, upon HQ AF approval of this T/TSNS, the follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.8. Population centers, communities, previously identified or potential noise sensitive areas. There are no additional anticipated concerns for the Population centers, communities, and previously identified potentially sensitive noise areas under the proposed R-6403, the launch site is approximately 4.5 miles south of the nearest populated site. The drones produce a loud noise during take-off for a limited time only. However, upon HQ AF approval of this T/TSNS, the follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.9. Ongoing litigation that may be impacted. Per coordination with the wing legal office, there have been none identified for either concept.

6.10. Other training airspace actions that may be impacted by this initiative. Approval of this initiative will only assist in the resource utilization of the UTTR by allowing required testing to be conducted in a more efficient manner. No other training airspace actions are in discussion.

6.11. Regional Actions by other MAJCOM or Military Services. After briefing this concept to the Airspace Manager of the Nevada Test and Training Range in March 2015, there are no other duplicative actions ongoing, nor any other current airspace that will meet these requirements.

6.12. Consultation with other state/federal agencies. As mentioned previously, various components of this concept have been briefed to FAA Air Traffic Control Management personnel. There are no additional anticipated concerns for consultations with other state/federal agencies under the proposed R-6403. However, upon HQ AF approval of this T/TSNS, the follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.13. Other Aviation interest groups and agencies such as: Aircraft Owners and Pilots Association (AOPA), National Business Aircraft Association (NBAA), Air Transport Association (ATA), State Department of Transportation and any local airport commission or Fixed Base Operators (FBO). After informal discussions with local transportation officials, there will be little impact to the general aviation community. The wing MACA program identified two FBOs whom could potentially be impacted and the wing has contacted them, this has been briefed at all MACA visits in this area and will be briefed in future visits.

6.14. Other interested or affected parties. None identified.

7. Questions or Concerns: Matt Bolduc, Chief of Airspace Management, DSN 777-9384, matthew.bolduc.1@us.af.mil

Attachment 1

Proposed Boundaries

1. The vertical and lateral boundaries of the R-6403 airspace are defined as listed below:

The R-6403 airspace is defined as the overlying airspace of the Wendover Airfield and vertically starts at the surface and extends up to, and including 5,000 feet AGL "IN CONTROLLED AIRSPACE ONLY." The area is defined laterally beginning at 40°40'15.94"N/114°02'37.89"W to 40°40'15.94"N/114°00'33.09"W to 40°39'18.74"N/113°59'58.94"W to 40°36'30.23"N/114°02'37.29"W to the point of beginning.

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol
*RCS:***25776**

INSTRUCTIONS: ***Section I to be completed by Proponent; Section II and III to be completed by Environmental Planning Function. Continue on seperate sheets as necessary. Reference appropriate item number(s).***

SECTION I - PROPONENT INFORMATION

1. TO (*Environmental Planning Function*)	2. FROM (*Proponent organization and functional address symbo*	2a. TELEPHONE NO.
75 CEG/CEIEA	**ACC UTTR (Michael Shane)**	**586-2551**

3. TITLE OF PROPOSED ACTION
WSEP Launch power & fiber upgrades

4. PURPOSE AND NEED FOR ACTION *(Identify decision to be made and need date)*
See Page 2

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES *(DOPAA) (Provide sufficient details for evaluation of the total action.)*
See Page 2

6. PROPONENT APPROVAL *(Name and Grade)*	6a. SIGNATURE	6b. DATE
Michael Shane	**Michael.Shane**	**12-Jun-2015**

SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY. *(Check appropriate box and describe potential environmental effects Including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown*	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE *(Noise, accident potential, encroachment, etc.)*	☐	☒	☐	☐
8. AIR QUALITY *(Emissions, attainment status, state implementation plan, etc.)*	☐	☒	☐	☐
9. WATER RESOURCES *(Quality, quantity, source, etc.)*	☐	☒	☐	☐
10. SAFETY AND OCCUPATIONAL HEALTH *(Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)*	☐	☒	☐	☐
11. HAZARDOUS MATERIALS/WASTE *(Use/storage/generation, solid waste, etc.)*	☐	☒	☐	☐
12. BIOLOGICAL RESOURCES *(Wetlands/floodplains, threatened or endangered species, etc.)*	☐	☒	☐	☐
13. CULTURAL RESOURCES *(Native American burial sites, archeological, historical, etc.)*	☐	☒	☐	☐
14. GEOLOGY AND SOILS *(Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)*	☐	☒	☐	☐
15. SOCIOECONOMIC *(Employment/population projections, school and local fiscal impacts, etc.)*	☐	☒	☐	☐
16. OTHER *(Potential impacts not addressed above.)*	☐	☒	☐	☐

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17. ☒ PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION *(CATEX)* (see below for list of CATEXs); OR
☐ PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.

18. REMARKS
32 CFR 989 CATEX A2.3.12 Installing, operating, modifying, and routinely repairing and replacing utility and communications systems, data processing cable, and similar electronic equipment that use existing rights of way, easements, distribution systems, or facilities.

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION *(Name and Grade)*	19a. SIGNATURE	19b. DATE
Samuel Johnson	**//E-SIGNED 7- 7-15//** **Johnson, Samuel**	**07-Jul-2015**

AF IMT 813, SEP 99, CONTINUATION SHEET

4. PURPOSE AND NEED FOR ACTION *(Identify decision to be made and need date)*

4.1 Objective:

To establish commercial power to the Wendover launch sites

4.2 Need Back:

26-JUN-15

4.3 Who Wants the Project:

The UTTR has been asked by the 86ht Weapons Evaluation Group to work this project

4.4 Why is the action required:

To establish commercial power to the WSEP launch sites to reduce the use of Generators on site. Commercial power will provide a more constant power source to the sites.

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES *(DOPAA) (Provide sufficient details for evaluation of the total action.)*

5.1 What is the proposed Action:

The proposed action is to plow both power and fiber on the east side of the existing road leading from Wendover property to the DOD site.

5.2 Where is the proposed work to be done:

Wendover Stem area

5.3 How will the proposed work be done:

Equipment will be used to plow both a power and fiber line approximately 48" into the ground within 25' of the existing road. The plowing operations will leave a path approximately 16" wide and the soil will fill into the area after the line is installed

5.4 Alternatives

Alternative A - No Action:

The no action alternative will require the use of generators on site to run operations and will require for tactical fiber lines to be run over the ground which leads to security issues.

Alternative B - Other Locations Considered:

Other routes were considered in the area however due to land ownership and availability of the commercial power these were considered to not meet requirements.

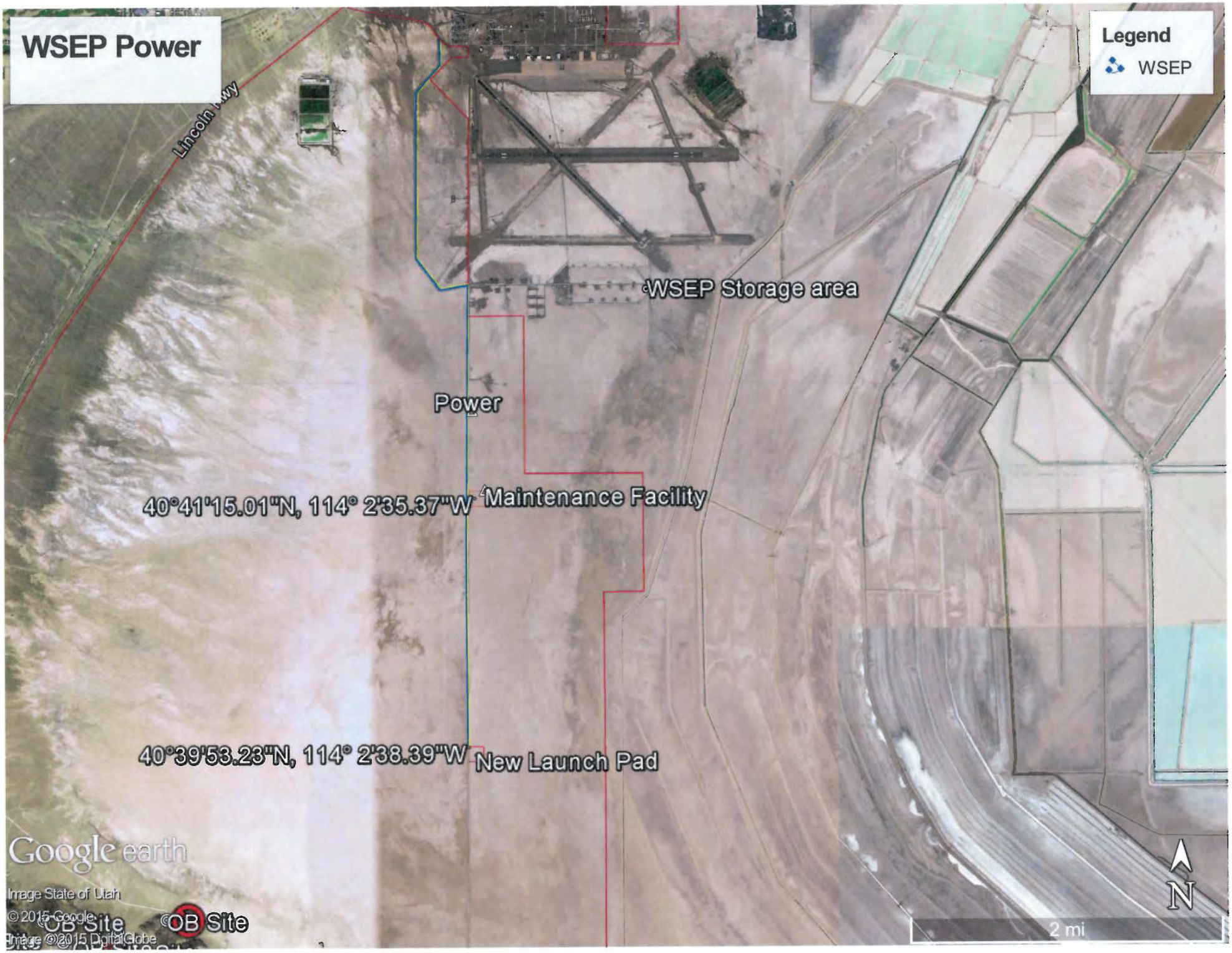
Alternative C - Other Alternatives:

The selected alternative limits the soil disturbance by keeping the lines next to an existing road where soil disturbance has already taken place and also provides a path that will ensure the security of the lines.

Electronic 813 Comments:

Remarks:

Comments:	Provided By:	Assigned:	Provided:
AFCEC/CZOM-UTTR-Range Restoration	Scott Stoddard		15-Jun-2015
See attached EMR comment			
75 CEG/CEIEA-AC-Air Conformity	Megan Evans		16-Jun-2015
No conformity concerns			
75 CEG/CEIE-CR-Cultural Resources	Anya Kitterman		18-Jun-2015
Cultural Resources - No Adverse Effect. The proposed project has previously been surveyed. The two historic properties will be avoided. The work will remain completely within previously disturbed areas. A letter of no adverse effect will be forwarded to the SHPO office. Potential for subsurface deposits, see unanticipated discovery protocol and full comments below.			
75 CEG/CEIEA-AQ-Air Quality	Glenn Palmer		15-Jun-2015
no air quality issues			
75 CEG/CEIEA-NR-Natural Resources	Russ Lawrence		06-Jul-2015
No Natural resource Concerns due to it being located adjacent to the access road.			
75 CEG/CEIEA-Environmental Management	Samuel Johnson		07-Jul-2015
No comments available			


WSEP Power
Legend
WSEP
Lincoln Hwy
WSEP Storage area
Power
40°41'15.01"N, 114° 2'35.37"W
Maintenance Facility
40°39'53.23"N, 114° 2'38.39"W
New Launch Pad
Google earth
Image State of Utah
© 2015 Google
Image © 2015 DigitalGlobe
OB Site
OB Site
2 mi
N

ENVIRONMENTAL MANAGEMENT DIVISION, RESTORATION BRANCH (EMR)

AF Form 813 Review
Requestor: Michael Shane
Work Request: 25756 – UTTR – Vegetation Control

EMR Concerns:

Surface clearance of explosives has been completed. However there are unknown subsurface explosives and ordinance contamination in the vicinity of this site. Any excavation in an area of industrial activity presents the potential to encounter contamination. In the event that explosives or ordinance contamination is encountered OR if unusual odors or soil discoloration are observed during any excavation or trenching necessary to complete this project and/or if any monitoring points are encountered, please contact the Environmental Restoration POC, Ms. Elizabeth Tevault, 777-3804.

Excavations that result in the need for soil disposal will either dispose of clean soil at a permitted landfill or use as fill for another on-base project. If excavated soil is to be taken to a permitted landfill a tipping receipt must be provided to the project proponent. Please note, that each landfill may have its own requirements for certification on the material they receive; therefore, prior to excavated soil leaving HAFB it is advisable to understand and comply with those requirements.

Environmental Restoration Reviewer: Scott Stoddard (775-6893)

Reviewed on: 10/26/2016

813 REVIEW – WORK REQUEST #25776
FIBER UPGRADE PROJECT – WSEP LAUNCH PAD SITE
SUTTR
CULTURAL RESOURCES REVIEW

The Utah Test and Training Range (UTTR) houses numerous cultural and archaeological sites. The proposed work falls completely within existing road lines and previously disturbed areas. The site has been surveyed in 1995 (U-95-WC-558m) and in 2012 (U-12-UI-0371m). The only known historic properties in the area are eligible historic sites 42TO2749 and 42TO0708, which the project avoids. This project will remain completely within the existing disturbance and will not impact the historic properties. Therefore, the project will have no adverse effect.

A no adverse effect letter will be forwarded to the SHPO office for concurrence. Section 106 will be complete when this concurrence is received. It is recommended the project proceed with the understanding that an archaeological monitor will be present for all ground disturbing activities. Please contact Anya Kitterman (586-2464) to discuss the project or if there are any questions.

18 June 2015 Anya Kitterman

Standard Operating Procedure

UNANTICIPATED DISCOVERY OF ARCHAEOLOGICAL DEPOSITS

APPLICABLE LAWS AND REGULATIONS

- National Historic Preservation Act
- National Environmental Policy Act
- Native American Graves Protection and Repatriation Act
- AFI 32–7065 (June 2004), *Cultural Resources Management Program*

OVERVIEW

All undertakings that disturb the ground surface have the potential to discover buried and previously unknown archaeological deposits. The accidental discoveries of archaeological deposits during an undertaking can include but are not limited to:

- Undiscovered/undocumented structural and engineering features; and
- Undiscovered/undocumented archaeological resources such as foundation remains, burials, artifacts, or other evidence of human occupation.

POLICY

When cultural resources are discovered during the construction of any undertaking or ground-disturbing activities, Hill AFB shall:

- Evaluate such deposits for NRHP eligibility.
- Treat the site as potentially eligible and avoid the site insofar as possible until an NRHP eligibility determination is made.
- Make reasonable efforts to minimize harm to the property until the Section 106 process is completed.
- **The BHPO will ensure that the provisions of NAGPRA are implemented first if any unanticipated discovery includes human remains, funerary objects, or American Indian sacred objects (see SOP #6).**

PROCEDURE

Step 1: Work shall cease in the area of the discovery (Figure 5-5). Work may continue in other areas.

- The property is to be treated as eligible and avoided until an eligibility determination is made. Hill AFB will continue to make reasonable efforts to avoid or minimize harm to

Further construction activities in the vicinity of the site will be suspended until an agreed-upon testing strategy has been carried out and sufficient data have been gathered to allow a determination of eligibility. The size of the area in which work should be stopped shall be determined in consultation with the **BHPO**.

the property until the Section 106 process is completed.

Step 2: Immediately following the discovery, the **Project Manager** shall notify the installation **BHPO**.

Step 3: The **BHPO** or a professional archaeologist shall make a field evaluation of the context of the deposit and its probable age and significance, record the findings in writing, and document with appropriate photographs and drawings.

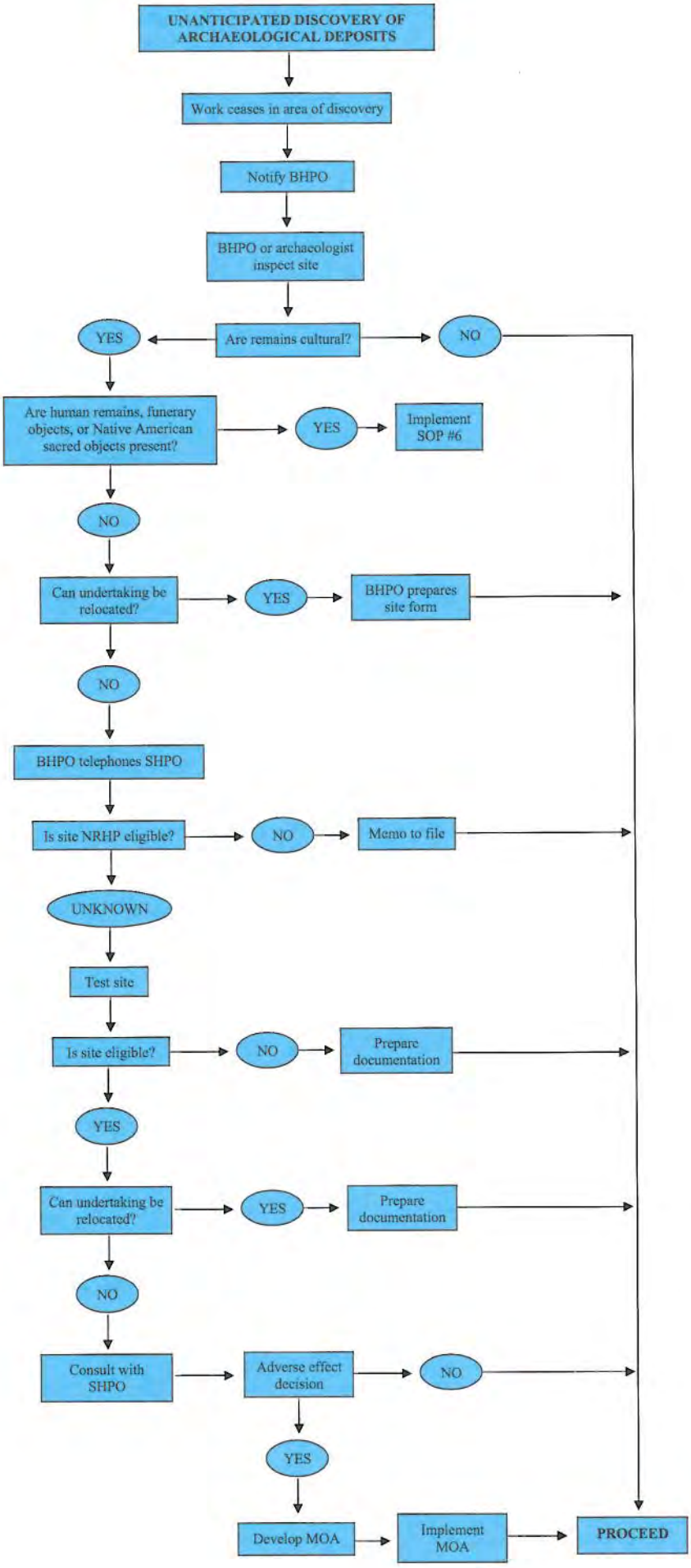
- If disturbance of the deposits is minimal and the excavation can be relocated to avoid the site, the **BHPO** will file appropriate site forms in a routine manner.
- If the excavation cannot be relocated, the **BHPO** shall notify the office of the **SHPO** to report the discovery and to initiate an expedited consultation.

The Section 106 review process is initiated at this point.

- If the deposits are determined to be ineligible for inclusion in the NRHP, then Hill AFB **BHPO** will prepare a memorandum for record and the construction may proceed.
- If the existing information is inadequate for an NRHP eligibility determination, Hill AFB **BHPO** shall develop an emergency testing plan in coordination with the SHPO.

Step 4: Hill AFB shall have qualified personnel conduct test excavations of the deposits to determine NRHP eligibility.

- Hill AFB BHPO, in consultation with the SHPO, will determine appropriate methodology for NRHP eligibility determination.
- If the SHPO and Hill AFB agree that the deposits are ineligible for inclusion in the NRHP, then work on the undertaking may proceed.
- If the deposits appear to be eligible, or Hill AFB and the SHPO cannot agree on the question of eligibility, then Hill AFB shall implement alternative actions, depending on the urgency of the proposed action.
  - Hill AFB may relocate the project to avoid the adverse effect.
  - Hill AFB may request the Keeper of the National Register to provide a determination.
  - Hill AFB may proceed with a data recovery plan under a MOA developed in coordination with the SHPO and possibly the ACHP and interested parties.
  - **Hill AFB may request comments from the ACHP and may develop and implement actions that take into account the effects of the undertaking on the property to the extent feasible and the comments of the SHPO, ACHP, and interested parties. Interim comments must be provided to Hill AFB within 48 hours; final comments must be provided within 30 days.**


UNANTICIPATED DISCOVERY OF ARCHAEOLOGICAL DEPOSITS
Work ceases in area of discovery
Notify BHPO
BHPO or archaeologist inspect site
Are remains cultural?
YES
NO
Are human remains, funerary objects, or Native American sacred objects present?
YES
Implement SOP #6
NO
Can undertaking be relocated?
YES
BHPO prepares site form
NO
BHPO telephones SHPO
Is site NRHP eligible?
NO
Memo to file
UNKNOWN
Test site
Is site eligible?
NO
Prepare documentation
YES
Can undertaking be relocated?
YES
Prepare documentation
NO
Consult with SHPO
Adverse effect decision
NO
YES
Develop MOA
Implement MOA
PROCEED

Appendix B

Previous Draft EA, Media Releases, and Public and Agency Comments

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DRAFT

ENVIRONMENTAL ASSESSMENT FOR ESTABLISHING RESTRICTED AREA (R-6401) AND OPERATION OF UNMANNED AIRCRAFT, WENDOVER, UTAH

Prepared by:
Leidos, Inc.

Prepared for:
U.S. Army Corps of Engineers, Mobile District
Contract Number W91278-16-D-0073; Delivery Order 0002

September 2019

PRIVACY ADVISORY

Public comments on the Draft Environmental Assessment (EA) were requested. Letters or other written or oral comments provided to the U.S. Air Force (USAF) at Wendover, Utah, have been published in this Draft EA. As required by law, comments will be addressed in the Final EA and made available to the public. Any personal information provided to the USAF, Wendover, Utah, is used only to identify your intent to make a comment or to fulfill requests for copies of the Final EA or associated documents. Private addresses were compiled to develop a mailing list for those requesting copies of the Draft EA. However, only the names of the individuals making comments and their specific comments have been disclosed. Private address information has not been published in this EA or released for any purpose unless required by law.

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
53 WEG	53rd Weapons Evaluation Group
75 CEG/CEIE	75th Civil Engineer Group, Environmental Compliance
75 LRS/LGRM	75th Logistics Readiness Squadron, Materiel Management Flight
388 FW	388th Fighter Wing
ACAM	Air Conformity Applicability Model
ACC	Air Combat Command
AFB	Air Force Base
AEDT	Aviation Environment Design Tool
AFI	Air Force Instruction
AFOSH	Air Force Occupational Safety and Health
AFMAN	Air Force Manual
AGL	above ground level
ALTRV	Altitude Reservation
APE	Area of Potential Effect
Army	U.S. Army
ARTCC	Air Route Traffic Control Center
AST	aboveground storage tank
ATC	air traffic control
ATCAA	Air Traffic Control Assigned Airspace
BASH	bird/wildlife-aircraft strike hazard
BCC	Bird of Conservation Concern
BCR	Bird Conservation Region
BGEPA	Bald and Golden Eagle Protection Act
BIOTICS	Biodiversity Tracking and Conservation System
BMP	best management practice
CA	Cooperating Agency
CAA	Clean Air Act
CATEX	Categorical Exclusion
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CH_4	methane
cm	centimeter(s)
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CSE	Comprehensive Site Evaluation
CWA	Clean Water Act
dB	decibel(s)
dBA	A-weighted decibel(s)
DNL	day-night average sound level
DNL_{mr}	onset-rate adjusted monthly day-night average sound level
DoD	U.S. Department of Defense
DoDD	Department of Defense Directive

ACRONYMS AND ABBREVIATIONS (Continued)

DPG	Dugway Proving Ground
EA	Environmental Assessment
EESOH-MIS	Enterprise Environmental, Safety, and Occupational Health – Management Information System
EI	Environmental Issue
EIAP	Environmental Impact Analysis Process
EIC	Environmental Impact Category
EISA	Energy Independence and Security Act
EO	Executive Order
EOD	Explosive Ordnance Disposal
EPCRA	Emergency Planning and Community Right-to-Know Act
ERA	Environmental Resource Area
ERP	Environmental Response Program
ESA	Endangered Species Act
ESQD	explosive safety quantity-distance
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FL	Flight Level
FRP	Facility Response Plan
FSS	Federal Supply System
GHG	greenhouse gas
GLCM	Ground Launched Cruise Missile
GPS	Global Positioning System
GWP	global warming potential
HAP	hazardous air pollutant
HAZMART	Hazardous Materials Pharmacy
HDSC	Hazardous Material Distribution Service Center
HMMP	Hazardous Materials Management Process
HQ	Headquarters
I	Interstate
ICP	Installation Contingency Plan
IFR	Instrument Flight Rules
ILS-S	Integrated Logistics System – Supply
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resources Management Plan
Intrepid Potash	Intrepid Potash Wendover, LLC
IPaC	Information for Planning and Consultation
IR	Instrument Route
JLENS	Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System
kg	kilogram(s)
kts	knots
kW	kilowatt(s)
lbs	pounds
L_{eq}	equivalent sound level
LID	Low Impact Development

ACRONYMS AND ABBREVIATIONS (Continued)

L_{max}	maximum sound level
LOA	Letter of Agreement
LQG	large quantity generator
MBTA	Migratory Bird Treaty Act
MEC	munitions and explosives of concern
mm	millimeter(s)
MMRP	Military Munitions Response Program
MOA	Military Operations Area
MRNMAP	MOA Range NoiseMap
MRS	Munitions Response Site
MSL	mean sea level
MTR	Military Training Route
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAS	National Airspace System
NAVAID	Navigational Aid
NEI	National Emissions Inventory
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NM	nautical mile
NO_2	nitrogen dioxide
NOTAM	Notice to Airmen
NO_x	nitrogen oxides
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSN	National Stock Number
O_3	ozone
O&M	operations and maintenance
OSHA	Occupational Safety and Health Administration
Pb	lead
PCB	polychlorinated biphenyl
PL	Public Law
$PM_{2.5}$	particulate matter less than or equal to 2.5 micrometers in diameter
PM_{10}	particulate matter less than or equal to 10 micrometers in diameter
RA	Restricted Area
RATO	rocket-assisted takeoff
RCRA	Resource Conservation and Recovery Act
RF	radio frequency
ROI	Region of Influence
RPA	remotely piloted aircraft
S56	Salt Lake City Terminal Radar Approach Control
SAA	Special Activity Airspace
SARA	Superfund Amendments and Reauthorization Act
SEL	sound exposure level
SHPO	State Historic Preservation Office

ACRONYMS AND ABBREVIATIONS (Continued)

SIP	State Implementation Plan
SITLA	School and Institutional Trust Lands Administration
SLC	Salt Lake City International Airport
SO_2	sulfur dioxide
SO_x	sulfur oxides
SPC	Species of Concern
SPCC	Spill Prevention Control and Countermeasures
SQG	small quantity generator
SSAT	Sub-scale Aerial Target
SUA	Special Use Airspace
TERPS	United States Standard for Terminal Instrument Procedures
TFR	Temporary Flight Restriction
TSCA	Toxic Substances Control Act
UA	Unmanned Aircraft
UAS	Unmanned Aircraft Systems
UDWR	Utah Division of Wildlife Resources
UFC	Unified Facilities Criteria
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USC	United States Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UTTR	Utah Test and Training Range
VFR	Visual Flight Rules
VOC	volatile organic compound
VOR	Very High Frequency Omni-Directional Range
VR	Visual Route
VSQG	very small quantity generator
WSEP	Weapon Systems Evaluation Program
ZLC	Federal Aviation Administration Salt Lake City Air Route Traffic Control Center

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1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 INTRODUCTION

Headquarters (HQ) Utah Test and Training Range (UTTR), as the Range Operating Authority for the UTTR, supports test and training customers that include the 53rd Weapons Evaluation Group (53 WEG). The 53 WEG is responsible for the U.S. Air Force (USAF) air-to-ground and air-to air Weapon Systems Evaluation Program (WSEP) and pilot live-fire training known as Combat Hammer and Combat Archer, respectively. These programs evaluate all phases of combat operations, from weapons loading to aircraft performance, aircrew performance, and weapons performance. The focus of this Environmental Assessment (EA) is specific to the Combat Archer program and does not include the Combat Hammer program.

A BQM-167 launches from a rail system at Tyndall AFB, Florida. This sub-scale target is used for live weapon system evaluations and testing (U.S. Air Force photo/Sara Vidon).

Test and training units use a wide variety of different Unmanned Aircraft (UA) for test and training purposes. This EA evaluates the use of UA classified as Sub-Scale Aerial Targets (SSATs). SSATs are used to provide realistic live-fire pilot training.

HQ UTTR, in support of the various test and training units, needs to increase the capability and flexibility of training to meet expanding operational requirements of the WSEP to respond to increasingly complex combat conditions. HQ UTTR currently launches, controls, and recovers SSATs from the former Ground Launched Cruise Missile (GLCM) site on Dugway Proving Ground (DPG), which is owned by the U.S. Army (Army) and within the airspace of the UTTR. The Army also uses this site for UA operations and artillery missions. Capacity is limited at the former GLCM site for both Army and USAF missions. The 53 WEG has access limitations to the former GLCM site, including limitations on scheduling relative to the increasing Army UA operations and program and testing requirements. In addition, the HQ UTTR test and training program continues to grow and the demand for additional SSAT training missions is increasing.

Launching SSATs requires locating the support/maintenance functions in close proximity to the launch facilities to ensure rapid availability for training. Launch and recovery of the SSATs from the former GLCM site requires HQ UTTR to locate support/maintenance functions off-site from the launch location. This requires the support/maintenance functions to be assembled and disassembled before and after each launch series and delays the availability of SSATs.

This EA analyzes and documents the environmental consequences that could result from relocating the SSAT launch and recovery mission from the former GLCM site on DPG to a consolidated new site (includes new construction) located south of Wendover, Utah (Wendover Site); the creation of new Restricted Area (RA) airspace, proposed as R-6401; and launch, control, recovery, and maintenance of SSATs.

Combining the SSAT launch, control, recovery, and maintenance capabilities[1] at the proposed Wendover Site, along with the creation of new RA airspace over the proposed SSAT launch and

[1] For the purposes of this EA, launch is defined as the time in which the SSAT is launched from the ground into the proposed RA, to when the SSAT enters into existing RA. Recovery is defined as the time in which the SSAT exits the existing RA into the proposed RA, to the time the SSAT lands on the ground. Figure 1-1 shows the location of the proposed R-6401 relative to the existing RA. The launch and recovery operations also include maintenance activities before and after launch and recovery events. The control function would control all aspects of the SSAT, from the time of launch to recovery.

recovery site, would permit unencumbered SSAT launch and recovery operations in accordance with Federal Aviation Administration (FAA) requirements for the operation of UA in the proposed RA (FAA Order JO 7200.23, *Unmanned Aircraft Systems [UAS]*).

During the initial planning stages for the Wendover Site, the USAF presumed that launch, control, and recovery of SSATs could be authorized under a Temporary Flight Restriction (TFR) issued by the FAA. Based on this understanding, the USAF evaluated the environmental impacts of various construction projects under Categorical Exclusions (CATEXs) A2.3.12, A2.3.13, and A2.3.14. Once the CATEXs were approved (See Appendix I), the USAF proceeded with construction of some of the infrastructure necessary to relocate the SSAT launch and recovery mission to the Wendover Site. This construction included improving approximately 7 miles of an existing gravel road and installing a fiber optic line along the edge of the road. Building 625 at Wendover Airport was upgraded as the control room for all SSAT operations. For the maintenance facility, a maintenance building was constructed on a 156-foot by 250-foot gravel pad, and a 90-foot by 161-foot concrete pad was constructed on the gravel pad. For the launch facility, a concrete block building with three launch rails was constructed on a 198-foot by 250-foot gravel pad. A 30-foot radio-relay tower and a 55-foot by 165-foot concrete pad were also constructed on the gravel pad. The launch facility construction also included a 77-foot by149-foot gravel pad adjacent to the access road. All of the pads were underlain with a geotextile fabric to preserve the integrity of native soils.

After this construction was complete, the FAA determined that the launch, control, and recovery of SSATs from the Wendover Site could not be conducted under a TFR; that new RA would be required; and that an EA would be required to evaluate potential impacts of new RA and the remaining construction. Therefore, this EA analysis includes creation of the proposed R-6401 and the remainder of construction necessary to relocate the SSAT launch and recovery mission from the former GLCM site on DPG to the Wendover Site.

The USAF is the proponent of this airspace proposal and is the lead agency for preparation of this EA. Congress has assigned the FAA with the responsibility of administering all navigable airspace in the public interest as necessary to ensure the safety of aircraft and the efficient use of such airspace. The FAA is the agency with jurisdiction by law and special expertise with respect to changes in the configuration of the National Airspace System (NAS).

This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (40 *Code of Federal Regulations [CFR]* §§ 1500-1508) and implementing regulations issued by the President's Council on Environmental Quality (CEQ). Federal agencies have developed "agency-specific" procedures for implementing the NEPA. The NEPA procedures for the USAF are described in 32 *CFR* 989, *Environmental Impact Analysis Process (EIAP)*. The NEPA procedures for the FAA are described in FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*. To facilitate creation of new RA and in accordance with CEQ regulations prescribed in 40 *CFR* 1501.6 and 1508.5, and the Memorandum of Understanding between the FAA and U.S. Department of Defense (DoD), *Concerning Environmental Review of Special Use Airspace (SUA) Actions*, dated October 4, 2005, the FAA is serving as a Cooperating Agency (CA) throughout the EA process (see Appendix A for the CA letter). This EA is being prepared to satisfy the procedural requirements of the NEPA for both the USAF and the FAA.

1.2 BACKGROUND

The UTTR is located approximately 80 miles southwest of Salt Lake City in Tooele and Box Elder Counties, Utah. Divided into the North and South Ranges, the UTTR consists of 2,624 square miles

(1,982 square nautical miles) of DoD-owned land and 16,616 square miles (12,574 square nautical miles) of airspace. UTTR airspace consists of 6,010 square nautical miles of RA and 6,564 square nautical miles of Military Operations Areas (MOAs). The UTTR is used for test and evaluation of new weapon systems and platforms, and training. Range use averages 16,000 sorties per year for training and 300 sorties per year for testing.

HQ UTTR at Hill Air Force Base (AFB) has oversight of the UTTR (Hill AFB 2016a). As part of this mission, HQ UTTR is responsible for airspace management in the UTTR. The 388th Fighter Wing (388 FW) is the using agency for the RA airspace in the UTTR, and the FAA Salt Lake City Air Route Traffic Control Center (ARTCC) is the controlling agency (ZLC).

1.3 PURPOSE OF THE PROPOSED ACTION

The purpose of the proposed action is to increase operational flexibility and capability by providing the infrastructure and airspace necessary to accommodate the launch, control, recovery, and maintenance of SSATs into and out of adjoining (proposed R-6401) and existing (R-6405) RA airspace (Figure 1-1). In addition, creation of the RA would safely segregate non-participating air traffic from the hazardous activities associated with the SSAT launch, control, and recovery operations.

1.4 NEED FOR THE PROPOSED ACTION

Due to the increasing Army test and training operations at the former GLCM site and the continued growth of the HQ UTTR UA program, the USAF needs to relocate the SSAT program to a new site. The former GLCM site has no opportunity for expansion and no opportunities to increase weapon system evaluations. HQ UTTR has access and scheduling limitations at the former GLCM site that could negatively impact the Combat Archer mission by reducing the number of SSAT operations completed from the former GLCM site.

HQ UTTR needs to increase the capability and flexibility of test and training to meet expanding operational requirements to respond to increasingly complex combat conditions. In addition, new RA is needed to segregate non-participating air traffic from the hazards associated with the launch, control, recovery, and maintenance of SSATs. SSATs use Rocket-Assisted Takeoff (RATO) bottles for launch and large parachutes for recovery. The RATO bottles contain compressed rocket fuel to launch SSATs from the ground. Once the SSAT reaches 500 feet above ground level (AGL), the RATO bottles drop off and a turbojet engine capable of achieving 1,000 pounds of thrust engages to propel the SSAT through the exercise. SSATs are capable of achieving speeds in excess of 650 miles per hour and have the ability to carry smoke oil and live munitions such as chaff and flares. These types of operations are considered hazardous and must be conducted in RA airspace in accordance with FAA regulations (FAA Order JO 7400.2M). The proposed R-6401 would be located adjacent to and contiguous with the existing R-6405 at the UTTR. A description of the proposed R-6401 is contained in Appendix B. Figure 1-1 illustrates the location of the Wendover Site relative to the proposed R-6401.

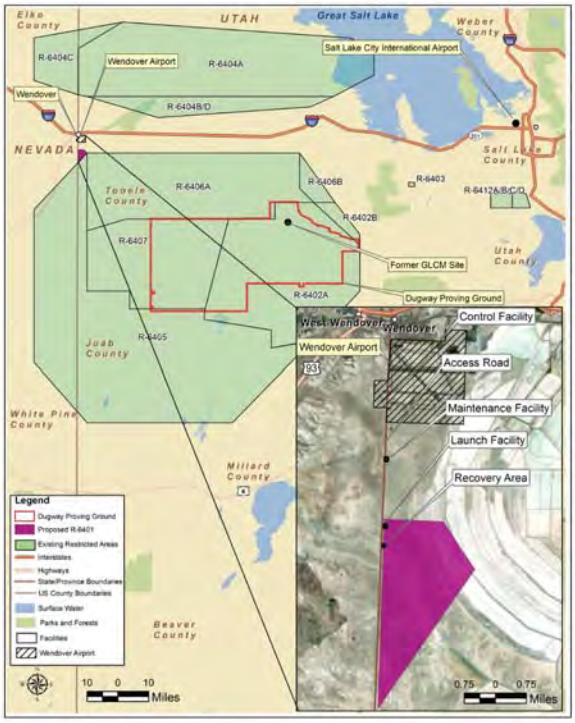

Figure 1-1. Regional Map of the Wendover Site and the Proposed R-6401

1.5 PUBLIC INVOLVEMENT AND AGENCY AND TRIBAL COORDINATION

Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, requires intergovernmental notifications prior to making any detailed statement of environmental consequences. Through the process of Interagency and Intergovernmental Coordination for Environmental Planning, the proponent must notify concerned federal, state, and local agencies and allow them sufficient time to evaluate potential environmental consequences of a proposed action. Comments from these agencies are subsequently incorporated into the environmental analysis.

The USAF encourages and invites public/agency, tribal, and other participation in the NEPA process. Consideration of the views and information of all interested persons promotes open communication and enables better decision making. All agencies, organizations, tribes, and members of the public with a potential interest in the proposed action are encouraged to participate in the decision-making process during the 30-day Draft EA public review period.

Public participation opportunities with respect to this EA and decision making on the proposed action are guided by 32 *CFR* 651 and Section 2-5 of FAA Order 1050.1F. The Draft EA has been made available to the public and others online (at https://www.hill.af.mil/.) and at the West Wendover Branch Library, located at 590 Camper Drive, West Wendover, Nevada, 89883, for 30 days between September 15 and October 15, 2019. A public notice notifying the public of the 30-day public review and comment period was published in the Wendover Times and High Desert Advocate on September 12, 2019 (see Appendix C).

1.6 SCOPE OF THE ENVIRONMENTAL ANALYSIS

The purpose of this EA is to inform decision makers of the potential consequences that could result from implementation of the proposed action or the No Action Alternative. This EA identifies, documents, and evaluates the potential human and natural environmental effects of implementation of the proposed action at the UTTR. An interdisciplinary team of airspace specialists, environmental scientists, biologists, planners, economists, engineers, and archaeologists analyzed the proposed action relative to existing conditions and identified the potential impacts associated with implementation of the proposed action. Chapter 2 describes the proposed action, the No Action Alternative, and alternatives considered but not carried forward. Conditions existing as of 2019, considered the "baseline" conditions, are described in Chapter 3, Affected Environment. The expected effects of the proposed action are presented in Chapter 4, Environmental Consequences. Chapter 5 addresses the potential for cumulative effects.

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2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 OVERVIEW

This chapter describes the proposed action, provides an explanation of the screening criteria that were used to identify and develop the proposed action from other alternatives, and describes the alternatives that were not carried forward for analysis. This chapter details the process the USAF followed to identify reasonable alternatives that met the purpose (as described in Section 1.3) and need (as described in Section 1.4) to formulate the proposed action. In accordance with CEQ regulations (40 *CFR* 9, Section 1502.14[d]), this chapter also includes a No Action Alternative that serves as a baseline against which environmental impacts of the proposed action are measured.

2.2 REQUIREMENTS FOR THE PROPOSED ACTION

The purpose of the proposed action is to provide the infrastructure and airspace necessary to accommodate the launch, control, recovery, and maintenance of SSATs into and out of adjoining (proposed R-6401) and existing (R-6405) RA airspace. The infrastructure and airspace would permit HQ UTTR to have capability and flexibility to meet the operational test and training requirements of the DoD. HQ UTTR is currently expanding and is in need of a facility that can accommodate the launch, control, recovery, and maintenance operations, along with proposed RA for SSATs to access existing RA. To facilitate the alternative development process, HQ UTTR developed three primary siting requirements for the SSAT mission. These requirements include: (1) a site large enough to accommodate the SSAT launch, control, recovery, and maintenance functions; (2) a site that is located within 125 miles of either the North or South Range and under or adjacent to existing RA; and (3) a site that is located near existing roadways and other support infrastructure to reduce infrastructure cost and minimize the environmental impact of additional new construction.

2.3 ALTERNATIVE DEVELOPMENT

HQ UTTR identified four potential alternative sites that met the purpose and need as described in Sections 1.3 and 1.4 and could meet the three siting requirements described in Section 2.2. The four alternative sites are described below and depicted on Figure 2-1.

Alternative A, Wendover Site and Proposed R-6401 – This alternative consists of a new launch, control, recovery, and maintenance operation near Wendover, along with the creation of the proposed R-6401.

Alternative B, Former JLENS Site – This alternative includes the former Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) Site on the North Range. This site was identified as a potential alternative for the proposed action.

Alternative C, Former GLCM Site – This alternative includes expanding the existing SSAT launch site on the former GLCM site at DPG. This site was identified as an alternative to the proposed action.

Alternative D, South Range Sites – This alternative consists of two sites located farther south on DoD land in the UTTR and under the existing RA. These sites were identified as an alternative to the proposed action.

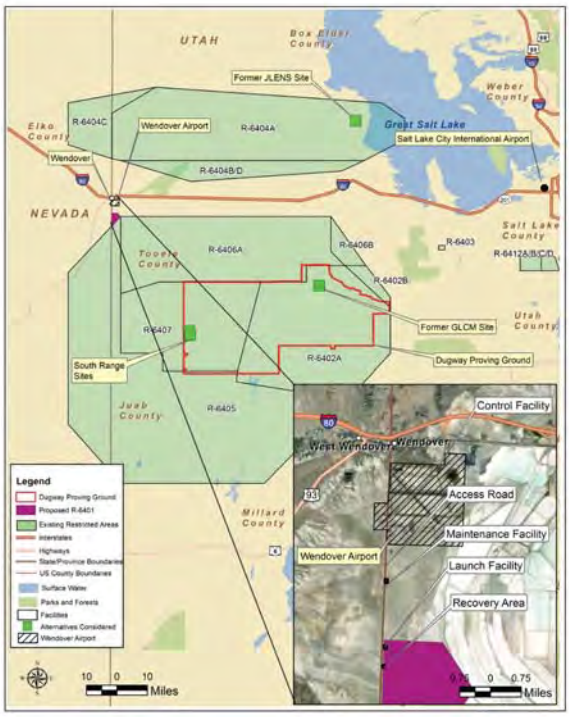

Figure 2-1. Potential Alternatives Relative to Existing Restricted Areas

2.4 ALTERNATIVE SCREENING CRITERIA

HQ UTTR developed screening criteria to define reasonable alternatives that could meet the functional and operational requirements of the SSAT mission. HQ UTTR determined that a reasonable alternative should meet the following seven criteria:

- **Criterion 1. Achieves Mission Requirements.** Alternatives should allow the SSAT system to be effectively operated such that pilots are able to train using the SSAT. This criterion meets the purpose and need for a facility that is capable of launching and recovering SSATs used for pilot training.
- **Criterion 2. Under or Adjacent to Existing RA.** Alternatives should maximize the use of existing military airspace. The USAF seeks to use existing military airspace to the maximum extent possible. Existing military airspace near the UTTR was reviewed to determine how the existing airspace could be utilized to meet the needs for launching and recovering SSATs. This criterion directly meets the project's requirement to be able to transition SSATs directly into existing airspace.
- **Criterion 3. Provides for Mission Flexibility.** Alternatives should maximize flexibility for mission requirements. Flexibility includes the ability to schedule and perform test and training missions without the potential for conflict with SSATs or other aircraft activities. In addition, alternatives should have sufficient space to prevent a requirement to assemble and disassemble SSATs at different facilities pre-launch and post-recovery. Flexibility also includes the ability to provide for future expansion of the HQ UTTR mission. Mission flexibility can best be accomplished by locating the facility on existing USAF-owned property. This criterion directly meets the purpose and need of the project to find a facility without the current scheduling conflicts imposed at the present location.
- **Criterion 4. Permits Colocation of Mission Support Facilities.** Alternatives to support SSAT launch, control, recovery, and maintenance activities should be capable of having all three facilities in close proximity. This criterion meets the purpose and need of the project (i.e., operational flexibility and capability, and a solution to the access and scheduling limitations currently experienced at the former GLCM site).
- **Criterion 5. Minimal Radio Frequency (RF) Interference.** Alternatives should avoid and/or minimize RF interference to protect communication and control of SSATs. This criterion applies directly to the purpose of the project to accommodate launch and recovery activities. Locations with high RF interference would not allow for safe and effective launch of SSATs.
- **Criterion 6. Provides for Accessibility.** Alternatives should be located near existing roadways and infrastructure to negate requirements for extensive new road construction and minimize potential environmental impacts. This criterion applies to the project's requirement to provide operational flexibility and capability, and a solution to the access and schedule limitations currently experienced at the former GLCM site.
- **Criterion 7. Avoids Civil Aviation Conflicts.** Alternatives should avoid, to the extent possible, potential conflicts with non-participating civil (i.e., commercial and civilian) air traffic. Creation of a small RA with limited periods of activation would reduce potential impacts to civil aviation. This criterion applies to the project's requirement to provide operational flexibility and capability, and to segregate non-participating air traffic from the hazardous activities associated with the SSAT launch, control, and recovery operations.

Table 2-1 provides a comparison of the four action alternatives against the seven screening criteria to determine which alternatives are considered reasonable and should be carried forward in the EA for analysis and evaluation.

2.5 IDENTIFICATION OF THE PROPOSED ACTION AND ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD

2.5.1 Alternative A, Wendover Site and Proposed R-6401

Table 2-1 demonstrates that Alternative A, the Wendover Site and the proposed R-6401, adjacent to the existing R-6405, represents the only alternative to meet all seven of the screening criteria. The Wendover Site and the proposed R-6401 would maximize the use of existing RA and provide RA of sufficient size to accommodate the SSAT mission. As described in Section 1.4, the RA is necessary due to the hazards associated with the launch, control, recovery, and maintenance of SSATs proposed for use. The limited size of the proposed RA would allow for SSAT launch, control, recovery, and maintenance operations while segregating non-participating air traffic from the proposed hazardous activities. The proposed RA includes scheduling and other measures to limit the potential for safety and environmental conflicts. The proposed Wendover Site, with the addition of the proposed R-6401 and scheduling and management, would meet the screening criteria identified in Section 2.4.

The alternatives considered but not carried forward are explained below.

2.5.2 Alternative B, Former JLENS Site

This alternative does not meet criteria 3, 4, or 7. Mission support facilities would not be collocated, and this location would require SSATs to traverse a high-traffic civilian airspace corridor (approach corridor from the west for Salt Lake City International Airport [SLC]). The former JLENS site would provide for infrastructure and launch facilities to be co-located. However, the traverse of the SSATs over the Interstate (I)-80 corridor would not be allowed by the FAA due to SSATs crossing a major highway and the need to delay or block civilian air traffic over the I-80 corridor during launch and recovery procedures. For these reasons and the ones explained in Table 2-1, this alternative was not carried forward for further evaluation.

2.5.3 Alternative C, Former GLCM Site

This alternative does not meet criteria 1, 3, 4, 5, or 6. As described, this location is not optimal due to the following limitations: inability to execute operations more than 1 week per year; no future growth potential; growing conflict with Army UA operations tempo and interferences with RF bandwidth from Army UA platforms. In addition, this site does not meet the needs of HQ UTTR. Although the former GLCM site provides the current operational site for launch and recovery operations, the ability and flexibility to utilize this site has passed its usefulness due to the increase in air operations at DPG. With numerous test operations on the UTTR requiring the use of SSATs and the ability to work within the restricted airspace over DPG, this site is no longer a feasible operational site. Therefore, this alternative was eliminated from further consideration.

Table 2-1. Summary of Screening Criteria to Alternative Selection

Alternative Considered	Criterion 1. Achieves Mission Requirements	Criterion 2. Under or Adjacent to Existing RA	Criterion 3. Provides for Mission Flexibility	Criterion 4. Permits Colocation of Mission Support Facilities	Criterion 5. Minimal RF Interference	Criterion 6. Provides for Accessibility	Criterion 7. Avoids Civil Aviation Conflicts
Alternative A, Wendover Site and Proposed R-6401	Achieves testing and training.	Proposed RA would be adjacent to R-6405.	All facilities on USAF property; avoids mission conflicts; potential for future mission expansion.	Former control building in place; maintenance, launch, recovery, and support facilities co-located in close proximity.	Minor potential for interference based on the low population density and minimal industrial activity in the project area.	Site has no accessibility limitations.	Proposed RA would not affect the approach corridor to Salt Lake City International Airport (SLC); scheduling and altitude provide for civil aviation.
Alternative B, Former JLENS Site	Achieves testing and training.	Site is located under existing RA.	Launches constrained by approach corridor to SLC; continued mission conflicts; no provision for future mission expansion.	Control, launch, recovery and maintenance support facilities would not be co-located.	Unknown.	Site has no accessibility limitations.	Transit from the North Range to the South Range would not be allowed. Launches from this area would conflict with the approach corridor to SLC.
Alternative C, Former GLCM Site	Achieves testing and training with scheduling limitations.	Site is located under existing RA.	All facilities not on USAF property; continued mission conflicts; no provision for future mission expansion.	Control, launch, recovery and maintenance support facilities not co-located. Army mission conflicts with current operations.	Outside entities encroach on the UA RF spectrum usage.	Site is only accessible through DPG.	No impact to civil aviation.
Alternative D, South Range Sites	Achieves testing and training.	Site is located under existing RA.	All facilities not on USAF property; continued mission conflicts; no provision for future mission expansion.	Control, launch, recovery and maintenance support facilities would not be co-located.	No potential for RF interference.	Road and infrastructure work would be required for site accessibility.	No impact to civil aviation.

2.5.4 Alternative D, South Range Sites

This alternative does not meet criteria 3 or 6. These sites would be farther south than the proposed Wendover Site and would require construction and maintenance of new roads and infrastructure. These sites on the South Range are a long distance from any established infrastructure. Access to the sites would be further limited due to their proximity to current target arrays. Access would either be through DPG property, which would extend past numerous target arrays, or by utilizing the Pony Express National Historic Trail and entering the range from the west. The unimproved roads associated with both options would severely limit access, and therefore, transition, to the site. SSATs could potentially be damaged during transport over unimproved roads. The only way to avoid such damage would be to construct improved, paved roads. The commercial power in this remote area is a single-phase power that would be insufficient to operate the infrastructure required during flight operations. The colocation of the control, maintenance and launch facilities would therefore require numerous generators and fuel tanks to maintain operations. For these reasons, this alternative was eliminated from further consideration.

2.6 DESCRIPTION OF THE PROPOSED ACTION

The proposed action is the relocation of the SSAT launch, control, recovery, and maintenance operations from the former GLCM site at DPG to the Wendover Site and the creation of the new RA R-6401 (Figure 2-1). The launch, control, recovery, and maintenance operations at the Wendover Site are anticipated to require approximately 40 full-time personnel. The proposed R-6401 would extend from the ground surface up to and including 6,500 feet AGL/10,800 feet above mean sea level (MSL). The proposed RA would be activated in the same manner as the existing RA (i.e., through the Salt Lake City FAA Center). The proposed RA would be active for eight 1-week periods per year; Monday through Thursday: 6 hours per day; by Notice to Airmen (NOTAM), at least 4 hours prior to activation. The expected use is 32 days per year, 6 hours per day. No SSAT launches would occur after 10:00 P.M. Up to six SSAT sorties (launch and recovery) would be conducted per day.

The Wendover Site would be used to launch and recover SSATs. The BQM-167 and BQM-34 are the SSATs that would be launched from this site. The BQM is a sub-scale jet aircraft used as an aerial target that would be launched from a set of metal rails using a RATO bottle. All launches would occur in a southeasterly direction, and the SSAT would transition directly from R-6401 into R-6405. Prior to transitioning into R-6405 and at the point when the SSAT reaches 500 feet AGL, the RATO bottle would drop off the SSAT. The SSAT would be powered by its jet engine for the remainder of the flight time. RATO bottles would be retrieved by USAF personnel.

Recovery of the SSATs would occur on USAF property located approximately 0.5 mile south of the launch facility (Figure 2-2). Prior to recovery, weather balloons would be launched to calculate wind-drift information, which would be provided to the control facility. Flying a wind-corrected course, the SSAT would enter recovery at 2,500 feet AGL and descend under a recovery parachute. Following landing, the SSAT would be made safe by removing any unexpended chaff or flares. The parachute would then be collected, and the SSAT would be transported back to the maintenance facility. The average recovery distance would be less than 900 feet from the recovery area.

2.6.1 Facilities, Infrastructure, and Maintenance Operations

Three primary facilities would be required for this operation. These facilities consist of the launch, control, and maintenance facilities (Table 2-2). As described in Section 1.1, renovation of the control facility (Building 625) and partial construction of the maintenance and launch facilities was completed under a separate NEPA analysis using CATEXs.

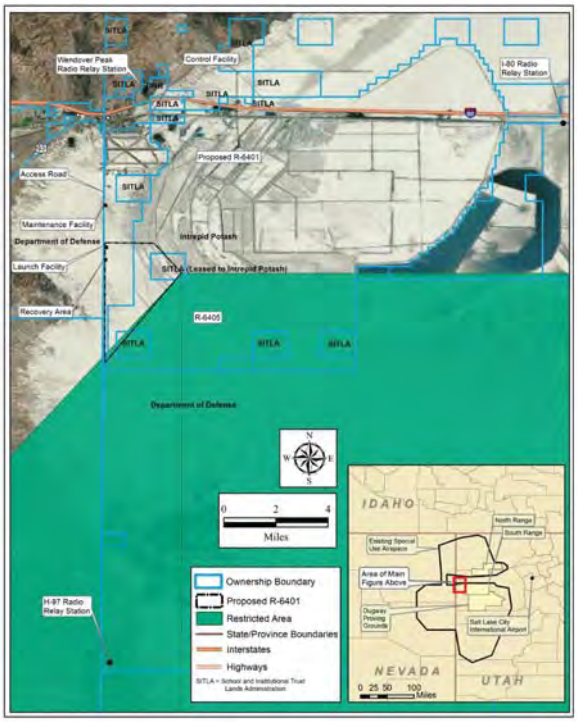

Figure 2-2. Proposed Facilities and Infrastructure

In addition to the three primary facilities, three different radio-relay stations would be required for the control and operation of SSATs. The radio-relay stations consist of the radio-relay array, a lead acid battery, and a solar panel. The locations of the three radio-relay stations are shown on Figure 2-2. The I-80 radio-relay station would be located on an existing cellular tower along I-80 at mile marker 13. The H-97 radio-relay station would be located on DoD property on the peak of a mountain approximately 15 miles south of Wendover. Construction at the H-97 site would include the installation of four corner anchor points to hold the radio relay and solar panels in place during windy conditions. The Wendover Peak radio-relay station is an existing station located on Wendover Peak directly north of Wendover. The Wendover Peak radio-relay station is currently used for other missions. The three radio-relay stations would all require regular maintenance. The existing radio-relay station on Wendover Peak and the radio-relay station proposed for the cellular tower along I-80 would be accessed using existing roads. Due to its remote location, the proposed H-97 radio-relay station would be accessed twice per year using a helicopter. No constructed landing zone is planned for helicopter use.

Table 2-2. Launch, Control, and Maintenance Facility and Infrastructure Requirements

Existing[a]	Proposed
Control Facility and Function	
Control facility (Building 625) interior renovation	
Diesel backup generator	
Maintenance Facility and Function	
156-foot by 250-foot gravel pad covered by a 90-foot by 161-foot concrete pad	30-kilowatt (kW) diesel generator with 50-gallon tank
Maintenance building	Electric lifts, overhead hoists, and outdoor lighting
	Portable 500-gallon, double-wall, aboveground storage tank (AST) for jet fuel
	Portable 500-gallon, double-wall, AST for jet fuel recovery
	Boom truck
	Front-end loader, all-terrain vehicles
	Covered drum storage area
Launch Facility and Function	
198-foot by 250-foot gravel pad covered with a 55-foot by 165-foot concrete pad, three launch rails, and a concrete-block building	100-foot by 250-foot gravel pad extension covered by a 55-foot by 150-foot concrete pad with three additional launch rails a concrete-block building and a pre-cast concrete barricade
77-foot by 149-foot gravel pad adjacent to the access road	Four earthen-covered, explosive storage buildings to be constructed on the existing 77-foot by 149-foot gravel pad
30-foot radio-relay tower	30-foot radio-relay tower
	Electric lifts, overhead hoists and outdoor lighting
	100-kW diesel generator with 300-gallon tank
	Covered drum storage area
	Air compressors for starting the SSAT's jet engine
Other Infrastructure	
Improved approximately 7 miles of an existing gravel road	H-97 radio relay station
Installed fiber optic line along the edge of the road	I-80 radio-relay station
Wendover Peak radio-relay station	

[a] Previously evaluated under separate NEPA analysis.
Note: All gravel pads associated with the project have been constructed or will be constructed on a geotextile base.

2.6.1.1 Maintenance Facility

The existing maintenance facility is located approximately 0.75 mile south of Wendover Airport, adjacent to the site access road. The maintenance facility consists of a 156-foot wide by 250-foot long gravel pad with a geotextile base and a 90-foot wide by 161-foot long concrete pad. A maintenance building was previously constructed on the concrete pad.

One 30-kilowatt (kW) diesel generator would supply power to the maintenance facility. For the purposes of the analysis, the generator was assumed to be in use 8 hours per day for up to 96 days during each calendar year. The on-board 50-gallon diesel fuel tank would be the only fuel storage required for the generator. Fuel for the generator would be delivered to the site via semi-tractor trailer truck. Additional support equipment located at the maintenance facility would include electric lifts, overhead hoists, outdoor lighting, and a front-end loader. A covered drum storage area would also be constructed at the maintenance facility.

SSATs transported via semi-tractor trailer would arrive at the maintenance facility, where they would be removed from their shipping containers and assembled. New SSATs, along with recently recovered SSATs, would then enter a launch preparation phase. Launch preparation consists of lubrication and service, configuration, system checks, fueling, engine-run, refueling, and battery installation. The SSATs would be fueled at the maintenance facility with Jet-A from one 500-gallon, double-walled aboveground storage tank (AST) on a mobile trailer. An additional portable, 500-gallon, double-walled, AST would be required for de-fueling activities. Both tanks would have adequate secondary containment. Before operational missions, the SSATs would be transported to the launch facility.

2.6.1.2 Launch Facility

The existing launch facility is located approximately 1.5 miles south of the existing maintenance facility. The existing launch facility consists of a 198-foot wide by 250-foot long gravel pad with a geotextile base, covered by a 55-foot wide by 165-foot long concrete pad with three launch rails. A concrete-block building used to store equipment (generator, air compressor, etc.) is located on the concrete pad adjacent to the launch rails. A gravel pad that is approximately 77-foot wide by 149-foot long is located adjacent to the launch facility access road.

The existing launch facility consists of a concrete pad, three rails, and a block building.

The proposed action includes the construction of an extension (100-foot wide by 250-foot long) to the existing gravel pad, and an additional concrete pad (55-foot wide by 165-foot long) with three additional launch rails and a concrete block building protected by a pre-cast concrete barricade. Four earthen-covered, explosive storage buildings would be constructed on the existing 77-foot wide by 149-foot long gravel pad. Because the SSATs would use RATO bottles and have the capability to carry chaff and flares, appropriate explosive storage facilities would be required to store the RATO bottles and the chaff and flares. All storage of RATO bottles, chaff, and flares would occur in these four storage buildings near the launch facility.

One 30-foot radio-relay tower would be constructed on the site along with outdoor lighting. Associated support equipment would be moved from the former GLCM site at DPG and installed at this location. The launch facility would include electric lifts and overhead hoists, and air compressors for starting the SSAT's engine. Smoke oil for the SSATs would be distributed from a 5-gallon can for daily operations and would be stored in 55-gallon drums with secondary containment for monthly operations. A covered area would be constructed for drum storage. One 100-kW diesel generator

would be installed at the launch facility. An on-board diesel fuel tank of approximately 300 gallons would be the only fuel storage required for the generator. For the purposes of the analysis, it is assumed the generator would be in use 10 hours per day for up to 32 days during each calendar year.

2.6.2 Airspace and Operations in the Proposed Restricted Area

The USAF is proposing the creation of a new RA (R-6401) located in Tooele County, Utah, approximately 3 miles south of Wendover Airport (Figure 2-1). The proposed R-6401 would be located adjacent to the northwestern-most point of the existing R-6405 and would extend from the ground surface up to and including 6,500 feet AGL/10,800 feet MSL (Figure 2-3). The proposed RA excludes the airspace from the surface up to 1,500 feet AGL within a 3-nautical mile (NM) radius of Wendover Airport. The proposed RA would be active for eight 1-week periods per year; Monday through Thursday: 6 hours per day; by NOTAM, at least 4 hours prior to activation. The expected use is 32 days per year, 6 hours per day. No SSAT launches would occur during from 10:00 P.M. to 7:00 A.M.

The proposed RA is located over land primarily owned by the USAF. Other landowners under the proposed RA include the Utah School and Institutional Trust Lands Administration (SITLA) and Intrepid Potash Wendover, LLC (Intrepid Potash) (Figure 2-2). Letters of Agreement (LOAs) allowing overflight and SSAT recovery operations have been established with both landowners. By direct ownership or written agreement, the USAF controls all of the land under the proposed R-6401.

The proposed RA structure would permit the launch and recovery of SSATs for use in the UTTR. The primary function of the new airspace would be to provide RA transit airspace from the launch site into the existing RAs at UTTR and a transit back out of existing RAs to accommodate SSAT recovery operations. No weapons employment or supersonic flights would be conducted in the proposed R-6401.

2.7 NO ACTION ALTERNATIVE

Implementation of the No Action Alternative would not result in any additional construction, and no additional RA would be created. Analysis of the No Action Alternative provides a basis for comparing the environmental consequences of the proposed action to the existing (baseline) conditions, over time. Implementation of the No Action Alternative would require that training using SSATs be limited to what could be conducted from the former GLCM site at DPG. The former GLCM site does not have sufficient capacity to meet the test and training demand and has competing uses that restrict the availability of the site for full use.

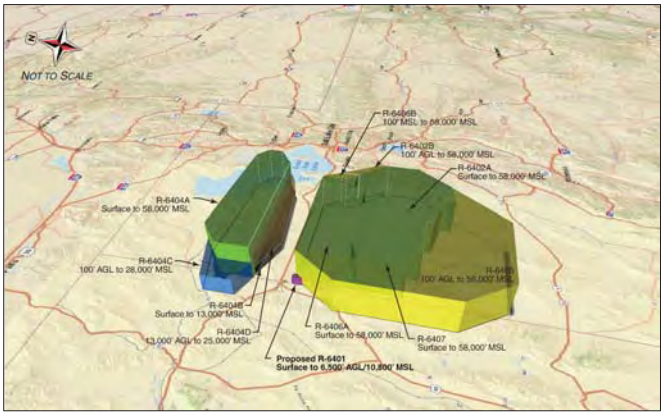

Figure 2-3. Proposed Restricted Area R-6401 Relative to Existing Restricted Areas at UTTR

2.8 ENVIRONMENTAL RESOURCE AREAS NOT CARRIED FORWARD FOR DETAILED ANALYSIS

This EA is intended to satisfy the NEPA requirements for both the FAA and the USAF. As described in Section 1.1, federal agencies have developed "agency-specific" procedures for implementing the NEPA. For the affected environment section of NEPA documents, the USAF refers to environmental resources as Environmental Issues (EIs) and the FAA refers to environmental resources as Environmental Impact Categories (EICs). Table 2-3 provides a cross-reference of environmental resources between the USAF and FAA categories and identifies where they are described in this document. EIs and EICs will be referred to as Environmental Resource Areas (ERAs) throughout the remainder of this EA.

Table 2-3. Environmental Resource Area Cross-Reference

USAF EI	FAA EIC	ERA for this EA	How addressed in this EA
Aesthetics and Visual Resources	Visual Resources / Visual Character	Aesthetics and Visual Resources	Section 3.13 and 4.13, Aesthetics and Visual Resources
	Light Emissions		
Airspace Resources	Not Applicable	Airspace Resources	Sections 3.1 and 4.1, Airspace Resources
Air Quality	Air Quality	Air Quality	Sections 3.2 and 4.2, Air Quality
	Climate		
Cultural Resources	Historical, Architectural, Archeological, and Cultural Resources	Cultural Resources	Sections 3.3 and 4.3, Cultural Resources
Energy	Natural Resources and Energy Supply	Energy	Sections 3.14 and 4.14, Natural Resources and Energy Supply
Environmental Justice	Environmental Justice	Environmental Justice	Eliminated from detailed study (See Section 2.8)
	Children's Environmental Health and Safety Risks		
Facilities	Not Applicable	Infrastructure	Sections 3.4 and 4.4, Infrastructure
Hazardous Materials/ Hazardous Wastes	Hazardous Materials, Solid Waste, and Pollution Prevention	Hazardous Materials and Waste	Sections 3.5 and 4.5, Hazardous Materials and Waste
Land Use	Land Use	Land Use	Sections 3.6 and 4.6, Land Use
Noise Effects	Noise and Noise-Compatible Land Use	Noise	Sections 3.7 and 4.7, Noise
Safety	Not Applicable	Safety	Sections 3.8 and 4.8, Safety
Socioeconomics	Socioeconomics	Socioeconomics	Sections 3.9 and 4.9, Socioeconomics
Soil Erosion Effects	Farmlands	Soil Resources	Sections 3.10 and 4.10, Soil Resources
Threatened and Endangered Species	Biological Resources (including fish, wildlife, and plants)	Biological Resources	Sections 3.11 and 4.11, Biological Resources
Traffic and Transportation Systems	Department of Transportation Act, Section 4(f)	Infrastructure	Section 4(f) was eliminated from further consideration (See Section 2.8). Traffic will be addressed in Sections 3.4 and 4.4, Infrastructure

Table 2-3. Environmental Resource Area Cross-Reference (Continued)

USAF EI	FAA EIC	ERA for this EA	How addressed in this EA
Water Resources Management	Coastal Resources	Water Resources	Eliminated from detailed study (See Section 2.8)
	Floodplains		Sections 3.12 and 4.12, Water Resources
	Groundwater		
	Surface Waters		
	Wetlands		
	Wild and Scenic Rivers		Eliminated from detailed study (See Section 2.8)

Determining which ERAs will be analyzed versus those not carried forward for detailed analysis is part of the EA scoping process. CEQ, USAF, and FAA regulations (40 *CFR* §1501.7(a)(3), 32 *CFR* 989.18, and FAA Order 1050.1F §4-2(c)) encourage project proponents to identify and eliminate from detailed study the ERAs that have no potential to be impacted through implementation of their respective proposed actions.

The following ERAs have no applicability to the proposed action, because there would be no potential for direct, indirect, or cumulative impacts. Therefore, these ERAs are not carried forward for detailed analysis in the EA.

Coastal Resources – No coastal resources are located near the proposed action area. Therefore, an analysis of impacts to coastal resources is not necessary.

Department of Transportation Act, Section 4(f) – Designation of airspace for military flight operations is exempt from Section 4(f). The DoD reauthorization in 1997 provided that "[n]o military flight operations (including a military training flight), or designation of airspace for such an operation, may be treated as a transportation program or project for purposes of section 303(c) of title 49, US Code" (Public Law [PL] 105-85, 18 Nov. 1997).

Environmental Justice, and Children's Environmental Health and Safety Risks – No schools, hospitals, or population centers would be affected by implementation of the proposed action. The nearest population centers are approximately 4.5 miles to the north of the Wendover Site. Because no people would be adversely affected, there would be no impacts to environmental justice populations and no impacts to children or increased risk to the health and safety of children. Detailed analysis of the environmental justice ERA is therefore not required.

Wild and Scenic Rivers – The Virgin River, located approximately 350 miles from Wendover, Utah, is the only wild and scenic river in Utah or Nevada. Therefore, further analysis of wild and scenic rivers is not required.

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3.0 AFFECTED ENVIRONMENT

3.1 AIRSPACE RESOURCES

3.1.1 Definition of the Resource

Airspace management and air traffic control (ATC) consist of the direction, control, and coordination of flight operations in the "navigable airspace" that overlies the geopolitical borders of the United States and its territories. Airspace management considers how navigable airspace is designated, used, and administered to best accommodate the individual and common needs of military, commercial, and general aviation. Navigable airspace consists of airspace above the minimum altitudes of flight prescribed by *United States Code (USC)* Title 49, Subtitle VII, Part A, and includes airspace needed to ensure safety in the takeoff and landing of aircraft (49 *USC* § 40102). The U.S. government has exclusive sovereignty over all U.S. airspace extending from the ground surface to above 60,000 feet MSL (49 *USC* 40103(a)(1)).

Congress has assigned the FAA the responsibility to develop plans and policy for the use of the navigable airspace to ensure the safety of aircraft and efficient use of airspace (49 *USC* § 40103(b)). The FAA considers multiple and sometimes competing demands for aviation airspace relative to airport operations, federal airways, Jet Routes, military flight training activities, and other special needs to determine how the NAS can best be structured to address all user requirements. SUA identified by the FAA for military and other governmental activities is charted and published by the National Aeronautical Charting Office in accordance with FAA Order 7400.2M and other applicable regulations and orders.

For the purposes of this airspace analysis, the Region of Influence (ROI) for the proposed action and No Action Alternative includes the UTTR South Range, the proposed R-6401, the Wendover Airport and more distant aviation facilities that could be affected by changes in flight patterns resulting from use of the proposed R-6401.

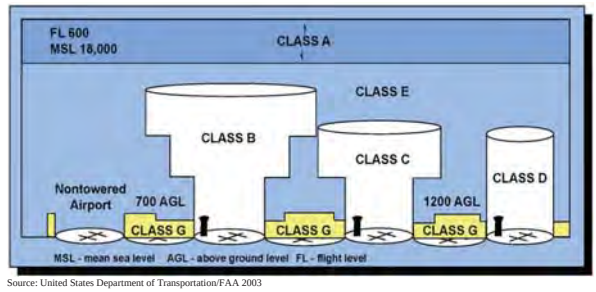
3.1.1.1 Airspace Categories

The FAA defines two categories of airspace: regulatory and non-regulatory. Within these two categories are four types of airspace: Controlled, Special Use, Other, and Uncontrolled. Controlled airspace is airspace of defined dimensions within which ATC service is provided to Instrument Flight Rules (IFR) and Visual Flight Rules (VFR) flights in accordance with the airspace classification (FAA 2017).

Controlled airspace is categorized into five separate classes: Classes A through E. The airspace classes are graphically shown on Figure 3-1. Classes A through E identify airspace that is controlled, airspace supporting airport operations, and designated airways affording en route transit from place to place. The classes also dictate pilot qualification requirements, rules of flight that must be followed, and the type of equipment necessary to operate within that airspace.

Class A airspace generally extends from 18,000 feet MSL up to and including Flight Level (FL) 600. FL 600 is equal to approximately 60,000 feet MSL. FLs are MSL altitudes based on the use of a directed barometric altimeter setting and are expressed in hundreds of feet.

Class B airspace generally extends from the surface to 10,000 feet MSL around the nation's busiest airports. The actual configuration of Class B airspace is individually tailored and consists of a surface area and two or more layers. Class B airspace is designed to contain all published instrument procedures (FAA 2017).



Source: United States Department of Transportation/FAA 2003

Figure 3-1. Controlled/Uncontrolled Airspace Schematic

Class C airspace generally extends from the surface up to 4,000 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower, are serviced by a radar approach control, and that have a certain number of IFR operations or passenger enplanements. Although the actual configuration of Class C airspace is individually tailored, it usually consists of a surface area with a 5-NM radius, and an outer circle with a 10-NM radius that extends from 1,200 feet to 4,000 feet above the airport elevation (FAA 2017).

Class D airspace generally extends from the surface to 2,500 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower. The configuration of each Class D airspace area is individually tailored, and when instrument procedures are published, the airspace will normally be designed to contain the procedures. Arrival extensions for instrument approach procedures may be designated as Class D or E airspace (FAA 2017).

Class E airspace is controlled airspace that is not Class A, B, C, or D. Areas in which Class E airspace begins at either the surface or 700 feet AGL are used to transition to/from the terminal or en route environment (around non-towered airports). These areas are designated by VFR sectional charts. In most areas of the United States, Class E airspace extends from 1,200 feet AGL up to but not including 18,000 feet MSL, the lower limit of Class A airspace. No ATC clearance or radio communication is required for VFR flight in Class E airspace. VFR visibility requirements below 10,000 feet MSL are 3 statute miles visibility and cloud clearance of 500 feet below, 1,000 feet above, and 2,000 feet laterally. VFR visibility requirements above 10,000 feet MSL are 5 statute miles visibility and cloud clearance of 1,000 feet below, 1,000 feet above, and 1 mile laterally (FAA 2003).

Class G airspace is uncontrolled.

3.1.1.2 Special Activity Airspace

Special Activity Airspace (SAA), a term that includes SUA and others (e.g., TFRs), is any airspace with defined dimensions within the NAS wherein limitations can be imposed upon aircraft

operations. This airspace could include Prohibited Areas, MOAs, Military Training Routes (MTRs) (Instrument Routes [IRs]/Visual Routes [VRs]), aerial refueling track/anchors, slow routes, low-altitude tactical navigation areas, Air Traffic Control Assigned Airspace (ATCAA), and any other FAA-designated airspace.

SUA is defined airspace in which activities must be confined because of their nature, or in which limitations may be imposed upon aircraft operations that are not a part of those activities. The types of SUA are Prohibited Areas, RAs, MOAs, Warning Areas, Alert Areas, Controlled Firing Areas, and National Security Areas.

MOAs are SUA of defined vertical and lateral limits established outside Class A airspace to separate and segregate certain non-hazardous military activities from IFR traffic and to identify to VFR traffic where these activities are conducted (FAA 2017). MOAs are considered "joint use" airspace. Non-participating pilots operating by VFR are permitted to enter a MOA, even when the MOA is active for military use. Pilots operating by IFR must remain clear of an active MOA unless approved by the responsible ATC. If a pilot operating by IFR is approved to transit a MOA, that part of the MOA is effectively deactivated for military training during the IFR aircraft transit.

Within an active MOA, flight by both participating and non-participating pilots operating by VFR is conducted under the "see-and-avoid" concept, which stipulates, "when weather conditions permit, pilots operating [by] VFR are required to observe and maneuver to avoid other aircraft. Right-of-way rules are contained in Code of Federal Regulations (14 CFR) Part 91" (FAA 2017). The responsible ATC provides separation service for pilots operating by IFR and for air traffic in MOAs. The see-and-avoid procedures mean that if a MOA were active during weather with restricted visibility, the general aviation pilot operating by VFR could not safely access the MOA airspace and a pilot requesting IFR clearance would not be permitted to access the active MOA. If a pilot operating by VFR encountered weather or other conditions requiring IFR flight, that pilot would need to declare an in-flight emergency and communicate with the ATC, which would communicate with the FAA to establish a temporary floor in the MOA. The UTTR ATC facility, Clover Control, would then instruct military pilots not to fly below the temporary floor. Clover Control would also instruct the VFR pilot not to fly above the temporary floor.

RAs are another type of SUA. They are regulated under 14 *CFR* 73 as designated airspace that supports ground or flight activities that could be hazardous to non-participating aircraft. RAs are three-dimensional areas of airspace used to separate and segregate hazardous activities and military flight and training operations, including air-to-ground and ground-to-ground ordnance training. RAs are only used by participating military aircraft during scheduled hours. All commercial, general, and non-participating military pilots are prohibited from entering an active RA. Most RAs are designated "joint-use," and IFR/VFR operations in the area can be authorized by the applicable ARTCC when the RA is not being utilized by the using agency.

3.1.2 Existing Conditions

3.1.2.1 Military Airspace Use

Airspace associated with Hill AFB and the UTTR consists of MOAs, ATCAA, and RAs classified into two major subset complexes: the North Range and South Range. Each range includes RAs and MOAs, and the South Range offers supersonic operating areas for training operations. UTTR airspace also includes ATCAA and an Altitude Reservation (ALTRV). The airspace units associated with Hill AFB and the UTTR are described in Table 3-1.

Table 3-1. Existing FAA-Designated Airspace at the UTTR

Airspace Unit	Floor (feet MSL unless otherwise noted)	Ceiling (feet MSL unless otherwise noted)	Time of Use	Controlling Agency
North Range				
Lucin MOA A	100 AGL	9,000	7:00 A.M. to 12:00 A.M. Monday through Friday; 8:00 A.M. to 5:00 P.M. Saturday	ZLC
Lucin MOA B	100 AGL	7,500	7:00 A.M. to 12:00 A.M. Monday through Friday; 8:00 A.M. to 5:00 P.M. Saturday	ZLC
Lucin MOA C	100 AGL	6,500	7:00 A.M. to 12:00 A.M. Monday through Friday; 8:00 A.M. to 5:00 P.M. Saturday	ZLC
Lucin A ALTRV	9,000	18,000		
Lucin B ALTRV	7,500	18,000		
R-6404A	Surface	58,000	Continuous	ZLC
R-6404B	Surface	13,000	Continuous	ZLC
R-6404C	100 AGL	28,000	Continuous	ZLC
R-6404D	13,000	25,000	By NOTAM	ZLC
South Range				
Sevier MOA A	100 AGL	14,500	7:00 A.M. to 12:00 A.M. Monday through Friday; 8:00 A.M. to 5:00 P.M. Saturday	ZLC
Sevier MOA B	100 AGL	9,500	7:00 A.M. to 12:00 A.M. Monday through Friday; 8:00 A.M. to 5:00 P.M. Saturday	ZLC
Sevier MOA C	14,500	18,000	By NOTAM 6 hours in advance	ZLC
Sevier MOA D	9,500	18,000	By NOTAM 6 hours in advance	ZLC
White Elk MOA	14,000	18,000	7:30 A.M. to 10:00 P.M Monday through Thursday; 7:30 A.M. to 4:30 P.M. Friday	ZLC
Currie ATCAA	18,000	58,000		
Tippet ATCAA	18,000	58,000		
Gandy MOA	100 AGL	18,000	7:00 A.M. to 12:00 A.M. Monday through Friday; 8:00 A.M. to 5:00 P.M. Saturday	ZLC
Gandy ATCAA	18,000	58,000		
R-6402A	Surface	58,000	Continuous	ZLC
R-6402B	100 AGL	58,000	Continuous	ZLC
R-6403	Surface	9,000	8:00 A.M. to 8:00 P.M. Monday through Thursday	ZLC - No air to ground communications
R-6405	100 AGL	58,000	Continuous	ZLC
R-6406A	Surface	58,000	Continuous	ZLC
R-6406B	100 AGL	58,000	Continuous	ZLC
R-6407	Surface	58,000	Continuous	ZLC
R-6412A	Surface	9,000	By NOTAM	S56
R-6412B	9,000	10,000	By NOTAM	S56
R-6412C	Surface	9,000	By NOTAM	S56
R-6412D	9,000	10,000	By NOTAM	S56

Note: MSL is the elevation (on the ground) or altitude (in the air) of an object, relative to the average sea level.
ZLC – Federal Aviation Administration Salt Lake City Air Route Traffic Control Center; S56 – Salt Lake City Terminal Radar Approach Control

HQ UTTR at Hill AFB has oversight of the UTTR. As part of this mission, HQ UTTR is responsible for airspace management in the UTTR. The 388 FW is the using agency for the RA airspace in the UTTR, and the Federal Aviation Administration Salt Lake City Air Route Traffic Control Center (ZLC) is the servicing ATC agency for the surrounding UTTR airspace. The UTTR ATC facility, Clover Control, operates with multiple feeds from FAA radar sites. Clover Control provides RA information and air traffic services to the general aviation public. HQ UTTR owns primary and secondary radar sites, which are scattered throughout the UTTR. These radar sites are relied upon for military traffic separation within the RA structures outside of assigned Salt Lake City Terminal Radar Approach Control (S56)) airspace.

3.1.2.2 Civil Airspace Use

Civil aviation consists primarily of commercial and general aviation. Civil aircraft operations can occur anywhere within the airspace described in Section 3.1.1.2 if, and when, permitted. Civilian pilots often operate by VFR using topographic or highway features and/or using Global Positioning System (GPS) for direct routing. Specified routes and areas facilitate air transportation and airspace management. This section describes these routes and areas.

Victor Airways, sometimes referred to as Victor Routes, are "highways in the sky" used by pilots to transit between navigational aids (NAVAIDs). Victor Airways are designated on aeronautical charts with the letter "V" (hence Victor). Victor Airways are Class E airspace extending typically from 1,200 feet AGL to FL 180 or 18,000 feet MSL. The width of the victor corridor depends on the distance from the NAVAIDs (e.g., Very High Frequency Omni-Directional Ranges [VORs]). When VORs are less than 102 NM from each other, the Victor Airway extends 4 NM on either side of the centerline (8 NM total width). When VORs are more than 102 NM from each other, the width of the airway increases. The width of the airway beyond 51 NM from a NAVAID is 4.5 degrees on either side of the centerline between the two NAVAIDs (at 51 NM from a NAVAID, 4.5 degrees from the centerline of a radial is equivalent to 4 NM). The maximum width of the airway is at the middle point between the two NAVAIDs. No low-altitude Victor Routes transit the South Range. V32/V200, located in the gap between the South Range and the North Range, provides a corridor for low-altitude civilian flights across this portion of Utah.

Jet Routes are designated highways in Class A airspace for high altitude air traffic above FL 180. These routes are used by commercial aviation operators that fly under IFR control by the various FAA ARTCCs throughout the United States. While the minimum en route altitude for many of these commercial routes is FL 180, the majority of flight activity on these routes occurs at altitudes above FL 260 and up to FL 450. One high-level Jet Route, J56, bisects the UTTR southern RAs; however, pilots using the route are under positive ATC at altitudes above FL 180. Jet Routes J154 and Q124, both under positive ATC, are located in the gap between the South Range and the North Range.

Civilian and private airports/airstrips in the immediate area include Wendover Airport, which is owned and operated by Tooele County. Wendover Airport has two active runways. Runway 8/26 is approximately 10,000-feet long and 150-feet wide. Runway 12/30 is approximately 8,000-feet long and 100-feet wide. Approximately 90 aircraft operations are conducted per week from Wendover Airport, and five aircraft are based at the airport (AirNav 2019). Wendover Airport has six IFR approach procedures and one IFR departure procedure. Airspace units (as shown on the FAA Sectional Chart for the region around Wendover Airport) are shown on Figure 3-2.

Figure 3-2. Excerpt from the FAA Sectional Chart near Wendover Airport

3.2 AIR QUALITY

3.2.1 Definition of the Resource

Air quality is determined by the type and amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. The levels of pollutants are generally expressed on a concentration basis in units of parts per million or micrograms per cubic meter.

The baseline standards for pollutant concentrations are the National Ambient Air Quality Standards (NAAQS) and state air quality standards established under the Clean Air Act (CAA) and amendments of 1990. These standards represent the maximum allowable atmospheric concentration that could occur and still protect public health and welfare. The NAAQS provide both short- and long-term standards for the following criteria pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than or equal to 10 micrometers in diameter (PM_{10}), particulate matter less than or equal to 2.5 micrometers in diameter ($PM_{2.5}$), ozone (O_3), and lead (Pb).

Under the CAA, it is the responsibility of the individual states to achieve and maintain the NAAQS. To accomplish this, states use the U.S. Environmental Protection Agency (USEPA)-required State Implementation Plan (SIP). A SIP identifies goals, strategies, schedules, and enforcement actions designed to reduce the level of pollutants in the air and bring the state into compliance with the NAAQS.

All areas of the United States are designated as having air quality better than (attainment) or worse than (nonattainment) the NAAQS. Areas for which the air quality data are insufficient for the USEPA to form a basis for attainment status are unclassifiable. Such areas are treated as attainment areas until proven otherwise. Nonattainment areas in which air pollution concentrations have been successfully reduced to levels below the standard are designated as "maintenance areas." Maintenance areas are subject to special maintenance plans to ensure compliance with the NAAQS.

Hazardous air pollutants (HAPs) are chemicals known to or suspected of causing cancer or other serious health effects for which occupational exposure limits have been established. Some volatile organic compounds (VOCs) are classified as HAPs. VOCs are also ozone precursors and include any organic compound involved in atmospheric photochemical reactions, except those designated by a USEPA administrator as having negligible photochemical reactivity. HAPs are not covered by the NAAQS but could present a threat of adverse human health or environmental effects under certain conditions.

3.2.2 Existing Conditions

3.2.2.1 Climate

The UTTR is located in Box Elder and Tooele Counties in Utah. The UTTR is located in the interior climate region of central/western Utah, which is in the transition zone between a humid, subtropical climate and a hot-summer humid continental climate. The average temperature is 51.5 degrees Fahrenheit (°F) (10.8 degrees Celsius [°C]). The warmest month is July, with an average high temperature of 93.7°F (34.3°C). The coolest month is January, with an average low temperature of 18.1°F (-7.7°C) (Western Regional Climate Center 2017).

Average annual precipitation at the UTTR is 10.4 inches (263.1 millimeters [mm]). April is the wettest month, with an average of 1.3 inches (33.0 mm) of precipitation. August is the driest

month, with an average of 0.35 inches (8.9 mm) of precipitation. Average annual snowfall at the UTTR is 18.3 inches (46.5 centimeters [cm]). The most snow falls in January, with an average of 7.7 inches (19.6 cm) (Western Regional Climate Center 2017).

3.2.2.2 Air Quality

The proposed project area, including the proposed R-6401, is located entirely within Tooele County. Therefore, for the purposes of this air quality analysis, the ROI for the proposed action and No Action Alternative includes Tooele County. According to the USEPA, portions of Tooele County are in serious nonattainment for $PM_{2.5}$ (2006 standard) and nonattainment for SO_2 (1971 standard) (USEPA 2017a). However, the proposed R-6401 is not included in the nonattainment areas. Therefore, a conformity determination is not required.

Tooele County emissions data were obtained from USEPA's 2014 National Emissions Inventory (NEI), which contains the latest data available (Table 3-2). The county data include emission amounts from point sources, area sources, and mobile sources. *Point sources* are stationary sources that can be identified by name and location. *Area sources* are point sources from which emissions are too low to track individually (e.g., a home or small office building) or a diffuse stationary source (e.g., wildfires or agricultural tilling). *Mobile sources* are any kind of vehicle or equipment with a gasoline- or diesel-powered engine, an airplane, or a boat. Two types of mobile sources are considered: on-road and non-road. On-road sources include vehicles such as cars, light trucks, heavy trucks, buses, engines, and motorcycles. Non-road sources include aircraft, locomotives, diesel- and gasoline-powered boats, personal watercraft, lawn and garden equipment, agricultural and construction equipment, and recreational vehicles (USEPA 2017b).

Table 3-2. Baseline Criteria Pollutant Emissions Inventory for Tooele County, Utah

County	Criteria Pollutant (tons/year)					
	CO	NO_X	PM_{10}	$PM_{2.5}$	SO_2	VOCs
Tooele	25,120	5,678	8,512	2,297	120	46,487

Source: USEPA 2017b
NO_x = nitrogen oxides

3.2.2.3 Greenhouse Gas Emissions

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere; the accumulation of these gases in the atmosphere has been attributed to the regulation of Earth's temperature. Human influence on the climate system is clear, and recent anthropogenic emissions of GHGs are the highest in history. Recent climate changes have had widespread impacts on human and natural systems (IPCC 2014). Air emissions, including GHG emissions, have been assessed in accordance with the Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide – Fundamentals, Volume 1 of 2 and Volume II – Advanced Assessments (USAF 2017a, USAF 2018). The guidance recommends consideration of both the potential effects of a proposed action on climate change, as indicated by its estimated GHG emissions, and the implications of climate change for the environmental effects of a proposed action. The guidance also emphasizes that agency analyses should be commensurate with projected GHG emissions and climate impacts and should employ appropriate quantitative or qualitative analytical methods to ensure useful information is available to inform the public and the decision-making process in distinguishing between alternatives and mitigations.

The six primary GHGs, as defined by the USEPA under Section 202(a) of the CAA by rulemaking (see Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the CAA, 74 *Federal Register* 66495–66546, 15 December 2009) are carbon dioxide (CO_2),

methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The GHGs of interest for this project are CO_2, N_2O, and CH_4. Each GHG has an estimated global warming potential (GWP), which is a function of its atmospheric lifetime and its ability to absorb and radiate infrared energy emitted from the earth's surface. The GWP allows for the comparison of GHGs by converting the GHG quantity into the common unit carbon dioxide equivalent (CO_2e). Current GHG emissions for Tooele County, obtained from the USEPA's 2014 NEI, are summarized in Table 3-3.

Table 3-3. Current Greenhouse Gas Emissions Inventory for Tooele County, Utah

County	Greenhouse Gases (tons/year)			
	CO_2	N_2O	CH_4	CO_2e
Tooele	746,674	13	240	756,486

Source: USEPA 2017b

3.3 CULTURAL RESOURCES

3.3.1 Definition of the Resource

Cultural resources are districts, sites, buildings, structures, or objects considered important to a culture or community for scientific, traditional, religious, or other purposes. They include historic architectural/engineering resources, archaeological resources, American Indian sacred sites, and traditional resources. Historic properties are any prehistoric, historic, or traditional resource included on or eligible for inclusion on the National Register of Historic Places (NRHP) (36 *CFR* 800.16(l)). For the purposes of this cultural resources analysis, the Area of Potential Effect (APE) for the proposed action and No Action Alternative includes the footprints of the proposed construction projects and the area under the proposed R-6401 (see Figure 2-1).

3.3.2 Existing Conditions

3.3.2.1 Architectural Resources

No architectural resources are present in the APE.

3.3.2.2 Archaeological Resources

Several archaeological inventories have been conducted near the APE. Only one archaeological resource, the former Deep Creek Railroad, has been documented in the APE. The former Deep Creek Railroad is located along the western edge of the APE. This railroad was constructed in 1917 as a branch of the Western Pacific Railroad. The Deep Creek Railroad connected the main lines of the Western Pacific at Wendover to Gold Hill and the Ferber Gold Mining District (Hill AFB 2016a). The railroad was abandoned and most of its associated features (e.g., ties and rails) were removed in 1939, but the rail bed remains. The former Deep Creek Railroad is significant for its association with regionally significant themes of area development, transportation, and communication.

Surveys have identified seven additional archaeological resources within 1 mile of the APE. Table 3-4 contains a summary of the resources located in the APE and within 1 mile of the APE.

Table 3-4. Archaeological Resources Near the APE

Site Number	Site Name	NRHP Status
CRNV-11-8619	NA	Not Eligible
CRNV-11-8635	NA	Not Eligible
42TO3663	NA	Not Eligible

Table 3-4. Archaeological Resources Near the APE (Continued)

Site Number	Site Name	NRHP Status
42TO855	Wendover Airfield	Eligible
42TO2749	JB-2 Rocket Test Site	Eligible
42TO0708	Deep Creek Railroad	Eligible
CRNV-11-8631	NA	Unevaluated
CRNV-11-8632	NA	Unevaluated
26EK6396	NA	Not Eligible

NA – not applicable

3.3.2.3 American Indian Sacred Sites and Traditional Resources

Pursuant to Sections 101(d)(6)(B) and 106 of the National Historic Preservation Act (NHPA) and implementing regulations prescribed in 36 *CFR* 800.2(c)(2), the USAF is in the process of consulting on a government-to-government basis with tribes culturally affiliated with the UTTR. These tribes have been asked to provide information on any properties to which they attach religious and cultural significance (Appendix D). The Hill AFB Cultural Resource Manager has been providing updates on the project at the Annual American Indian Meeting since 2015. No tribal sacred sites or properties of traditional religious and cultural importance have been documented in the APE.

3.4 INFRASTRUCTURE

3.4.1 Definition of the Resource

Infrastructure, within the context of this EA, is associated with utilities and transportation. The utility systems described and analyzed include potable water, electricity, and waste water/solid waste. The description of each utility system focuses on existing infrastructure and current use.

For the purposes of this infrastructure analysis, the ROI for the proposed action and No Action Alternative includes the portion of the project area within and immediately surrounding Wendover Airport.

3.4.2 Existing Conditions

The existing infrastructure system of Wendover, Utah, and West Wendover, Nevada, currently serves a combined population of 5,668 (USCB 2016). This population increases by an average of 12,000 to 15,000 visitors per weekend (West Wendover 2016).

3.4.2.1 Utilities

Potable water is supplied to the region by the Johnson Springs Transmission System, which is owned by the Cities of Wendover and West Wendover. Wendover and West Wendover also provide wastewater and solid waste collection services. Wells Rural Electric Company, a co-operative facility serving northeastern Nevada and a portion of western Utah, provides electricity.

3.4.2.2 Transportation

Transportation in the region consists of I-80, which connects Salt Lake City, Utah, to San Francisco, California; and U.S. Highway 93A, which connects the Wendover and West Wendover communities to Las Vegas, Nevada, and I-15. The region is also accessible by FLYAWAY, a commercial charter flight into and out of Wendover Airport. This program averages 7-10 flights per week on a 168-passenger Boeing 737-800 aircraft operated by Xtra Airways (West Wendover 2016).

3.5 HAZARDOUS MATERIALS AND HAZARDOUS WASTE

3.5.1 Definition of the Resource

The terms "hazardous materials" and "hazardous waste" refer to substances that, because of their quantity, concentration, or physical, chemical, or infectious characteristic, could present substantial danger to public health or the environment when released into the environment. Products containing hazardous materials that could result in the generation of hazardous waste include fuel, adhesives, sealants, corrosion-prevention compounds, hydraulic fluids, lubricants, oils, paints, polishes, thinners, and cleaners. In addition to these substances, the EA also evaluated ordnance such as chaff and flares.

The key federal regulatory requirements related to hazardous materials and waste include:

- Resource Conservation and Recovery Act (RCRA) of 1976 (42 *USC* 6901 et seq.);
- Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 (42 *USC* 11001-11050);
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 (42 *USC* 9601-9675);
- Community Environmental Response Facilitation Act of 1992 (42 *USC* 9620);
- Asbestos Hazard Emergency Response Act (15 *USC* 2651);
- Spill Prevention, Control and Countermeasure Rule (40 *CFR* 112);
- USEPA Regulation on Identification and Listing of Hazardous Waste (40 *CFR* 261);
- USEPA Regulation on Standards for the Management of Used Oil (40 *CFR* 279);
- USEPA Regulation on Designation, Reportable Quantities, and Notification (40 *CFR* 302);
- EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance;*
- Toxic Substances Control Act (TSCA) of 1976 (40 *CFR* 700–766); and
- CAA of 1970, including the 1990 CAA Amendments (40 *CFR* 61).

Several USAF regulations address the management and safe handling of hazardous materials and wastes in accordance with applicable federal and state regulations. These include:

- Air Force Instruction (AFI) 32-7086, *Hazardous Material Management;*
- The Hill AFB Supplement to AFI 32-7086, *Hazardous Material Management;*
- AFI 32-7042, *Solid and Hazardous Waste Compliance;* and
- AFI 32-1052, *Facility Asbestos Management.*

USAF and DoD regulations concerning the safe storage, handling, and use of chaff and flares include:

- Department of Defense Directive (DoDD) 6055.09E, *Explosives Safety Management*
- AFI 11-214, *Air Operations Rules and Procedures*
- Air Force Manual (AFMAN) 91-201, *Explosives Safety Standards*
- AFMAN 32-1084, *Facility Requirements*
- AFI 91-204, *Safety Investigations and Reports*

For the purposes of this hazardous materials and waste analysis, the ROI for the proposed action and No Action Alternative includes portions of the UTTR where these substances are used, stored, transported, or disposed. The ROI also includes the area beneath the proposed RA (R-6401) where a SSAT accident and resulting hazardous material release could occur and the footprints of the proposed construction projects described in Section 2.6.1 of this EA.

3.5.2 Existing Conditions

Hazardous materials used by USAF and contractor personnel at the UTTR are managed in accordance with the Hill AFB Supplement to AFI 32-7086. Hazardous materials at the UTTR are authorized, issued, and tracked via coordination with the Installation Hazardous Materials Management Program, using the installation Hazardous Material Management Process (HMMP) and Enterprise Environmental, Safety, and Occupational Health – Management Information System (EESOH-MIS). Federal Supply System (FSS) hazardous material (e.g., National Stock Number [NSN] hazardous material) is procured through coordination with Material Control and Demand Processing (75th Logistics Readiness Squadron, Materiel Management Flight [75 LRS/LGRM]) via the Integrated Logistics System – Supply (ILS-S) and Base Supply/Central Receiving Warehouse, which is the Hazardous Materials Pharmacy (HAZMART)/Hazardous Material Distribution Service Center (HDSC) established by and accountable to 75 LRS/LGRM. Base Supply/Central Receiving Warehouse is a component of the HMMP and the primary receiving point for FSS hazardous material deliveries. Procurement of non-FSS hazardous material (e.g., locally purchased) is handled on a case-by-case basis and coordinated via the HMMP and EESOH-MIS, 75 LRS/LGRM, and the requesting organization or contractor.

The UTTR-North is a large quantity generator (LQG) of hazardous waste, as defined by the USEPA, with USEPA identification number UT0570090001. However, the proposed site is discontiguous from the UTTR-North area. Hazardous wastes generated at the proposed site would be managed separately from UTTR-North wastes. Depending on the amount of waste generated, the proposed site would receive a separate designation, likely as either a very small quantity generator (VSQG) or a small quantity generator (SQG). As defined in Utah Administrative Code R315-262, VSQGs generate less than or equal to 100 kilograms (kg) per month of non-acute hazardous waste and SQGs generate less than or equal to 1,000 kg per month. Should the proposed site generate greater than 1,000 kg per month of hazardous waste, the site would be designated as an LQG. Waste generating activities would need to be coordinated with Hill AFB/UTTR environmental support staff (75th Civil Engineer Group, Environmental Compliance [75 CEG/CEIE]) and be tracked in the EESOH-MIS database. All hazardous wastes generated would be managed in accordance with the Hill AFB Hazardous Waste Management Plan (Hill AFB 2016b). This plan describes the responsibilities, training, policies, and procedures for managing hazardous wastes on the UTTR and ensures compliance with applicable federal, state, and local laws and regulations at Hill AFB, the UTTR, and the Little Mountain Test Annex. The Hazardous Waste Management Plan applies to all organizations and activities associated with, located on, or occurring at the UTTR (Hill AFB 2016b).

HQ UTTR manages oil and hazardous substance spills and releases through implementation of the Hill AFB Installation Contingency Plan (ICP) for Oil Prevention and Emergency Response (Hill AFB 2016c). The ICP fills the requirement for a Facility Response Plan (FRP) and Spill Prevention Control and Countermeasures (SPCC) Plan. The ICP serves to reduce the likelihood of spills, prepare personnel to respond rapidly in the event of a spill, minimize discharge in the event of a spill, provide resources to support DoD requirements in the National Contingency Plan, and protect the environment and public health at the UTTR. The ICP establishes the responsibilities, duties,

procedures, and resources to contain, mitigate, and clean up oil products and hazardous material or waste spills on the UTTR and associated sites (Hill AFB 2016c). The proposed site would need to be incorporated into the Hill AFB ICP.

Toxic substances, as regulated under the TSCA, include asbestos, lead, and polychlorinated biphenyls (PCBs). It is not likely that asbestos, lead-based paint or PCBs would be encountered during the projects associated with the proposed action; these substances are therefore not carried forward for analysis in this EA.

The UTTR Environmental Response Program (ERP) includes the Military Munitions Response Program (MMRP) and provides for the environmental cleanup of contamination attributable to USAF activities. The ERP includes immediate actions to remove imminent threats to human health and the environment. The objective of the ERP at the UTTR is to protect human health and the environment, and comply with all applicable statutory, regulatory, and other requirements. Environmental response actions at the UTTR are planned and executed under the ERP in a manner consistent with AFI 32-7020, *Environmental Restoration Program*, CERCLA, and other applicable laws.

Construction associated with the maintenance and launch facilities (described in Section 2.6.1) would occur in the former Munitions Response Site (MRS) AL501C. The former MRS AL501C is now part of an active range; this site was closed out and withdrawn from the MMRP on 24 October 2014 (Hill AFB 2014).

Chaff and flares are currently used in the portions of the UTTR that have been approved for such use. Additional information on chaff and flare storage is described in Section 3.8.2.2.

3.6 LAND USE

3.6.1 Definition of the Resource

Land use describes the way the natural landscape has been modified or managed to provide for human needs. In developed and urbanized areas, land uses typically include residential, commercial, industrial, utilities and transportation, recreation, open space, and mixes of these basic types. Other uses such as mining, agriculture, forestry, and specially protected areas (e.g., monuments, parks, and preserves) are usually found on the fringes of or outside of urbanized areas. Plans and policies guide how land resources are allocated and managed to best serve multiple needs and interests. Ordinances and regulations define specific limitations on uses.

The attributes of land use addressed in this analysis include general land use patterns within and surrounding Wendover Airport and the land use regulatory setting. The regulatory setting is the framework for managing land use and approving new development. It pertains to federal, state, and local statutes, regulations, plans, programs, and ordinances.

For the purposes of this land use analysis, the ROI for the proposed action and No Action Alternative includes Wendover Airport and the land beneath the proposed R-6401.

3.6.2 Existing Conditions

The DoD owns a portion of the land beneath the proposed R-6401. This area is part of the UTTR South Range, which is primarily used for military personnel and weapon systems training and testing exercises. Testing and training includes air-to-air operations, air-to-surface operations, visual and radar bombing, and tactical maneuvers.

The other portions of land beneath the proposed R-6401 are owned by the SITLA and Intrepid Potash. The SITLA manages Utah's trust lands to support public institutions such as schools, hospitals, and universities. Two SITLA parcels are located beneath the proposed R-6401. One parcel is leased to Intrepid Potash. The other parcel is currently unleased. The land owned by Intrepid Potash and the SITLA parcel leased to Intrepid Potash under the proposed RA include portions of potash evaporation ponds associated with potash production in the area.

Wendover Airport is located near the proposed R-6401. Wendover Airport is an active civil airport owned by Tooele County. The airport contains an 8,000-foot long runway and a 10,000-foot long runway, and is used primarily by general aviation aircraft but also by military and commercial aircraft (AirNav 2019). Wendover Airfield is listed on the NRHP as an archaeological resource.

3.7 NOISE

3.7.1 Definition of the Resource

Noise is commonly defined as unwanted sound. Sound is defined as pressure variations in air that can be detected by the human ear. A sound can be characterized by its pitch and its loudness. Pitch depends on the rapidity (frequency) of the vibrations that comprise a sound. The human ear is specialized and best suited for the detection of sounds with vibrational frequencies between 1,000 and 6,000 cycles per second. Extremely high-pitched sounds (e.g., dog whistles) and extremely low-pitched sounds (e.g., distant rumbles) are not heard as well as sounds in mid-range frequencies. Sound levels are typically described in decibels (dB), a logarithmic scale used to simplify communication of a very wide range of audile sound pressure levels. Loudness describes the amplitude of sound waves as perceived by a listener. A system known as A-weighting (measured in A-weighted decibels [dBA]) is often applied to sounds to mathematically de-emphasize sound energy at frequencies not easily detected by the human ear. Zero on the dBA scale is based on the lowest sound pressure that a healthy, unimpaired, human ear can detect. Sound levels higher than 120 dBA can cause discomfort. Normal conversation at a distance of 3 feet typically generates sound levels of approximately 60 dBA. Common A-weighted sound levels are shown on Figure 3-3.

The dB scale is logarithmic, which reflects the way in which sounds of various acoustic energies are perceived. An increase of 10 dB relative to any dB starting point represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense. Because of the nature of logarithms, the addition of a sound that is 10 dB less loud than the existing sound level adds only 0.1 dB to an existing sound environment, an increase that is not measurable under normal conditions. There is also a relationship between the subjective noisiness (i.e., perception) of a sound and its level. A 20-dB increase in sound level is perceived by the human ear as approximately a quadrupling of sound level, while a 10-dB increase is perceived as a doubling of sound level and a 3-dB increase is barely perceptible under normal (i.e., non-laboratory) conditions.

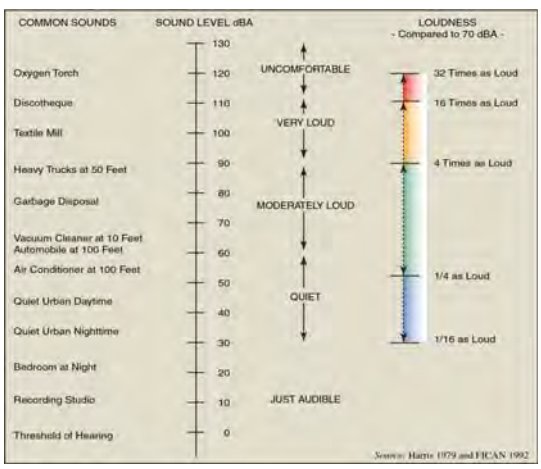
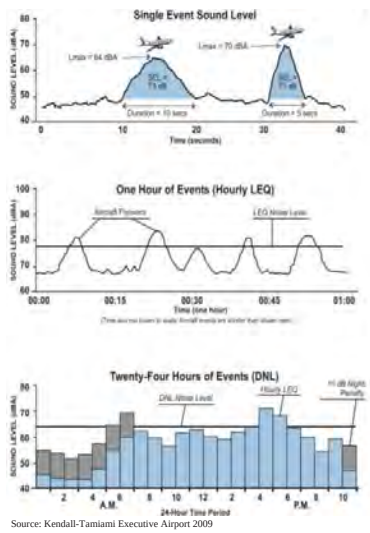


Figure 3-3. Typical A-Weighted Levels of Common Sounds

The variability of sound levels across time is also important in determining impacts. The highest sound level measured during a noise event (e.g., a vehicle pass-by) is referred to as the maximum sound level (L_{max}); the overall noise energy of a noise event normalized to a single second is the sound exposure level (SEL); and the decibel-averaged sound level over a period of time is the equivalent sound level (L_{eq}). The day-night average sound level (DNL) is a dB-averaged noise level for a 24-hour time period with a 10-dB "penalty" applied to noise levels generated between 10:00 P.M. and 7:00 A.M. In this EA, referenced L_{eq} values are for a 24-hour period, and are approximately equivalent to DNL for acoustic environments where loud late-night events are not common. Figure 3-4 illustrates time-varying sound levels for a hypothetical location exposed to aircraft flyover noise. It should be noted that the time-averaged noise level is often substantially lower than the noise level of individual loud events (e.g., aircraft overflights). Noise values on Figure 3-3, for example, are instantaneous noise levels, not time-averaged noise levels like those communicated using the DNL metric. In military training airspace, DNL is calculated for the month with the highest operations tempo and includes a dB-correction for potential startle reactions caused by sudden onset noises generated by low-flying, high-speed military aircraft. This metric is the onset-rate adjusted monthly day-night average sound level (DNL_{mr}).



Source: Kendall-Tamiami Executive Airport 2009

Figure 3-4. Describing Time-Varying Sound Levels

Social surveys have identified a correlation between DNL and the percentage of the population that is highly annoyed by a noise. A DNL of 65 dBA is expected to highly annoy approximately 12 percent of the population (Schultz 1978; Finegold 1994). The DoD has published land use guidelines stating that certain noise-sensitive land uses (e.g., residences) are not compatible with DNL greater than 65 dBA (FICON 1992). As previously mentioned, reactions to noise depend on characteristics of the listener and characteristics of the sound. Some people will be annoyed by noise at any level. People are more likely to be annoyed when engaged in a noise-sensitive activity such as sleeping or conversation. However, DNL greater than 65 dBA imply that noise events are intense, frequent, and/or occur frequently late at night, resulting in a greater likelihood of annoyance.

For the purposes of this noise analysis, the ROI for the proposed action and No Action Alternative includes areas in which the component actions of the proposed action (i.e., construction; operation of ground vehicles and equipment; launch, recovery, and maintenance of SSATs) would be audible. As described in Section 1.1, for the purposes of this EA, "launch" is defined as the time in which the SSAT is launched from the ground surface into the proposed RA, to the time the

SSAT enters into existing RA; "recovery" is defined as the time in which the SSAT exits the existing RA into the proposed RA, to the time the SSAT lands on the ground. Existing UTTR airspace is currently used by a wide variety of military aircraft, including SSATs; therefore, the noise resulting from operation of SSATs in existing airspace would not constitute a new noise source. Only noise associated with the proposed action (i.e., noise at the Wendover Site and in the proposed R-6401) is analyzed in this EA.

3.7.2 Existing Conditions

3.7.2.1 Existing Noise Sources

The majority of the activities associated with the proposed action would occur in the desert south of Wendover Airport. In 2017, Wendover Airport supported approximately 90 aircraft operations per week, which equates to an average of 13 aircraft operations per day. Seventy-six (76) percent of the aircraft operations were conducted with transient general aviation aircraft, 17 percent were conducted with commercial aircraft, 6 percent were conducted with military aircraft, and 1 percent were conducted with local general aviation aircraft (AirNav 2019). L_{max} associated with common examples of general aviation, commercial, and military aircraft are listed in Table 3-5. Low-altitude overflights occur frequently near the runways and along the extended runway centerlines. Aircraft operations are relatively infrequent, and according to the *Wendover Airport Industrial Park Plan*, DNL greater than 60 dB occur only on and immediately adjacent to the runways (Tooele County 2016).

Table 3-5. Maximum Noise Levels of Example General Aviation, Commercial and Military Aircraft

Aircraft Category	Example Aircraft Type	Maximum Noise Level (L_{max}) at Distance (feet)		
		4,000	8,000	12,000
General Aviation	Beechcraft Baron	52	38	33
Commercial	Boeing 737	56	40	33
Military	KC-135R	72	63	56

Notes: Aircraft types listed are examples only; a large number of aircraft types are used at Wendover Airport; sound levels are reported for takeoff engine power setting at 59 °F and 70 percent humidity
Source: SELCALC run at standard acoustic conditions (59 °F and 70 percent relative humidity)

The launch facility is located in an area immediately adjacent to the UTTR airspace complex. The UTTR airspace complex is used for training by several very loud (greater than 65 dB) types of military aircraft, including the F-35A. As reported in the F-35 Operational Basing EIS (USAF 2013), the noise level in the adjacent UTTR airspace is expected to be 60 dB DNL_{mr} once F-35A units based at Hill AFB are operating at full capacity. Supersonic aircraft operations in portions of UTTR airspace where supersonic operations are permitted are expected to generate 61 sonic booms per month (USAF 2013). Although military aircraft noise events are less frequent outside the boundaries of the UTTR than within the boundaries of the UTTR, they do occur on a regular basis within the ROI.

Noise in the ROI also includes sounds generated in the Cities of Wendover and West Wendover, traffic noise generated on nearby roads (e.g., I-80), and aircraft operations at Wendover Airport. Areas immediately adjacent to human development generally experience higher sound levels than more remote areas. The National Park Service (NPS) conducted an extensive study of the relationship between ambient sound level and non-acoustic geospatial features such as topography, climate, hydrology, and human activity (NPS 2017). This study involved field measurements of

sound levels at locations across the United States. Based on this study, the L_{eq} during a typical summer daytime hour is approximately 30 dB in remote portions of the desert and approximately 40 dB on the outer fringes of developed areas near Wendover and West Wendover (i.e., the proposed SSAT launch site) (NPS 2015). Because the NPS study does not specifically account for Wendover Airport aircraft operations, noise levels in portions of the ROI close to the airport could be slightly higher than predicted by the study. Because late-night noise events are not common under baseline conditions, baseline DNL is approximately equal to baseline L_{eq}.

3.7.2.2 Noise-Sensitive Locations

Table 3-6 lists the distances from the maintenance facility, launch facility, and recovery area to the nearest noise-sensitive locations. The nearest residence is located near Airport Drive (i.e., near Wendover Airport). West Wendover Equestrian Park is located immediately south of the City of West Wendover.

Table 3-6. Noise-Sensitive Locations Near the Wendover Site

Facilities	Distance to Nearest Residence	Distance to West Wendover Equestrian Park
	Miles	Miles
Maintenance Facility	2.9	3.3
Launch Facility	4.5	4.8
Recovery Area	5.0	5.3

3.8 SAFETY

3.8.1 Definition of the Resource

For the purposes of this EA, safety includes ground, explosive, and flight safety. Ground safety considers issues associated with construction, and operations and maintenance (O&M) activities that support aircraft operations, including fire and emergency response. Explosive safety considers the management and use of ordnance or munitions associated with SSATs. Flight safety considerations include the interaction of launch and recovery operations with other flight activities in the region. Flight safety also addresses potential for aviation mishaps and Bird/Wildlife Aircraft Strike Hazards (BASHs).

For the purposes of this safety analysis, the ROI for the proposed action and No Action Alternative includes the UTTR and surrounding areas, including the proposed R-6401.

3.8.2 Existing Conditions

3.8.2.1 Ground Safety

The UTTR is currently managed in accordance with the requirements and procedures prescribed in AFI 13-212, Air Combat Command (ACC) Supplement 1, 388 FW Addenda A, *Range Planning and Operations*. This AFI addresses a variety of ground safety considerations, including land ownership and control, weapons use, range scheduling, range maintenance, Explosive Ordnance Disposal (EOD), range decontamination and debris disposal, and environmental stewardship of ranges. AFI 13-212 also assigns responsibilities and provides detailed processes and procedures for range scheduling; maintenance; EOD; range decontamination and debris disposal; and entry into, operations within, and exit from airspace directly supporting range operations.

HQ UTTR is responsible for the safe management and operation of the UTTR. Range management involves the development and implementation of those processes and procedures required to ensure that range operations are planned, operated, and managed safely. The focus of range management is on ensuring the safe, effective, and efficient operation of the UTTR and the safe and efficient use of RAs. The overall purpose of range management is to balance the military need to accomplish realistic testing and training with the need to minimize potential impacts of such activities to human health, the environment, and surrounding communities.

The UTTR Fire Department, which is stationed at Oasis Range, provides fire response for activities on the UTTR, including those near Wendover Airport. HQ UTTR also has mutual aid agreements with Tooele County, the City of West Wendover, and the City of Wendover's volunteer fire department. HQ UTTR works with the local fire departments to alert citizens about the potential for injury should they handle or disturb aircraft or munitions debris associated with military operations.

All structures on the ground have the potential to create hazards to aviation. The FAA provides detailed instructions for the marking of obstructions (i.e., paint schemes and lighting) to warn pilots of their presence. Any temporary or permanent structure, including all appurtenances, that exceeds an overall height of 200 feet AGL or exceeds any obstruction standard prescribed in 14 *CFR* 77 should normally be marked and/or lighted. The FAA may also recommend marking and/or lighting a structure that does not exceed 200 feet AGL or 14 *CFR* 77 standards because of its particular location. The obstruction standards prescribed in 14 *CFR* 77 are primarily focused on structures in the immediate vicinity of airports and in the approach and departure corridors of airports.

3.8.2.2 Explosive Safety

Explosives include ammunition, propellants (solid and liquid), pyrotechnics, warheads, explosive devices, and chemical agent substances and associated components that present real or potential hazards to life, property, or the environment. Hill AFB/HQ UTTR currently stores, maintains, and uses munitions required to perform the testing and training mission of the WSEP Combat Archer program.

DoDD 6055.09E and AFMAN 91-201 describe DoD and USAF guidelines for explosives safety. These regulations, along with AFI 91-204, identify potential explosive safety mishaps involving both explosive and chemical agents. Siting requirements for munitions storage and handling facilities are based on safety and security criteria. Defined distances are maintained between munitions storage areas and a variety of other types of facilities. These distances, called explosive safety quantity-distance (ESQD) arcs, are determined by the type and quantity of explosive material to be stored. Each explosive material storage or handling facility has ESQD arcs extending outward from its sides and corners for a prescribed distance. Within these ESQD arcs, development is either restricted or prohibited altogether to ensure personnel safety and to minimize potential for damage to other facilities in the event of an accident. In addition, explosives storage and handling facilities must be located in areas where security of the munitions can be maintained at all times. Identifying the ESQD arcs ensures that incompatible construction does not occur in these areas.

Trained, qualified personnel using USAF-approved technical procedures perform all munitions maintenance conducted at the UTTR. Restrictions apply to areas immediately surrounding munitions handling and storage facilities to segregate these facilities from other activities. Information on the hazards associated with the explosives located in these facilities is provided to first responders and other emergency responders.

3.8.2.3 Flight Safety

The primary concern regarding flight safety is the potential for aircraft accidents. Aircraft mishaps could include accidents related to weather, mechanical failure, or pilot error; mid-air collisions; collisions with manmade structures or terrain; or bird-aircraft collisions. Flight risks apply to all aircraft; they are not limited to the military. During 2016, six aircraft were based at Wendover Airport. A total of 4,722 operations (3,368 general aviation transient, 850 air carrier, 432 military, and 72 general aviation local) were conducted from Wendover Airport.

Bird-aircraft strikes constitute a safety concern for the USAF because they can result in damage to aircraft, injury to aircrews, or injury to local human populations if an aircraft crashes. Most birds fly below 500 feet AGL, except during migration. Generally, long-distance migrants begin migrating at elevations of approximately 5,000 feet and then progressively climb to approximately 20,000 feet. The highest known flight of a North American migratory bird species is that of the mallard duck (*Anas platyrhynchos*), which has been observed flying as high as 21,000 feet (World Atlas 2016). More than 97 percent of reported bird-aircraft strikes occur below 3,000 feet AGL, approximately 30 percent occur in the airport environment, and approximately 55 percent occur during low-altitude flight training (USAF 2017b).

3.9 SOCIOECONOMICS

3.9.1 Definition of the Resource

Socioeconomics refers to features or characteristics of the social and economic environment (e.g., population, employment, earnings, housing, and public services). For the purposes of this socioeconomic analysis, the ROI for the proposed action and No Action Alternative includes the area beneath the proposed R-6401 and the Cities of Wendover and West Wendover.

3.9.2 Existing Conditions

The area beneath the proposed R-6401 is primarily owned by the DoD. SITLA and Intrepid Potash own private parcels of land beneath the proposed R-6401. Wendover and West Wendover are located approximately 4 miles north of the proposed RA. The arts, entertainment, and recreation industries are the primary drivers of economic conditions in the region (City Data 2019). Fifteen (15) hotels in the region support these industries. Other drivers of economic conditions in the area include tourism and potash mining. The combined population of Wendover and West Wendover is approximately 5,668 (USCB 2016).

3.10 SOIL RESOURCES

3.10.1 Definition of the Resource

The following section describes the soils and physiography of the ROI. The term "soils" refers to unconsolidated materials formed from the underlying bedrock or other parent material. Soils play a critical role in both the natural and human environment.

For the purposes of this soils analysis, the ROI for the proposed action and the No Action Alternative includes the land proposed for the H-97 radio-relay station, the land adjacent to the existing gravel pad for the launch facility, and the land beneath the proposed R-6401. All other proposed construction projects would occur on existing gravel pads evaluated in previous environmental analysis documents.

3.10.2 Existing Conditions

Four soil components are mapped by the Natural Resources Conservation Service (NRCS) in the ROI: playas, salt flats, saltair-playas complex, and theriot-rock outcrop complex (Soil Survey Staff 2018). Playa soils consist of very poorly drained, strongly calcareous, stratified silt loam, clay loam, and sand loam with a salt layer overlying alkaline sediments. Salts flats are barren, undrained basins on lake plains with a layer of salt crust that can reach approximately 1 foot in thickness. Saltair soil consists of very deep, poorly drained to very poorly drained soils that formed in alluvium and lacustrine sediments derived from mixed-rock sources (e.g., limestone, shale, and quartzite). The theriot-rock outcrop complex is found on mountainsides with short, convex slopes. Theriot soil is shallow and well drained and formed from limestone. Rock outcrops in this soil series consist of barren limestone found on escarpments and ridges.

Construction activities that disturb one (1) or more acre(s) of land must be authorized under Utah's pollutant discharge elimination system; landowners and contractors are required to obtain a stormwater permit for such activities. At the UTTR, construction activities with a footprint greater than 5,000 square feet must follow Energy Independence and Security Act (EISA) Section 438 guidance for long-term stormwater management using the Low Impact Development (LID) methods described in DoD Guidance, Unified Facilities Criteria (UFC) 3-210-10, *Low Impact Development*. An erosion control plan incorporating best management practices (BMPs) must be submitted to and approved by the 75 CEG/CEIE prior to construction startup (Hill AFB 2016d).

3.11 BIOLOGICAL RESOURCES

3.11.1 Definition of the Resource

For the purposes of this EA, sensitive and protected biological resources include plant and animal species that are federally (U.S. Fish and Wildlife Service [USFWS]) or state (Utah Division of Wildlife Resources [UDWR]) listed for protection. Identifying which species occur in an area affected by an action can be accomplished through literature reviews and coordination with appropriate federal and state regulatory agency representatives, resource managers, and other knowledgeable experts.

For the purposes of this biological resources analysis, the ROI for the proposed action and No Action Alternative includes the proposed project area as shown on Figure 2-2. The proposed project area includes the radio-relay stations; the launch, control, and maintenance facilities; the recovery area; and the boundaries of the proposed R-6401.

3.11.2 Existing Conditions

3.11.2.1 Vegetation

The project area is located near the Bonneville Salt Flats in the Great Salt Lake Desert, a large dry lake surrounded by several small mountain ranges along the edges of the desert. The Bonneville Salt Flats are a densely packed salt pan encompassing more than 30,000 acres in northwestern Utah. This area is comprised of sparsely vegetated desert salt flat or alkali flats typically devoid of vegetation, with the exception of salt-tolerant shrubs and grasses adapted to the climate. Great Basin sagebrush is the primary vegetation community. Invasive species such as cheat grass (*Bromus tectorum*), Russian thistle (*Salsola tragus*), and halogeton (*Halogeton glomeratus*) are the dominant species. As elevation increases, the landscape contains a mixture of shrubs and grasses, including sagebrush (*Artemisia tridentata*), greasewood (*Sarcobatus vermiculatus*),

shadescale (*Atriplex confertifolia*), seepweed (*Suaeda torreyana*), budsage (*Artemisia spinosa*), rabbitbrush (*Chrysothamnus nauseosus*), blue grama grass (*Bouteloua gracilis*), and galleta grass (*Hilaria jamesii*) (Hill AFB 2014).

The Wendover Site is located in an existing military operations area. The adjacent areas are disturbed and have been used for range activities dating back to World War II. The H-97 radio-relay station is the only radio-relay station that would be located in a new location. The H-97 radio-relay station would be located on DoD property on the peak of a mountain approximately 15 miles south of Wendover (Figure 2-2). The land area beneath the proposed RA is partially an existing military operating area and partially private land used for mining. No unique vegetation is present in these areas.

3.11.2.2 Wildlife

A variety of mammals, birds, and reptiles inhabit the desert shrub habitat found within the Great Salt Lake Desert area. Common mammal species include black-tailed jackrabbit (*Lepus californicus*), coyote (*Canis latrans*), and desert cottontail (*S. audubonii*). Avian species include house sparrow (*Passer domesticus*), Brewer's sparrow (*Spizella breweri*), mourning dove (*Zenaida macroura*), horned lark (*Eremophila alpestris*), turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), burrowing owl (*Athene cunicularia*), and golden eagle (*Aquila chrysaetos*). Common reptile species include the Great Basin collared lizard (*Crotaphytus bicinctores*), sagebrush lizard (*Sceloporus graciosus*), side-blotched lizard (*Uta stansburiana*), western rattlesnake (*Crotalus viridis*), and Great basin gopher snake (*Pituophis catenifer deserticola*).

3.11.2.3 Special Status Species

3.11.2.3.1 Endangered Species Act

Special status plant and wildlife species are subject to regulations under the authority of federal and state agencies. The Endangered Species Act (ESA) (16 *USC* 1532 et seq.) of 1973, as amended, was enacted to protect and recover imperiled species and the ecosystems upon which they depend. The USFWS maintains a list of special status species considered endangered, threatened, or candidate.

"Endangered" means a species is in danger of extinction throughout all or a significant portion of its range. "Threatened" means a species is likely to become endangered within the foreseeable future. Candidate species include plants and animals that have been studied and proposed for addition by the USFWS to the federal endangered and threatened species list. All federal agencies are required to implement protection programs for endangered and threatened species and to use their authority to further the purposes of the ESA.

The USFWS Information for Planning and Consultation (IPaC) system was accessed online to request an *Official Species List* to identify species protected under Section 7(c) of the ESA that could occur in Tooele County. On 27 September 2018, an *Official Species List* with the names of three federally threatened species that could occur in Tooele County (Table 3-7) was generated (via online letters) by the USFWS Utah Ecological Services Field Office and the Reno Fish and Wildlife Office (Consultation Codes: 06E23000-2017-SLI-0407, 08ENVD00-2017-SLI-0561). See Appendix E for copies of these letters.

Additionally, the USFWS Critical Habitat Portal was used to determine if designated critical habitat is present in or near the ROI. No critical habitat for USFWS special status species is present in Tooele County (USFWS 2017a).

Table 3-7. Federally-Listed Species with Potential to Occur in Tooele County, Utah

Common Name	Scientific Name	Protection Status	Habitat	Potential to Occur within the Project Area
Birds				
Yellow-billed Cuckoo	*Coccyzus americanus*	Threatened	This species uses riparian habitats. The species nests in young, rapidly growing stands of riparian areas, including willows, cottonwoods, and box elders.	None. No suitable habitat present.
Flowering Plants				
Jones Cycladenia	*Cycladenia humilis var. jonesii*	Threatened	This species is found in mixed desert scrub, juniper areas, or areas dominated by wild buckwheat and Mormon tea. The species grows only on the gypsiferous, saline soils of the Cutler, Summerville, and Chinle formations at elevations of 4,390 to 6,000 feet.	None. No suitable habitat present.
Ute Ladies'-tresses	*Spiranthes diluvialis*	Threatened	This species occurs along riparian edges, gravel bars, old oxbows, high-flow channels, and moist-to wet meadows along perennial streams. The species typically occurs in stable wetland and seepy areas associated with old landscape features in historical floodplains of major rivers, as well as in wetlands and seeps near freshwater lakes or springs.	None. No suitable habitat present.

Source: Layman 1998; NatureServe 2017a, b; UDWR 2017; USFWS 2017ab, 2018

No federally listed plant or animal species have been documented in the ROI (Lawrence 2017). No habitat suitable for federally listed species is present in the ROI.

3.11.2.3.2 Utah Wildlife Species of Concern

Pursuant to Sections 23-14-19 and 63-34-5(2)(a) of the Utah Code, the UDWR Utah Natural Heritage Program's Biodiversity Tracking and Conservation System (BIOTICS) species-by-county list was obtained to identify state-listed species that could occur within Tooele County (UDWR 2015) (Appendix E). In accordance with AFI 32-7064, *Integrated Natural Resources Management*, the USAF provides the same level of protection, when practicable, to any state-listed threatened, endangered, or other rare species as that provided to federally listed species.

Of the 28 species listed for Tooele County, three (3) Utah Wildlife Species of Concern (SPC) have been documented near the project area. These species include the short-eared owl (*Asio flammeus*), kit fox (*Vulpes macrotis*), and bald eagle (*Haliaeetus leucocephalus*) (Lawrence 2017). The short-eared owl and kit fox and their respective habitats near the ROI are described below. The bald eagle is described separately in Section 3.11.2.3.4.

Short-eared Owl. The short-eared owl is a medium-sized owl typically found within grasslands, shrublands, and other open habitats (UDWR 1999). Habitat occurs throughout the UTTR region. The short-eared owl has been occasionally observed at the UTTR, but the species has not been observed in the ROI (Hill AFB 2014).

Kit Fox. The kit fox is native to much of the Western United States and Northern Mexico. Although the species is not overly abundant in Utah, it does occur in the western, east-central, and

southeastern areas of the state. The species most often occurs in open prairie, plains, and desert habitats (UDWR 1997). Kit fox habitat occurs throughout the UTTR region; however, kit fox are uncommon throughout the UTTR and are rarely seen during the surveys performed under the Hill AFB Natural Resource Program (Hill AFB 2014).

3.11.2.3.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits actions that result in the pursuit, capture, killing, and/or possession of any protected migratory bird, nest, egg, or parts thereof. The USFWS maintains a list of designated migratory birds known to occur in various regions of the United States. The USFWS regulations allow for the incidental take of migratory birds for military readiness activities. Birds of Conservation Concern (BCCs) are a subset of MBTA-protected species identified by the USFWS as those in the greatest need of additional conservation action to avoid future listing under the ESA. BCCs have been identified at three geographic scales: National, USFWS Regions, and Bird Conservation Regions (BCRs). BCRs are the smallest geographic scale at which BCCs have been identified, and the lists of BCC species at this scale are expected to be the most useful for government agencies to consider in complying with the MBTA and EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds* (USFWS 2008). The proposed project area is located within BCR 9.

The USFWS IPaC system identified seven migratory bird species with potential to occur in Tooele County (USFWS 2018) (Appendix E). The USFWS BCC 2008 identified 28 BCCs for BCR 9 (USFWS 2008) (Appendix E). Four (4) BCCs are known to occur near the ROI: the bald eagle, golden eagle, ferruginous hawk (*Buteo regalis*), and short-eared owl (Lawrence 2017).

3.11.2.3.4 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) (as amended in 1962) provides for the protection of bald and golden eagles by prohibiting the take, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export, or import of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit (16 *USC* 668(a); 50 *CFR* 22). "Take" means to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb (16 *USC* 668c; 50 *CFR* 22.3).

Bald and golden eagles are known to frequent the Great Salt Lake Desert area. Nesting habitat near the project area includes the surrounding rock outcrops and mountain areas. Foraging habitat is present throughout the Great Salt Lake Desert area. Documented eagle sightings are the most recurrent at Blue Lake, a large geothermal pond located approximately 11 miles south of the proposed R-6401 and approximately 5 miles north of the proposed H-97 radio-relay station. The closest documented eagle nest is located approximately 3 miles southwest of the launch facility (Brown 2017). Additional documented eagle nests are located near Blue Lake. In accordance with *the National Bald Eagle Management Guidelines* (USFWS 2007), HQ UTTR currently applies a 1-mile buffer to military activities that could disturb eagles and affect their ability to forage, nest, roost, breed, or raise young (Lawrence 2017; Brown 2017).

3.11.2.4 Natural Resource Area of Concern

The USFWS IPaC system was accessed to identify any National Refuge lands or invasive species management practices near the ROI. Bear River Migratory Bird Refuge, which is located approximately 120 miles to the northeast of the ROI, is the nearest natural resource area of concern (USFWS 2017b).

3.12 WATER RESOURCES

3.12.1 Definition of the Resource

For purposes of this EA, water resources include surface water, groundwater, wetlands, and floodplains. Surface water resources include lakes, ponds, rivers, and creeks. These resources are important for a variety of reasons, including economic, ecological, recreational, and human health factors. Groundwater includes the subsurface hydrologic resources of the physical environment; its properties are often described in terms of depth to aquifer or water table, water quality, and surrounding geologic composition. Wetlands are areas of transition between terrestrial and aquatic systems in which the water table is usually at or near the surface, or the land is covered by shallow water (Mitsch and Gosselink 2000). Wetlands and other water resources that are under the regulatory authority of the U.S. Army Corp of Engineers (USACE) under Section 404 of the Clean Water Act (CWA) are termed jurisdictional waters. Floodplain refers to the lowland and relatively flat areas adjoining inland and coastal waters, including, at a minimum, that area subject to a 0.2 percent or greater chance of flooding in any given year.

For the purposes of this water resources analysis, the ROI for the proposed action and No Action Alternative includes the water resources within the proposed project area. The proposed project area includes the radio-relay stations; the launch, control, and maintenance facilities; the recovery area; and the proposed R-6401.

3.12.2 Existing Conditions

3.12.2.1 Surface Water

The proposed project area is located near the Bonneville Salt Flats in the western portion of the Great Salt Lake Desert Basin (Groundwater Basin 192) (King 2010). Basin 192 encompasses approximately 507 square miles across Nevada and Utah. Hydrology within Basin 192 is characterized by the closed hydrologic nature of the basin. A closed basin contains no surface water or other hydrologic outlets. All precipitation falling within the basin remains in the basin or is lost to evaporation. This results in the creation of playas (i.e., flat-floored desert areas that periodically fill with water to become temporary lakes) and distinct ephemeral stream channels that flow from the mountains toward the playas. Many of these ephemeral streams will end and drain into the surrounding soil before reaching a playa (USGS 1998). Because these drainages terminate into salt flats with no defined bed or bank and do not drain into another substantial waterbody, they are not considered Waters of the United States (USACE 2010). In the proposed project area, these ephemeral streams have been intercepted by brine-collection ditches and associated berms used for potash mining.

3.12.2.2 Groundwater

Depths to the shallow groundwater near the ROI vary from 3.5 to 7 feet below ground surface (USACE 2010) to deeper than 30 feet (West Wendover 2010). Water quality is poor due to high concentrations of total dissolved salt ion solids (USAF 2000). Because of the poor quality of the groundwater, Wendover and West Wendover obtain drinking water from springs located in the surrounding mountains approximately 30 miles to the north (USAF 2000).

3.12.2.3 Wetlands and Floodplains

The ephemeral streams, diversion ditches, and playas described in Section 3.12.2.1 are mapped by the National Wetland Inventory as the following wetland types:

- L2USJ Lacustrine Littoral Unconsolidated Bottom Intermittently Flooded
- R4SBA Riverine Intermittent Streambed Temporary Flooded
- R4SBJ Riverine Intermittent Streambed Intermittently Flooded
- R3UBF Riverine Upper Perennial Unconsolidated Bottom Semipermantly Flooded
- R4SBC Riverine Intermittent Streambed Seasonally Flooded

These areas are located beneath the southern and eastern portions of the proposed R-6401 (Figure 3-5). As described in Section 3.12.2.1, these are non-jurisdictional waters. No surface waters or wetlands are located in the areas proposed for construction.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) indicate that the project area is outside the FEMA FIRM area.

3.13 AESTHETICS AND VISUAL RESOURCES

3.13.1 Definition of the Resource

Aesthetics and visual resources describe the visual quality and character of an area, and consider the natural (e.g., scenic views) and manmade (e.g., skyline) features that give a particular environment its aesthetic qualities.

Visual effects analysis considers the extent to which a proposed action or alternative(s) would either: (1) contrast with, or affect the nature of, the visual resources and/or the visual character of the existing environment, or block or obstruct the views of visual resources; or (2) produce light emissions that create annoyance, or interfere with or affect the visual character of the area.

Light emissions include any light that emanates from a light source into the surrounding environment. Glare is any strong or dazzling light and light emissions redirected off a reflective surface, such as window glass in a facility.

For the purposes of this aesthetics and visual resources analysis, the ROI for the proposed action and No Action Alternative includes Wendover Airport, the land use within the proposed RA, and viewsheds within these areas.

3.13.1.1 Distinct Visual Features and Scenic Views

Visual resources also have a "visual sensitivity" component (i.e., the relative degree of public interest [including agency and tribal] in visual resources and concern over adverse changes in the quality of a resource). As applied to visual impact analyses, sensitivity refers to public attitudes about specific views, or interrelated views, and is integral to identifying critical public views, assessing how important a visual impact could be, and determining if it represents a significant impact.

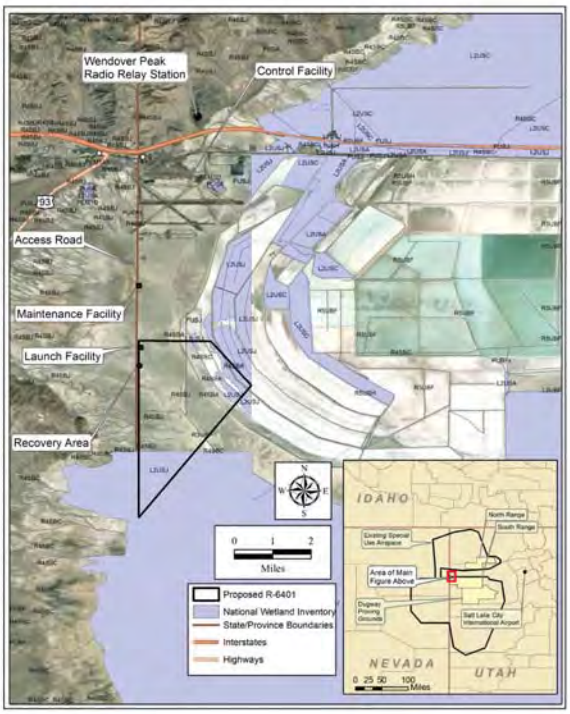


Figure 3-5. National Wetland Inventory-Mapped Waters within the Proposed Project Area

Potential visual impacts are determined by estimating the degree of change to the visual character and quality of a viewshed that would result from implementing a proposed action. The analysis also considers visual features and scenic views, and the potential sensitivity of these views to change. Adverse effects on visual resources occur if the proposed action violates existing policy related to the preservation of visual resources, contrasts appreciably with the existing visual character and quality, blocks or degrades a distinct visual feature or scenic view, or creates glare that would be incompatible with existing land use. Cultural resource sites often have potential to be impacted by changes in the visual environment. Cultural resources are described in Section 3.3.

3.13.2 Existing Conditions

3.13.2.1 Visual Resources

No protected visual resources (e.g., Wild and Scenic Rivers, National Scenic Areas, scenic easements, etc.) are located in the ROI. The visual environment consists primarily of developed land associated with Wendover Airport, former USAF training ranges, and mining activities beneath portions of the proposed RA. Section 3.6 contains additional descriptions of these areas. Cultural resources located in the ROI are described in Section 3.3.

3.13.2.2 Light Emissions

Areas proposed for construction are located approximately 4 miles from the Cities of Wendover and West Wendover, and approximately 2 miles from Wendover Airport. Existing artificial lighting is present in the nearby cities (including lighting from 24-hour gaming facilities) and at Wendover Airport.

3.14 NATURAL RESOURCES AND ENERGY SUPPLY

3.14.1 Definition of the Resource

This section describes the natural resources (e.g., water, metal, aggregate [gravel, concrete], etc.) and energy supplies (e.g., coal or diesel for electricity, and fuel for construction equipment and SSATs) that would be consumed as part of the proposed action. Consumption of these resources would result from proposed construction and operation activities.

For the purposes of this natural resources and energy supply analysis, the ROI for the proposed action and No Action Alternative includes local and municipal sources of water and electricity, which would be supplied by the City of Wendover. Resources such as building materials, aggregate, and fuel supplies required for the construction and operation of the Wendover Site would be transported to the site from suppliers within the broader northeastern Utah and northwestern Nevada region. Other fuel and fuel-related materials could be provided by suppliers in the western United States.

3.14.2 Existing Conditions

Natural resources required for the construction and operation would include fuels, building materials, water, and aggregate. Natural gas is not expected to be used for heating or other energy needs during construction and operation of the Wendover Site.

Building materials and aggregate are readily available from multiple suppliers in the region. All building materials would be purchased from these suppliers and then transported to the proposed project site.

As discussed in Section 3.4, potable water is provided to the region by the Johnson Springs Transmission System, which is owned by the Cities of Wendover and West Wendover.

Resources required for the supply of energy include electricity and fuels. Wells Rural Electric Company provides electricity to the region.

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4.0 ENVIRONMENTAL CONSEQUENCES

4.1 AIRSPACE RESOURCES

4.1.1 Proposed Action

Implementation of the proposed action would include creation and use of a new RA (R-6401) that would extend from the ground surface up to and including 6,500 feet AGL/10,800 feet MSL, approximately 3 miles south of Wendover Airport. The proposed RA would be active for eight 1-week periods per year; Monday through Thursday: 6 hours per day; by NOTAM, at least 4 hours prior to activation. The expected use is 32 days per year, 6 hours per day. No SSAT launches would occur between 10:00 P.M. and 7:00 A.M. The proposed R-6401 would not change the airspace from the surface up to 1,500 feet AGL within a 3-NM radius of Wendover Airport.

The primary function of the proposed R-6401 would be to provide RA transit for SSATs from the launch site into the existing UTTR RAs and transit back out of existing RAs to accommodate SSAT recovery operations. No weapons use or supersonic flight would occur in the proposed R-6401.

Implementation of the proposed action is not anticipated to result in significant impacts to the management or use of airspace near Wendover Airport.

No Victor or Jet Routes would be affected. Jet Route 56, located north of the proposed R-6401, would be available for routing air traffic through the area. Airports situated in the ROI are currently located under existing MOAs or in airspace subject to existing civilian and military ATC.

Pilots using the IFR departure procedures from Wendover Airport are currently directed into the existing RA to the southeast of Wendover Airport, and the boundaries of the new RA increase the likelihood that pilots could enter the new RA. ZLC has reviewed the aeronautical proposal associated with the creation of the RA and has included the following conditions to minimize violations of restricted airspace and to improve the safety of the airspace proposal:

1. ZLC will delegate airspace encompassing Wendover Airport, specifically areas X-Ray and the Skull Valley, 13,000 feet MSL and below to Clover Control.
2. An LOA will be developed to delegate this airspace to Clover Control.
3. Clover Control will work all Wendover IFR arrivals, departures, and overflights; VFR traffic; and all traffic in area X-ray, Skull Valley, and R-6401when open.
4. Clover Control must be open during all times R-6401 is active.
5. Clover Control must submit regular working hours and may add to but not subtract from those hours.
6. A NOTAM will be issued at least 4 hours prior to activation of R-6401.

ZLC also highly recommends all Instrument Approach Procedures and Departure Procedures be reevaluated by United States Standard for Terminal Instrument Procedures (TERPS) to ensure all procedures remain clear of, and aircraft are capable of staying clear of, restricted airspace. Additional correspondence from the FAA regarding the aeronautical proposal is contained in Appendix F.

4.1.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site, the proposed R-6401 would not be created, and none of the associated proposed training

activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. Training activities would be limited to what could be conducted from the former GLCM site at DPG. Implementation of the No Action Alternative would result in no impacts to management or use of airspace.

4.2 AIR QUALITY

CAA Section 176(c), *General Conformity*, requires federal agencies to demonstrate that their proposed activities would conform to the applicable SIP for attainment of the NAAQS. General conformity applies only to nonattainment and maintenance areas. If the emissions from a federal action proposed in a nonattainment area exceed annual *de minimis* thresholds identified in the rule, a conformity determination is required for that action. The thresholds are more restrictive as the severity of the nonattainment status of the area increases. The criteria pollutants were compared with Tooele County's annual emissions. However, because the proposed R-6401 would be located in an attainment area, a General Conformity determination is not required for the proposed action. Nevertheless, project emissions were also compared to General Conformity annual *de minimis* thresholds in order to provide a point of reference and indicator of the potential significance of the impact.

To evaluate air emissions and their impact on the overall ROI, the emissions associated with the proposed project activities were compared with the total emissions from the ROI's 2014 NEI data on a pollutant-by-pollutant basis. Potential impacts to air quality are evaluated with respect to the extent, context, and intensity of the impact in relation to relevant regulations, guidelines, and scientific documentation. The CEQ defines significance in terms of context and intensity in 40 *CFR* 1508.27. This requires the significance of the action to be analyzed with respect to the setting of the action and based relative to the severity of the impact. The CEQ NEPA regulations (40 *CFR* 1508.27[b]) provide 10 key factors to consider in determining an impact's intensity. To provide a more conservative analysis, Tooele County was selected as the ROI instead of the USEPA-designated Air Quality Control Region, which is a much larger area.

The air quality analysis focused on emissions generated by construction equipment, emissions from generators, vehicle exhaust from contracted employees' personal vehicles and emissions from SSAT operations.

GHGs are included in the analysis. The primary source of CO_2 emissions would be from vehicles operating on-site during construction activities. The emissions generated by construction equipment operation and associated commuting workers, as well as operational emissions, would contribute to minimal GHG emissions in the area.

4.2.1 Proposed Action

Under the proposed action, construction emissions would be generated by equipment completing site grading, facilities construction, and worker trips while construction is ongoing. SSAT operations, as well as fuel storage tanks, generator operations, and full-time employee commutes would also contribute to long-term emission increases.

Emissions that would be generated by the proposed action were calculated and are summarized in Table 4-1. Excavation and grading emissions were calculated using DoD-developed Air Conformity Applicability Model (ACAM) Version 5.0.10 inputs. Calculations are described in Appendix G.

Table 4-1. Proposed Action Emissions Compared with Tooele County Emissions

	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC	CO_2e
	Tons per year						
Proposed action emissions	42.19	34.87	7.07	1.94	1.77	5.85	7,243
ROI baseline emissions	**25,120**	**5,678**	**8,512**	**2,297**	**120**	**46,487**	**756,486**
Percentage of ROI emissions	*0.17%*	*0.61%*	*0.08%*	*0.08%*	*1.47%*	*0.01%*	*0.96%*
Reference level	*100*	*100*	*100*	*70*	*100*	*100*	*NA*

Source: USEPA 2017b
NA = not applicable

Impacts resulting from implementation of the proposed action would amount to less than 1.5 percent of each of the criteria pollutants. The highest percentage would be for SO_2 (1.47 percent). In addition, particulate matter emissions could be further minimized by the use BMPs (e.g., spraying grading areas and unpaved construction roads with water during the construction phase). GHG emissions would be minimal, representing 0.96 percent of the Tooele County baseline annual emissions. Emissions of all pollutants would be below their respective annual *de minimis* levels. Therefore, no significant impacts to local or regional air quality are anticipated from implementation of the proposed action.

4.2.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site, the proposed R-6401 would not be created, and none of the associated proposed training activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. Implementation of the No Action Alternative would result in no impacts to the air quality of Tooele County.

4.3 CULTURAL RESOURCES

4.3.1 Proposed Action

As described in Section 3.3.2.2, only one cultural resource (the former Deep Creek Railroad) is located within the APE of the proposed action. Limited construction activities are planned adjacent to the former Deep Creek Railroad site and no adverse effects on this resource are anticipated.

Minor construction for the launch facility would occur on existing gravel pads that were previously evaluated for impacts to cultural resources (see Appendix D for State Historic Preservation Office [SHPO] letters). In addition, an extension to the existing concrete launch pad would be constructed. The extension to the launch pad would be constructed in the same manner as the existing pads and would include the use of a geotextile fabric laid over existing site soils. Use of this fabric would allow for restoration of the site to preexisting grading should the facility be decommissioned. Therefore, implementation of the proposed construction activities would have no adverse impacts to cultural resources.

No operational impacts to the former Deep Creek Railroad are anticipated. As described in Section 4.7.1, the creation and use of the proposed R-6401 would not result in significant noise impacts. The creation and use of the airspace would not change the visual setting of the former Deep Creek Railroad. The site's historical significance is based on its location and association with important historical events. A quiet setting is not one of the characteristics/criteria for NRHP

eligibility of the site. No impacts to the historical integrity of the former Deep Creek Railroad are anticipated to result from creation and use of the proposed R-6401.

The USAF submitted a Section 106 letter to the Utah SHPO on 20 August 2018. The letter defined the APE and included the USAF determination that the undertaking would have no adverse effect on historic properties. In a letter dated 24 August 2018, the Utah SHPO concurred that the undertaking would result in no adverse effects (Appendix D). A second letter has been submitted to the SHPO with this EA clarifying that there are no adverse effects on historic properties from construction-related activities or from the creation and use of R-6401.

As described in Section 3.3.2.3, the USAF continues to consult on a government-to-government basis with tribes culturally affiliated with the UTTR. On 28 August 2018, the USAF received a concurrence from the Hopi Tribe (Appendix D) for no adverse effects on historic properties.

4.3.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site, the proposed R-6401 would not be created, and none of the associated proposed training activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. Implementation of the No Action Alternative would result in no impacts to cultural resources at the UTTR.

4.4 INFRASTRUCTURE

Effects on infrastructure were evaluated based on the potential for disruption or improvement of existing levels of service and additional needs for resource consumption (e.g., water and energy). The proposed development and additional population associated with this action were used to determine the impact(s) to infrastructure.

The effects analysis consisted of a qualitative assessment based on available information for current population and the anticipated temporary population using each of the utilities and transportation infrastructure. An effect would be considered adverse if the proposed development caused any of the following:

- A violation of a permit condition or contract with a utility provider.
- A capacity exceedance of a utility.
- A system that could not sustain a mission increase due to poor condition, inefficient function, or operation.
- A mission increase that would require costly upgrades.
- A long-term interruption of a utility.

4.4.1 Proposed Action

The proposed action would require the infrastructure to support 40 full-time personnel for approximately 32 launch days per year. In addition, a limited number of personnel would also be required the week prior to and the week following a launch. These personnel would help assemble SSATs for launch and would dissemble SSATs for storage or shipping at the completion of launch activities. Facilities required to support the proposed SSAT operations are described in Section 2.6.1.

Because the proposed operations would occur for approximately 32 days per year, no permanent service facilities (e.g., potable water or sewer systems) would be required. Personnel using the launch

and maintenance facilities would provide their own potable water, and portable toilets would be used. Generators would be used to provide electricity, and fuel for those generators would be provided by fueling trucks. The launch and maintenance facilities and the recovery area would be accessed by a north/south gravel access road that traverses the Utah/Nevada border. This road was recently improved to accommodate the increased traffic using the facilities. The control facility would be accessed using the existing road network at Wendover Airport.

The increase in traffic and demand on the infrastructure of Wendover and West Wendover would be minimal because the influx of 40 additional personnel would represent less than 0.4 percent of the average weekend increase in population due to gaming activities. No impacts to potable water, wastewater and solid waste, electricity, or transportation infrastructure are anticipated to result from implementation of the proposed action.

4.4.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site, the proposed R-6401 would not be created, and none of the associated proposed training activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. Implementation of the No Action Alternative would result in no impacts to the infrastructure of Wendover or West Wendover.

4.5 HAZARDOUS MATERIALS AND HAZARDOUS WASTE

The qualitative assessment of impacts to hazardous materials and waste management focuses on how (context) and to what degree (intensity) each alternative could affect hazardous materials usage and management, hazardous waste generation and management, and hazardous waste disposal. Potential impacts related to hazardous materials and wastes were analyzed for the following five effects:

1. Generation of hazardous material/waste types or quantities that could not be accommodated by the current management system;
2. Increased likelihood of an uncontrolled release of hazardous materials that could contaminate the soil, surface water, groundwater, or air;
3. Non-compliance with applicable federal and state regulations as a result of the proposed action;
4. Disturbance or creation of contaminated sites, resulting in adverse effects on human health and/or the environment; and
5. Established management policies, procedures, and handling capacities could not accommodate the proposed action.

4.5.1 Proposed Action

The existing HMMP is adequate to accommodate the relocation of the SSAT launch, control, recovery, and maintenance operations from the former GLCM site at DPG to the Wendover Site and the creation of the proposed R-6401. All hazardous materials would be authorized and tracked in EESOH-MIS via the HMMP, and hazardous materials would continue to be managed in accordance with the Hill AFB Supplement to AFI 32-7086 (USAF 2006).

Implementation of the proposed action would add a new waste generating site that would be managed by the Hill AFB/UTTR environmental management staff (75 CEG/CEIE). The site would

need to comply with all management and reporting requirements specified by USAF policies, including the Hill AFB Hazardous Waste Management Plan (Hill AFB 2016b), and state and federal laws. Hazardous waste disposal procedures would be similar to those currently used at Hill AFB and the UTTR.

As described in Section 2.6.1, new facilities would require the addition of new ASTs to support electrical generators and O&M activities. These new ASTs would have the required secondary containment and meet all the requirements of federal, state, local, and USAF regulations. New hazardous material and waste containers associated with the maintenance facility would also be required. The Hill AFB ICP would subsequently need to be revised to incorporate the addition of new ASTs and any changes in facility design, operation, or maintenance that materially affects the potential for an uncontrolled release of petroleum products or other hazardous materials or wastes. In the event of an accidental hazardous material or waste release during the proposed construction or operations, the proper notifications and actions would be taken in accordance with the Hill AFB ICP (Hill AFB 2016c). Spill kits would be available and accessible during generator refueling and SSAT fueling, de-fueling, and smoke oil distribution activities.

No ERP sites/MRSs would be impacted by the proposed construction activities. As described in Section 3.5.2, construction associated with the maintenance and launch facilities would occur in the former MRS AL501C. The former MRS AL501C is now part of an active range; this site was closed and withdrawn from the MMRP on 24 October 2014 (Hill AFB 2014). Additionally, surface clearance actions were completed at the former MRS AL501C in 2011 along with adjacent MRSs AL501B, AL501D, AL501E, and AL501F. These surface clearance actions included the removal of debris and hazards associated with the munitions and explosives of concern (MEC) that were identified on the surfaces of these MRSs (Hill AFB 2012). MRS AL501 is the only remaining MRS in the area adjacent to the proposed project area. The Hill AFB Comprehensive Site Evaluation (CSE) Phase II includes a determination that no further action is required at MRS AL501 (Hill AFB 2011). Undocumented contaminated soils or MEC could be encountered during construction activities. Should soil contaminants or MEC be encountered, storage, transport, and disposal of contaminated soils and/or MEC would be conducted in accordance with applicable federal, state, and local regulations; AFIs; and base policies. Health and safety precautions, including worker awareness training, would also be required should soil contaminants or MEC be encountered during construction activities.

An SSAT accident in the proposed RA could result in a release of hazardous materials on the ground. The UTTR has procedures in place to respond to aircraft accidents, including the release of associated hazardous materials (Hill AFB 2017 and Hill AFB 2016c). In the event of an SSAT accident, the existing procedures would be followed.

No chaff or flares would be used in the proposed RA. Storage and handling of chaff and flares in the launch facility would be conducted in accordance with all DoD and USAF regulations concerning the materials. Section 4.8 contains additional information on explosive safety.

Impacts to hazardous materials and waste management from implementation of the proposed action would be minimal. Implementation of the proposed action would not negatively affect the hazardous materials and waste program.

4.5.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site, the proposed R-6401 would not be created, and none of the associated proposed training

activities would be conducted at the Wendover Site. The UTTR would continue to use, manage, and dispose of hazardous materials and waste as described in Section 3.5.2. Implementation of the No Action Alternative would result in no impacts to the management, use, or generation of hazardous materials and waste at the UTTR.

4.6 LAND USE

4.6.1 Proposed Action

No significant changes to land use would result from implementation of the proposed action. The creation and use of the proposed R-6401 would have no impact on mining operations on the Intrepid Potash or SITLA lands beneath the RA. Additionally, no impacts to the unleased SITLA parcel beneath R-6405 are anticipated to result from the creation and use of R-6401. The use of the existing radio-relay station and the placement of a new station on an existing cell tower would have no impact to land use.

All other elements of the proposed action, including the proposed H-97 radio-relay station and the portion of the proposed R-6401 above DoD lands, would occur on or above the boundaries of the UTTR and are compatible with the use of UTTR lands for military training.

4.6.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site, the proposed R-6401 would not be created, and none of the associated proposed training activities would be conducted at the Wendover Site. Existing public, private, and DoD land use would remain unchanged. Implementation of the No Action Alternative would result in no significant impacts to land use.

4.7 NOISE

The USAF considers "significance" of noise impacts in the context of the NEPA in terms of context and intensity, and has not defined uniformly applicable significance thresholds. The FAA, on the other hand, defines a threshold for "significant" noise impacts in FAA Order 1050.1F as follows: "The action would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe." As described in Section 3.7.2, the noise metric DNL represents a dB-averaged noise level over a 24-hour period with adjustments made for late-night noise events. In accordance with federal guidelines, some land uses are considered incompatible with DNL greater than 65 dBA (FICON 1992). This environmental analysis considers impacts in terms of context and intensity, and assesses whether impacts would meet the FAA's significance threshold.

4.7.1 Proposed Action

The proposed action involves three components that would generate noise: construction of new facilities, operation of ground vehicles and equipment, and SSAT launch and recovery.

4.7.1.1 Construction

Construction would involve equipment such as backhoes, cement mixers, and graders. According to the Federal Highway Administration's Roadway Construction Noise Model, these types of

construction equipment generate L_{max} of approximately 85 dBA at a distance of 50 feet (FHWA 2006). The residence nearest to the proposed maintenance facility is 3 miles away. Using the Roadway Construction Noise Model, the L_{max} at this residence would be approximately 35 dBA. This noise level would be below background sound levels in the Cities of Wendover and West Wendover and would therefore not be noticeable. Installation of the proposed radio-relay stations would occur in geographically remote areas and would generate minimal noise. Noise generated by construction activities associated with implementation of the proposed action would not be significant.

4.7.1.2 Ground Vehicles and Equipment

Once construction is complete, ground vehicles (e.g., cars and trucks) would continue to access the sites in support of SSAT operations. Equipment, including generators, would also be used as part of day-to-day O&M. Ground vehicles associated with the proposed action would generate noise levels comparable to those generated by vehicles currently operating in the area under existing conditions. Generators, which would be used at the maintenance and launch facilities, create approximately 82 dBA at a distance of 50 feet if they are not enclosed within structures (FHWA 2006). Enclosure within a structure provides some level of sound attenuation, with the specific amount of attenuation dependent upon the specifications of the structure. Noise generated by un-enclosed generators would attenuate to less than 31 dBA at the residence nearest to the proposed maintenance facility (approximately 3 miles away). This noise level would be below background sound levels and would therefore not be noticeable during typical conditions. Noise levels at noise-sensitive locations could be even lower should the generators be enclosed in structures. Noise generated by ground vehicles and equipment associated with implementation of the proposed action would not be significant.

4.7.1.3 SSAT Launch and Recovery

Implementation of the proposed action would include activation of the proposed RA for eight 1-week periods per year; Monday through Thursday: 6 hours per day; by NOTAM, at least 4 hours prior to activation. The expected use is 32 days per year, 6 hours per day. No SSAT launches would occur from 10:00 P.M. to 7:00 A.M. Launches would be conducted toward the south (i.e., the SSAT would move away from noise-sensitive locations to the north after launch).

The BQM-167 SSAT was used as the noise source surrogate for all launch events. The BQM-167 is the aircraft currently used at Tyndall AFB and is the aircraft most likely to be used at the Wendover Site. Noise levels generated by BQM-167 launches were measured at Tyndall AFB in May 2017; these launches generated L_{max} of 119.5 dBA at a distance of 400 feet (Williams 2017). The BQM-167 launch procedure includes a period of time in which the engine runs at relatively low power followed by ignition of the RATO bottle and rapid acceleration of the SSAT away from the launch pad. At the nearest noise-sensitive locations, which would be approximately 4.5 miles away, the portion of the launch prior to ignition would not be audible. The ignition portion of the launch would quickly generate the L_{max} associated with the launch. The sound level would then decrease as the SSAT moves into the distance to the south, away from noise-sensitive locations.

The following text describes the methodology used to calculate noise impacts in this EA. The following methodology was used in place of standard noise modeling (e.g., the Aviation Environment Design Tool [AEDT], NOISEMAP, MOA Range NOISEMAP [MRNMAP], and Blast Noise Version 2) for the following reasons. The AEDT is not designed to model noise levels associated with rocket launches (large-scale or small-scale), and is therefore not appropriate for this analysis. Similarly, the DoD aircraft noise modeling programs NoiseMap and MRNMAP do

not have capability to model large-scale or small-scale rocket launch noise. The U.S. Army noise modeling program Blast Noise Version 2 does have the ability to model small-scale rocket launch noise (e.g., munitions such as the Multiple Launch Rocket System), but its reference noise level data set does not contain SSATs or any surrogate noise source with comparable characteristics to an SSAT. Because the method described as follows is considered a non-default method for noise analysis, approval for the use of this method was received from the FAA on 25 March 2019 (see Appendix H). The specific inputs to and outputs from the noise level calculation formulae are also included in Appendix H.

As shown below, formula 1 calculates change in sound level with change in distance based on spherical spreading of sound energy and atmospheric absorption of sound energy over distance. This formula, which is used to calculate L_{max} at the nearest noise-sensitive location, provides a conservative estimate of actual noise levels because it does not account for additional sound energy that would be absorbed by the ground during transmission. Atmospheric absorption was estimated to be 1.4 dB per 1,000 feet.

Formula 1: $L2 = L1 - 20 * LOG (D1/D2) - A$

Where: L1 is the sound level at the location where BQM-167 noise was measured
L2 is the sound level at the location of interest (i.e., a noise-sensitive location)
D1 is the distance between the noise source and L1
D2 is the distance between the noise source and L2
A is sound energy (in dB) absorbed by the atmosphere

During launches, the exterior L_{max} at the nearest residence would be approximately 51 dBA (calculated using formula 1), a sound level that would be audible but unlikely to interrupt conversation. Typical residences provide 15 dB of structural sound level attenuation with windows open and 25 dB with windows closed. At the nearest residence (approximately 4.5 miles to the north), noise levels generated by launch activities would not be noticeable indoors.

The West Wendover Equestrian Park is located 4.8 miles north of the launch facility (Table 3-6). Wendover Airport is located approximately 1.5 miles southeast of this park. The L_{max} at the West Wendover Equestrian Park during launches would be approximately 48 dBA. Horses could be frightened by sudden noises such as those generated by SSAT launches. An L_{max} of 48 dBA may or may not be noticeable, depending on the noise generated by other activities occurring simultaneously.

The SEL metric effectively compresses all of the noise energy of a launch event into a single second. Launch SEL was conservatively estimated based on a simplified representation of the launch sound level time-history. Under this simplified representation, the sound level increases instantaneously to L_{max} when the RATO ignites and then continues at L_{max} for 5 seconds, after which the SSAT would be distant enough that the noise level would have decreased from L_{max} by 10 dB. Sound levels of 10 dB or greater below the L_{max} do not appreciably contribute to the overall sound level. Formula 2 was used to calculate SEL.

Formula 2: $SEL = 10 * LOG (T * 10^{(L2/10)})$

Where: T is the duration (in seconds) of an event with constant noise level
L2 is the sound level (in dBA) at the location of interest

The SEL noise metric was calculated for launch events as an intermediate step to calculating DNL, but is not directly used to predict impacts in this EA. DNL was calculated for a month in which

every week includes four flying days with six launch and recovery events per day. This scenario is extremely conservative, because that tempo of operations would likely never actually be sustained for more than 1 week at a time. The DNL at the nearest residence and the West Wendover Equestrian Park would be 16 dBA and 13 dBA, respectively. This DNL would be below the land use compatibility threshold of 65 dBA.

Formula 3 was used to calculate DNL. Because DNL associated with SSAT launches is more than 10 dBA below the baseline ambient noise levels at the nearest noise-sensitive locations (approximately 40 dBA), there would not be any measurable increase in overall noise levels. The FAA's significance threshold would not be met.

Formula 3: $DNL = SEL + 10 * LOG(Nday + 10*Nnight) – 49.4$

Where: Nday is the number of events per average day during the time period between 7:00 A.M. and 10:00 P.M.

Nnight is the number of events per average day during the time period between 10:00 P.M. and 7:00 A.M. (Because no launches would occur after 10:00 P.M., this number is zero.)

As described in Section 3.7, the DNL metric takes into account both intensity and duration of a noise, and DNL associated with SSAT launch represents both the event as well as sound levels during portions of the day when SSAT operations are not under way. The calculated DNL is substantially lower than the noise level during SSAT launch events using the L_{max} noise metric.

Recovery of SSATs after launch would involve the SSAT being flown toward the recovery area at 2,500 feet AGL, engine shutdown, and deployment of a parachute. Noise generated by SSATs being flown at low engine power or with engines powered off during the final approach would be minimal.

In conclusion, individual launch and recovery events would generate L_{max} of 51 dBA or lower at noise-sensitive locations. These events would be audible outdoors, but would not be expected to interfere with noise-sensitive activities such as conversation. Launch and recovery events would typically not occur on weekends, and would not occur after 10:00 P.M. These events would occur in the context of an area that is exposed to military aircraft noise and civilian aircraft noise from Wendover Airport on a regular basis under existing conditions. The DNL generated by the proposed launch and recovery events would remain below land use compatibility thresholds. Noise levels generated by construction and day-to-day O&M of ground vehicles and equipment associated with the proposed action would be below background sound levels at the nearest noise-sensitive locations and would therefore not be noticeable. Table 4-2 includes a summary of the noise levels that would occur at the nearest noise-sensitive location as a result of implementing the proposed action. No component of the proposed action would result in any measurable increase in DNL at the nearest noise-sensitive locations, and the FAA's significance threshold would not be met. Implementation of the proposed action would not result in significant noise impacts.

Table 4-2. Summary of Noise Levels at the Nearest Noise-Sensitive Location

Project Component	Outdoor Noise Level[a]	Impact Summary
Construction	35 dBA Maximum Noise Level (L_{max})	Not noticeable during typical conditions; time-averaged noise levels would not change, and the FAA's significance threshold would not be met.
Ground Vehicles and Equipment	31 dBA L_{max}	Not noticeable during typical conditions; time-averaged noise levels would not change, and the FAA's significance threshold would not be met.

Table 4-2. Summary of Noise Levels at the Nearest Noise-Sensitive Location (Continued)

Project Component	Outdoor Noise Level[a]	Impact Summary
SSAT Launch and Recovery	51 dBA L_{max}	Launches would be audible outdoors but unlikely to interrupt conversation; launches would not be noticeable indoors during typical conditions. See below for DNL results, on which FAA significance assessment is based.
	16 dBA Day-Night Average Sound Level (DNL)[b]	Well below land use compatibility threshold (65 dBA DNL); SSAT launch and recovery noise (16 dBA DNL) is more than 10 dBA below baseline / No Action Alternative ambient noise levels at the nearest noise-sensitive locations (approximately 40 dBA), and would not result in any measurable increase in overall noise levels; the FAA's significance threshold would not be met.

[a] Typical residential structures provide 15 dB of noise level reduction with windows open and 25 dB with windows closed.
[b] The SEL noise metric was calculated for launch events as an intermediate step to calculating DNL, but is not directly used to predict impacts in this EA
Note: The nearest noise-sensitive location is a residence located approximately 4.5 miles north of the proposed launch site; noise levels are slightly lower at the West Wendover Equestrian Park located 4.8 miles to the north.

4.7.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site, the proposed R-6401 would not be created, and none of the associated proposed training activities would be conducted at the Wendover Site. Existing noise-generating activities at Wendover Airport, on the UTTR, and in the Cities of Wendover and West Wendover would continue, but no new noise-generating activities would occur. Noise levels would not change relative to existing conditions. Implementation of the No Action Alternative would not result in significant noise impacts.

4.8 SAFETY

4.8.1 Proposed Action

4.8.1.1 Ground Safety

Day-to-day construction operations associated with the proposed action would be performed in accordance with all applicable USAF safety regulations, published USAF technical orders, and Air Force Occupational Safety and Health (AFOSH) requirements. Construction and demolition activities would require a jobsite safety plan that explains how tasks would be accomplished while assuring job safety throughout the life of the project. Construction workers would be required to follow applicable Occupational Safety and Health Administration (OSHA) requirements as governed by the terms of the contract, which could include USAF regulations and technical orders and AFOSH standards.

Capability for fire and emergency response is located in the City of West Wendover and at Wendover Airport. As described in Section 3.8.2.1, the UTTR Fire Department, which is stationed at Oasis Range, would continue to provide fire response for activities on the UTTR, including those near Wendover Airport. HQ UTTR would continue mutual aid agreements with Tooele County, the City of West Wendover, and the City of Wendover's volunteer fire department. HQ UTTR would continue to work with the local fire departments to alert citizens about the potential for injury should they handle or disturb aircraft or munitions debris associated with military operations. Adherence to all existing safety procedures for training ranges on the UTTR would continue for the proposed training activities. HQ UTTR maintains detailed emergency and mishap response plans to react to an accident, should one occur during launch, recovery, or maintenance

activities. These plans assign agency responsibilities and prescribe functional activities necessary to react to major mishaps on or off the range. Additionally, as part of the LOAs with Intrepid Potash and the SITLA, guidance for notification and incident response would be established for SSAT operations.

Implementation of the proposed action is not expected to increase ground safety risks beyond those typically associated with construction projects on the UTTR. Contractors would adhere to base and range safety requirements and would follow project-specific health and safety plans. No significant impacts to ground safety are anticipated if all applicable USAF, AFOSH, and OSHA requirements are followed.

4.8.1.2 Explosive Safety

EQSD arcs are separation distances between explosive storage areas (e.g., storage igloos) and handling areas (e.g., maintenance and launch facilities). ESQD arcs are based on the maximum storage capacity of each facility and are used to prevent explosive propagation from one facility to another. Additionally, ESQD arcs provide a safety zone between explosive storage areas and the surrounding areas. ESQD arcs have been established for the proposed maintenance facility, the launch facility, and the explosive storage facilities (Figure 4-1). All ESQD arcs would be located on DoD-controlled areas.

4.8.1.3 Flight Safety

The creation and use of the proposed R-6401 would segregate all air traffic from the hazardous SSAT launch and recovery activities. Strict control of R-6401, restricted access to launch and recovery areas, and use of established safety procedures would minimize the potential for safety risks and ensure the segregation of hazardous range operations from non-participating aircraft pilots. Adherence to the UTTR BASH Plan would continue and would reduce the risk of bird-aircraft mishaps. Prior to use at the Wendover Site, all SSATs would be required to have established pre-programmed lost link procedures. A lost link can occur when an SSAT loses communication from its controller. If communication cannot be restored immediately, then the lost link procedure is implemented. Lost link procedures vary by aircraft type but generally include pre-programmed actions that the SSAT would complete if it loses its link to the controller. Lost link procedures could include a predesignated flight profile that sends the SSAT to a pre-determined location until communication can be restored. If communication cannot be restored, then the aircraft would proceed to a designated landing or recovery zone. As described in Section 2.6, because SSAT operation and frequency of operation in existing RA would be the same as operations from the former GLCM site at DPG, this EA does not analyze the potential impacts associated with operating SSAT in existing RA.

Based on historical data from launches and recoveries at Tyndall AFB and the former GLCM site at DPG, approximately 1 percent of SSAT operations result in a mishap. No significant impacts to flight safety would result from the creation and use of the proposed R-6401.

4.8.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site, the proposed R-6401 would not be created, and none of the associated proposed training activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. All existing safety policies and procedures would remain in place, and SSAT launches would continue from the existing facilities at the former GLCM site at DPG. Implementation of the No Action Alternative would result in no impacts to safety at the UTTR.

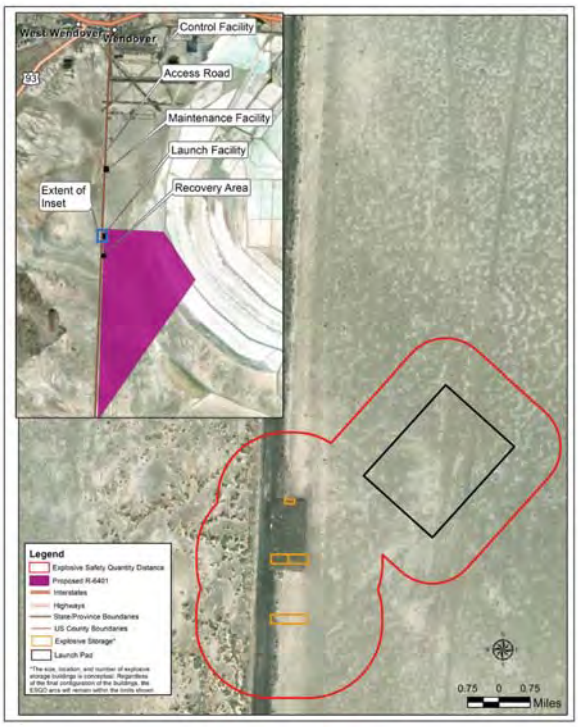

Figure 4-1. ESQD Arcs for the Proposed Wendover Site

4.9 SOCIOECONOMICS

4.9.1 Proposed Action

Construction activities and expenditures associated with the proposed action are expected to be minimal and would have no significant impact on direct, indirect, or induced employment and earnings in the local area surrounding the proposed R-6401 and proposed facilities.

Additional activities and expenditures would result from the influx of 40 additional personnel to conduct the operations associated with the proposed action. These activities and expenditures could result in minor, beneficial impacts to the local economy. The 15 hotels in the area could easily accommodate an influx of 40 additional personnel. Should the additional personnel utilize the local lodging, these personnel would contribute to local hotels and restaurants during the duration of training activities. Because the additional personnel would be temporary (i.e., for the duration of training activities only), these beneficial impacts would be short-term and minor.

4.9.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site, the proposed R-6401 would not be created, and no additional personnel would be located in the area for the training activities associated with the proposed action. The minor, short-term, beneficial impacts that would result from implementation of the proposed action would not occur. Implementation of the No Action Alternative would result in no impacts to socioeconomics in the Wendover/West Wendover region.

4.10 SOIL RESOURCES

Impacts to soil resources would be considered significant if one or more of the following occurs:

- substantial soil loss or compaction precluding the reestablishment of vegetation;
- erosion causing detrimental effects to aquatic life in adjacent waters; or
- a violation of applicable federal or state law, regulation, or permit.

4.10.1 Proposed Action

Implementation of the proposed action would not result in significant, adverse impacts to soils in the area. Minimal impact would result from the installation of the H-97 radio-relay station, which would be assembled and placed on the ground surface. Corner anchor points would be installed on the station to provide stability during high winds. Minimal soil disturbance is anticipated from the installation of these anchor points.

An extension to the existing launch pad would be constructed adjacent to the existing pad. The launch pad extension would be constructed in the same manner as the existing pads and would include the use of a geotextile fabric laid over existing site soils. Other construction related to the proposed action would occur on existing gravel pads and would not impact underlying soils.

Minor soil disturbance would occur as a result of RATO bottle recovery operations. RATO bottles would not be recovered during wet and muddy conditions.

No impacts to soils are expected to result from the use of the maintenance and control facilities. Minor impacts to soils could occur from vehicles traveling into the range area to recover SSATs. Potential impacts would be associated with the creation of ruts during wet periods or an increase in soil erosion associated with vehicle tracks. These impacts would be minor.

4.10.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site, the proposed R-6401 would not be created, and none of the associated proposed training activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. Implementation of the No Action Alternative would result in no impacts to soil resources at the UTTR.

4.11 BIOLOGICAL RESOURCES

4.11.1 Proposed Action

4.11.1.1 Vegetation

No significant impacts to vegetation would result from implementation of the proposed construction activities. Proposed construction activities would occur on USAF property subject to ongoing military operations. Construction-related impacts to vegetation would be limited to those that would result from the construction of the gravel pad and the installation of the proposed H-97 radio-relay station. The proposed H-97 radio-relay station would have an estimated impact area of 100 square feet. After installation of the radio-relay equipment, the site would be undisturbed except for periodic maintenance. Because of the remote location of the H-97 radio-relay station, a helicopter would be used to access the site twice per year to perform maintenance on the radio-relay station.

Impacts to vegetation could result from disturbance related to vehicle traffic onto the UTTR to recover SSATs and RATO bottles. No impacts to unique vegetation are anticipated. Therefore, no significant impacts to vegetation would result from implementation of the proposed action.

4.11.1.2 Wildlife

No significant impacts to wildlife or wildlife habitat are anticipated to result from implementation of the proposed construction activities. Proposed construction activities would occur on USAF property subject to ongoing military operations. As described in Section 4.11.1.1, construction-related impacts would be limited to a small, 100-square-foot disturbance area surrounding the proposed H-97 radio-relay station and construction of the new launch pad extension as described in Section 2.6.1.2.

Impacts to wildlife could result from noise generated by SSAT launches, vehicular disturbance within rangelands, SSAT operations within the proposed R-6401, and helicopter flights to conduct maintenance on the proposed H-97 radio-relay station.

Section 4.7.1 describes the noise-related impacts that would result from implementation of the proposed action. As indicated in Section 4.7.1, no significant noise impacts are anticipated to result from implementation of the proposed action. Wildlife within 400 feet of the launch facility would be exposed to short durations of high noise levels (L_{max} of 119.5 dBA). These noise levels would decrease with distance from the launch facility. Potential wildlife habitat is limited near the launch facility. This area has been used as a military testing range in the past. More recently, the area is used as an active civil airport. Wildlife in this region are adapted to human activities. No significant impacts to wildlife are anticipated to result from SSAT launches at the Wendover Site.

Noise and disturbances that could result from vehicles in the range area, SSAT operations in the proposed R-6401, and helicopter flights to the proposed H-97 radio-relay station would be less than those that would result from SSAT launches. Therefore, significant impacts to wildlife are not anticipated to result from implementation of the proposed action.

Avian species protected under the MBTA are discussed further in Section 4.11.1.3.3.

4.11.1.3 Special Status Species

4.11.1.3.1 Endangered Species Act

No federally listed threatened or endangered species have been documented in or near the project area. Additionally, no critical habitat for federally listed species is present in the project area.

4.11.1.3.2 Utah Wildlife Species of Concern

Short-eared Owl. The primary loss of undisturbed land that would result from implementation of the proposed action would be the 100-square-foot area in which the proposed H-97 radio-relay station would be located and the construction area of the gravel pad at the Wendover Site. Although the H-97 radio-relay station area is relatively undisturbed, no short-eared owl populations are known in the area and the impact to potential habitat would be minor. Indirect impacts that could result from SSAT launches and operations are also expected to be minor, as described in Section 4.11.1.2. Therefore, no significant impacts to the short-eared owl or short-eared owl habitat would result from implementation of the proposed action. Short-eared owls will continue to be monitored and managed under the Integrated Natural Resources Management Plan (INRMP) and Natural Resource Program (Hill AFB 2014; Lawrence 2017).

Kit Fox. The primary loss of undisturbed land that would result from implementation of the proposed action would be the 100-square-foot area in which the proposed H-97 radio-relay station would be located and the construction area of the gravel pad at the Wendover Site. Although the H-97 radio-relay station area is relatively undisturbed, no kit fox populations are known to occur in the area and the impact to potential habitat would be minor. Indirect impacts that could result from SSAT launches and operations are also expected to be minor, as described in Section 4.11.1.2. Therefore, no significant impacts to the kit fox or kit fox habitat would result from implementation of the proposed action. Kit foxes will continue to be monitored and managed under the INRMP and Natural Resource Program (Hill AFB 2014; Lawrence 2017).

4.11.1.3.3 Migratory Birds

Creation and use of the proposed R-6401 would not increase the frequency of aerial training exercises or traffic that could potentially affect migratory bird species (including BCCs) utilizing the existing airspace near the UTTR. Additionally, for BCCs and raptor species (including the bald eagle, golden eagle, ferruginous hawk, and short-eared owl), the spatial and temporal buffer recommendations of the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (USFWS 2002) would continue to be implemented (Hill AFB 2014). Therefore, no significant impacts to migratory birds (including BCCs) would result from implementation of the proposed action.

4.11.1.3.4 Bald and Golden Eagles

No nesting habitat for bald or golden eagles is located within the proposed project area. Installation and maintenance activities at the proposed H-97 radio-relay station site would require helicopter overflights that could approach eagle nests outside the proposed project area. The USAF would continue to adhere to practices recommended by the *National Bald Eagle Management Guidelines* (USFWS 2007) and employ a 1-mile buffer for any military activities that could disrupt or disturb eagle species.

Additionally, as part of the INRMP and Natural Resource Program, raptor nest surveys and raptor monitoring will continue. Data will continue to be acquired to investigate potential impacts to eagles that could result from military missions at the UTTR. Current partnerships with Hawkwatch International, the USFWS, the UDWR, and local universities will continue. Therefore, significant impacts to bald or golden eagles are not anticipated to result from implementation of the proposed action.

4.11.1.4 Natural Resource Area of Concern

Bear River Migratory Bird Refuge, which is located approximately 120 miles to the northeast of the Wendover Site, is the nearest natural resource area of concern (USFWS 2017b). Therefore, no impacts to natural resource areas of concern would result from implementation of the proposed action.

4.11.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site, the proposed R-6401 would not be created, and none of the associated proposed training activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. Implementation of the No Action Alternative would result in no significant impacts to biological resources at the UTTR.

4.12 WATER RESOURCES

4.12.1 Proposed Action

No construction activities associated with the proposed action would occur in areas with surface waters, floodplains, or wetlands; therefore, no impacts to these resources are anticipated to result from implementation of the proposed action. Proposed construction would occur on the ground surface and on existing gravel pads. Therefore, no impacts to groundwater are anticipated. Utah's Storm Water General Permit would apply for construction exceeding 1 acre or for less than 1 acre if part of a common plan of development. At the UTTR, construction activities with a footprint greater than 5,000 square feet must follow EISA Section 438 guidance for long-term stormwater management using the LID methods described in DoD Guidance, UFC 3-210-10 (Hill AFB 2016d).

Operational impacts to surface waters could occur from vehicle traffic on the range. Vehicles would be used to retrieve spent RATO bottles and recover SSATs. Recovery of RATO bottles would not occur during wet or muddy conditions, and impacts would not be significant.

4.12.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site, the proposed R-6401 would not be created, and none of the associated proposed training activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. Implementation of the No Action Alternative would result in no impacts to water resources at the UTTR.

4.13 AESTHETICS AND VISUAL RESOURCES

4.13.1 Proposed Action

4.13.1.1 Visual Resources

Construction and operation of the proposed infrastructure would result in minor viewshed changes. Proposed improvements consist of gravel or concrete pads and small, single-story facilities such as the earthen-covered explosive storage buildings. These facilities would be constructed on an active USAF training range and in close proximity to the Cities of Wendover and West Wendover, and to Wendover Airport. The construction of such facilities would not significantly alter or contrast with the existing visual landscape. The construction of these facilities would not obstruct other visual resources in the area. During launches, SSATs would be visible for a short period of time (generally 30 seconds or less) and flights would occur for a maximum of 32 days per year. No visual resources would be obscured and no permanent change to the viewsheds in the area would result from flight activities. Therefore, no significant impacts to visual resources are anticipated to result from implementation of the proposed action.

4.13.1.2 Light Emissions

Outdoor lighting (e.g., generator-powered floodlights) would be available in the maintenance and launch facilities during periods when SSAT launches are occurring. Lighting could also be used in preparation of SSATs prior to launch and after recovery activities. The use of outdoor lighting is not anticipated to have any impacts within the ROI, because the area surrounding the proposed facilities is already exposed to lighting from nearby communities and from Wendover Airport.

4.13.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site, the proposed R-6401 would not be created, and none of the associated proposed training activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. Implementation of the No Action Alternative would result in no impacts to aesthetics or visual resources at the UTTR.

4.14 NATURAL RESOURCES AND ENERGY SUPPLY

Energy (electricity and fuels) and natural resources (water and construction materials) would be consumed during construction and operation of the Wendover Site facilities. This section discusses the potential impacts to energy and natural resources that could result from activities associated with the proposed action.

For impact analysis, the estimated amount of natural resources and energy supply expected to be needed for a project were evaluated and compared to the local context of supply and demand to determine if the proposed action would cause demand to exceed available or future supplies.

4.14.1 Proposed Action

4.14.1.1 Construction

FAA Order 1050.1F states that the use of natural resources other than for fuel need to be examined only if the action involves a need for unusual materials or those in short supply. No unusual materials would be used for the proposed construction activities at the Wendover Site. The Wendover Site was

selected, in part, due to the availability of existing infrastructure; therefore, only minimal improvements would be required to accommodate the operation of SSATs at this location. These improvements include the gravel pad, concrete pad, concrete block building, and concrete barricade described in Section 2.6. It is anticipated that regional providers would have sufficient supply of gravel, concrete, and other building materials to meet the requirements of proposed construction activities at the Wendover Site while maintaining capacity for other construction projects in the area.

Energy requirements for the proposed construction at the Wendover Site would be minimal. Construction equipment and portable generators would be required for construction activities. Equipment and generators would require gasoline and diesel fuels to operate. No other energy sources (i.e., coal or natural gas) would be required for construction activities. No significant increase in demand for utilities such as water, electricity, or wastewater disposal are anticipated. Therefore, significant impacts to natural resources or energy supply would not result from the proposed construction activities.

4.14.1.2 Operation

As described in Section 3.4, utility use and the potential for the proposed operation of the Wendover Site to impact existing utility providers would be minimal. The proposed action would require the infrastructure to support 40 full-time personnel for approximately 32 days of launch activity each year plus an additional week prior to and after launch activities. Facilities required to support the proposed SSAT operations are described in Section 2.6.1.

Because the proposed operations would occur for a limited time during the year, no permanent service facilities (e.g., potable water or sewer systems) would be required. Personnel using the launch and maintenance facilities would use portable toilets, and potable water would be transported to the site. Generators would be used to provide electricity to the launch and maintenance facilities, and fuel for those generators would be provided by fueling trucks. Electricity for the control facility would be supplied by Wells Rural Electric Company.

Fuel consumption (i.e., fuel for the generators needed during operational activities and the fuels needed for the operation of SSATs) is not anticipated to change from the level of fuel currently consumed by the existing mission at the former GLCM site. No significant increase in demand for utilities (e.g., water, natural gas, electricity, or wastewater disposal) are anticipated. Therefore, significant impacts to natural resources and energy supplies would not result from operations at the proposed Wendover Site.

4.14.2 No Action Alternative

Under the No Action Alternative, no additional facility construction would occur at the Wendover Site, the proposed R-6401 would not be created, and none of the associated proposed training activities would be conducted at the Wendover Site. Baseline conditions would remain unchanged. Implementation of the No Action Alternative would result in no impacts natural resources and energy supply.

4.15 SUMMARY COMPARISON OF ENVIRONMENTAL CONSEQUENCES

Table 4-3 summarizes the potential environmental consequences from this chapter where the project description from Chapter 2 is overlaid on the baseline conditions from Chapter 3. The consequences are presented for each ERA and are described for the proposed action and the No Action Alternative.

The range of civil aviation consequences described in the airspace management section of this table is related to the civil aviation flights occurring in the areas surrounding the UTTR.

Table 4-3. Summary Comparison of Environmental Consequences

ERA	Proposed Action	No Action
Airspace Resources	Implementation of the proposed action is not anticipated to result in significant impacts to airspace use or management near Wendover Airport. No Victor or Jet Routes would be affected. Jet Route 56, located north of the proposed RA, would be useable and available for routing air traffic through the area. Airports situated in the ROI are currently under existing MOAs or in airspace subject to existing civilian and military ATC.	Implementation of the No Action Alternative would result in no changes to airspace. UTTR airspace would continue to be managed with no changes to airspace use.
Air Quality	Impacts resulting from implementation of the proposed action would amount to less than 1.5 percent of each of the criteria pollutants. GHG emissions would be minimal, representing 0.96 percent of the Tooele County baseline annual emissions. Although the project area is not within the nonattainment area of Tooele County, it should be noted that emissions of all criteria pollutants would be below their respective annual de minimis levels, so a formal conformity determination would not be required. Therefore, no significant impacts to local or regional air quality are anticipated from implementation of the proposed action.	Implementation of the No Action Alternative would result in no additional impacts to air quality beyond the scope of normal conditions and influences within the ROI.
Cultural Resources	Creation of the new RA is not anticipated to adversely impact any cultural resources.	No impacts.
Infrastructure	No impacts to potable water, wastewater and solid waste, electricity, or transportation infrastructure are anticipated.	No impacts.
Hazardous Materials and Hazardous Waste	Implementation of the proposed action would not increase the use or generation of hazardous materials or waste. No significant impacts to hazardous materials and waste management would result from implementation of the proposed action.	Implementation of the No Action Alternative would result in no impacts to management, use, or generation of hazardous materials and waste.
Land Use	No significant changes to land use would occur with implementation of the propose action. The creation of new RA and the operation of SSATs within the RA would have no impact on private lands under the RA.	No impacts.
Noise	Construction related to the launch, maintenance, and control facilities would result in noise impacts similar to standard construction activities and would not increase noise levels above those that currently exist near Wendover Airport. The operation of ground vehicles and generators would also result in noise levels that are similar to existing conditions. Individual launch and recovery events would generate noise levels at noise-sensitive locations at or below 51 dBA L_{max}. These events would be audible, but would not be expected to interfere with noise-sensitive activities such as conversation. SSAT launch and recovery noise (16 dBA DNL) would be more than 10 dBA DNL below baseline/No Action Alternative ambient noise levels at the nearest noise-sensitive locations (approximately 40 dBA DNL), and would not result in any measurable increase in overall noise levels and therefore the FAA's significance threshold would not be met. Therefore, implementation of the proposed action would result in no significant noise impacts.	Implementation of the No Action Alternative would not change noise levels relative to existing conditions, and there would be no additional noise impacts.

Table 4-3. Summary Comparison of Environmental Consequences (Continued)

ERA	Proposed Action	No Action
Safety	No significant health and safety impacts would result from implementation of the proposed action if all applicable USAF Safety Program requirements continue to be implemented.	No impacts
Socioeconomics	Construction activities and expenditures associated with the proposed action are expected to be minimal and would have no significant impact on direct, indirect, or induced employment and earnings in the local area surrounding the new RA and proposed facilities. Operational activities and expenditures would result from the 40 personnel who would operate the various aircraft proposed to use the RA and would have minor benefits to the local economy.	No impacts.
Soil Resources	Minimal impacts would result from the assembly of the H-97 radio-relay station. A 100-foot by 250-foot gravel pad extension would be constructed to the southwest of the existing launch facility gravel pad. The pad would be constructed in the same manner as the existing pad was constructed. This would include the use of a geotextile fabric laid over the existing site soils. Other construction related to the proposed action would occur on existing gravel pads and would not impact underlying soils. Minor impacts to soils could occur from vehicles traveling into the range area to recover SSATs or RATO bottles.	No Impacts.
Biological Resources	No significant impacts to vegetation, wildlife, listed species, or migratory birds would result from implementation of the proposed action.	No Impacts.
Water Resources	No impacts to groundwater are anticipated and Utah's Storm Water General Permit would not apply. Operational impacts to surface waters could occur from vehicle traffic on the range. Vehicles would be used to pick up spent RATO bottles and recover SSATs. Vehicles crossing ephemeral streams could increase the erosion potential of those streams. No significant impacts to water resources are anticipated.	No Impacts.
Aesthetics and Visual Resources	No significant impacts to aesthetics and visual resources (including light emissions) would result from implementation of the proposed action.	No Impacts.
Natural Resources and Energy Supply	No significant impacts to natural resources and energy supply would result from implementation of the proposed action.	No Impacts.
Cumulative Effects	No significant cumulative impacts would result from implementation of the proposed action. The proposed action combined with other past, present, and reasonably foreseeable projects in the area surrounding Wendover Airport would not result in significant cumulative impacts.	No Impacts.

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5.0 CUMULATIVE EFFECTS

The CEQ regulations stipulate that the cumulative effects analysis in an EA should consider the potential environmental consequences resulting from "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 *CFR* 1508.7).

Actions that have a potential to interact with the proposed actions are included in this cumulative effects analysis. This approach enables decision makers to have the most current information available so that they can evaluate the range of environmental consequences that would result from implementation of the proposed actions.

In this chapter, the USAF has identified past and present actions in the Wendover region. In addition, this analysis also evaluated reasonably foreseeable future actions that are in the planning phase in this region.

The assessment of cumulative effects begins with defining the scope of other project actions and the potential interrelationship with the proposed action (CEQ 1997). The scope of the analysis must consider other projects that coincide with the location and timetable of implementation of the proposed projects. Cumulative effects can arise from single or multiple actions and through additive or interactive processes acting individually or in combination with each other. Actions that are not part of the proposal, but that could be considered as actions connected in time or space (40 *CFR* 1508.25) (CEQ 1997), could include projects that affect areas on or near the project site. This analysis addresses three questions to identify cumulative effects:

1. Does a relationship exist such that elements of the proposed action or alternatives might interact with elements of past, present, or reasonably foreseeable actions?
2. If one or more of the elements of the alternatives and another action could be expected to interact, would the alternative affect or be affected by impacts of the other action?
3. If such a relationship exists, does an assessment reveal any potentially significant impacts not identified when the alternative is considered alone?

For the proposed actions under consideration to have cumulatively significant impacts on an environmental resource, two conditions must be met. First, the combined impacts of all identified past, present, and reasonably foreseeable projects, activities, and processes on a resource, including the impacts of the proposed action, must be significant. Second, the proposed action must make a substantial contribution to that significant cumulative impact. Proposed actions of limited scope do not typically require as comprehensive an assessment of cumulative impacts as proposed actions that have significant environmental impacts over a large area (CEQ 2005).

In the following sections, the cumulative significance is based on the context, intensity, and timing of the projects discussed in Chapter 4, related to the past, present, and reasonably foreseeable actions. A summary of the cumulative effects is provided in a table, followed by a discussion of the resource areas that have potentially significant cumulative effects based on the above evaluation criteria.

5.1 PAST, PRESENT AND REASONABLY FORESEEABLE ACTIONS

This section provides decision makers with the cumulative effects of the proposed action, as well as the incremental contribution of past, present, and reasonably foreseeable actions.

Table 5-1 summarizes past, present, and reasonably foreseeable actions within the region that could interact with implementation of the proposed projects. Table 5-1 briefly describes each identified action, presents the proponent or jurisdiction of the action and the timeframe (e.g., past, present/ongoing, future), and indicates which resources could potentially interact with the proposed action. It is possible that the construction of the facilities to support SSAT launches would lead to additional increased military activities near the project area. However, no plans are known at this time for such activities. No other actions were identified during the data gathering and field survey phases for this EA.

As part of the analysis for this EA, local planning officials were contacted to obtain information regarding reasonably foreseeable actions that could interact with the proposed projects to cause cumulative impacts. Projects are listed in Table 5-1. These development projects are located 3 to 5 miles from the project area.

Past activities are those actions that occurred within the geographic scope of cumulative effects that have shaped the current environmental conditions of the project area. For most resource areas (e.g., soils and water, biological resources, and infrastructure), the impacts of past actions are now part of the existing environment and are incorporated in the description of the affected environment in Chapter 3.

Table 5-1. Past, Present, and Reasonably Foreseeable Actions near Wendover Airport and Associated Region

Action	Proponent/ Location	Timeframe	Description	Possible Resource Interaction
State and Local Actions				
West Wendover Industrial Park	City of West Wendover / US 93A and Industrial Way	2018-2019	Two phased development project for a medical marijuana dispensary. Total development would include approximately 50,000 square feet for a dispensary, storage, and production facility.	Noise, Air Quality, Soils and Water, Biological Resources, Cultural Resources, Land Use
Downtown Development Phase I	Wendover and Pueblo Boulevards	2018-2019	Approximately 40-acre development in the downtown area of West Wendover. Development will include infrastructure improvement, space for small businesses, and a new fire station.	Noise, Air Quality, Safety, Soils and Water, Biological Resources, Cultural Resources, Land Use
Mix Used Residential Development	End of Pueblo Boulevard	Unknown	Possible 10-acre residential development at the end of Pueblo Boulevard and north of the existing golf course. The property is currently in the process of being acquired and development could occur in the near term.	Noise, Air Quality, Soils and Water, Biological Resources, Cultural Resources, Land Use

5.2 CUMULATIVE IMPACT ANALYSIS

This section evaluates the cumulative effects from the past, present, and reasonably foreseeable future actions (see Table 5-1) and the proposed action. Table 5-2 provides a summary of the cumulative effects. As shown in Table 5-2, noise, safety, soils and water, cultural resources, land use, and infrastructure are not anticipated to contribute to cumulative effects. Cumulative effects are discussed for air quality and biological resources.

Table 5-2. Summary of Cumulative Effects

Resource Area	Proposed Action Projects	Past, Present, and Reasonably Foreseeable Actions	Cumulative Effects
Noise	◘	○	○
Air Quality	◘	◘	◘
Safety	○	○	○
Soils and Water	◘	○	○
Biological Resources	◘	◘	◘
Cultural Resources	○	○	○
Land Use	○	○	○
Infrastructure	◘	○	○
Aesthetics and Visual Resources	◘	○	○
Natural Resources and Energy Supply	◘	○	○

Key: ○ – not affected or beneficial impacts, ◘ – affected but not significant, short- to medium-term, impacts that range from low to high intensity

5.2.1 Airspace

The FAA is proposing to establish LUCIN MOA D over the existing LUCIN MOA A, and establish LUCIN MOA E over the existing LUCIN MOA B. The proposed LUCIN D and E MOAs would have the same lateral boundaries of LUCIN MOAs A and B, respectively, except in the northeast corner. The proposed LUCIN D and E MOAs would replace the existing stationary ALTRVs (LUCIN A ALTRV and LUCIN B ALTRV). The proposed LUCIN D and E MOAs would have the exact same lateral and vertical boundaries of the existing ALTRVs. The USAF is proposing to establish new MOAs instead of raising the altitude of LUCIN MOAs A and B in response to coordination with the FAA, to avoid a conflict with existing procedures in the northeast area of the MOAs.

The proposed LUCIN D MOA would have a floor of 9,001 feet MSL and a ceiling up to but not including FL 180. The proposed LUCIN E MOA would have a floor of 7,501 feet MSL and a ceiling up to but not including FL180. The two proposed MOAs would replace the existing ALTRVs. The proposed time of use for the LUCIN D and E MOAs is 7:00 A.M. to 12:00 A.M. Monday through Thursday, 7:00 A.M. to 6:00 P.M. Friday, and 8:00 A.M. to 5:00 P.M. one Saturday per month.

5.2.2 Air Quality

Construction projects associated with the proposed development projects would take place near other ongoing and future construction projects during the same time periods. Construction projects have been and will continue to be a regular occurrence on and near developing communities such as West Wendover, Nevada, and Wendover, Utah. These projects would generate the same types of construction-related impacts as described for the proposed infrastructure development projects (e.g., fugitive dust emissions, increases in construction-related criteria pollutant emissions). Cumulative impacts to air quality resulting from implementation of the proposed development projects in

conjunction with past, present, and reasonably foreseeable future actions on air quality in the region would not be significant.

5.2.3 Biological Resources

The additional construction projects described in Table 5-1 are anticipated to have similar types of impacts to vegetation, wildlife, and special status species as those impacts described for the proposed development projects. Cumulative impacts to biological resources resulting from implementation of the proposed infrastructure development in conjunction with past, present, and reasonably foreseeable future actions in the region would not be significant.

5.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The irreversible environmental changes that would result from implementation of the proposed development involve the consumption of material resources and energy resources. The use of these resources is considered permanent. Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the impacts that use of these resources will have on future generations. Irreversible impacts primarily result from use or destruction of a specific resource that cannot be replaced within a reasonable timeframe (e.g., energy and minerals). Irretrievable resource commitments also involve the loss in value of an affected resource that cannot be restored as a result of the action.

For the proposed development, most resource commitments would be neither irreversible nor irretrievable. Most impacts would be short-term and temporary (e.g., air emissions from construction), or longer lasting but negligible (i.e. use of fuel). Those limited resources that could involve a possible irreversible or irretrievable commitment would be used in a beneficial manner.

Construction activities would continue to involve the consumption of nonrenewable resources, such as gasoline used in vehicles and equipment. None of these activities is expected to significantly decrease the availability of minerals or petroleum resources. Personal vehicle use by construction contractors and vehicles and aircraft used to support the existing missions consumes fuel, oil, and lubricants. Implementation of the proposed action would slightly increase \the amount of these materials used; however, this additional use is not expected to significantly affect the availability of the resources in the region or the nation.

Specific information for each resource area is described below.

5.3.1 Airspace Resources

Creation of new airspace would not result in irreversible or irretrievable impacts. Should the UTTR no longer require the use of the proposed R-6401, the RA could be returned to its prior use with no long-term impacts.

5.3.2 Air Quality

Impacts to air quality would be neither irreversible nor irretrievable. Should the mission cease, impacts to air quality would also cease and no long-term impacts would occur.

5.3.3 Cultural Resources

No irreversible or irretrievable impacts to cultural resources would occur. Geotextile fabrics were used in the construction of the facilities so the site could be returned to preexisting conditions.

5.3.4 Infrastructure

No irreversible or irretrievable impacts to infrastructure would occur.

5.3.5 Hazardous Materials and Waste

No irreversible or irretrievable impacts related to hazardous materials and waste are anticipated to occur. Should a spill of petroleum products occur, the site would be cleaned up and returned to preexisting conditions.

5.3.6 Land Use

No irreversible or irretrievable impacts to land use would occur. All construction associated with the proposed action is removable and the land could be made available for other land uses as desired.

5.3.7 Noise

No irreversible or irretrievable impacts to the noise environment would occur. Should the mission no longer be required, all noise resulting from the mission would cease.

5.3.8 Safety

No irreversible or irretrievable impacts related to safety would occur.

5.3.9 Socioeconomics

No irreversible or irretrievable impacts related to socioeconomic conditions would occur.

5.3.10 Soil Resources

No irreversible or irretrievable impacts to soil resources would occur. Gravel pads constructed for the proposed action would be underlain with geotextile fabric over the existing site soils. These fabrics were designed so the overlying gravel and concrete could be removed and soils returned to preexisting conditions.

5.3.11 Biological Resources

Minor, irretrievable impacts to plants and wildlife have occurred in the direct footprint of the construction activities. However, these impacts are reversible, because the site was designed to be returned to preexisting conditions should the mission end.

5.3.12 Water Resources

No irreversible or irretrievable impacts related to water resources would occur.

5.3.13 Aesthetics and Visual Resources

No irreversible or irretrievable impacts related to aesthetics and visual resources would occur.

5.3.14 Natural Resources and Energy

Minor, irretrievable impacts to natural resources and energy would occur. Construction of the proposed facilities would consume fuels and building materials. Impacts would be minor and would not consume any scarce or unusual resources.

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7.0 LIST OF PREPARERS

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Utah Test & Training Range Matthew P. Bolduc, Airspace Manager		Proponent	
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Brad Boykin Environmental Scientist M.S. Biotechnology B.S. Biomedical Science	Section Author	Air Quality	9 years environmental science
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Appendix A
Cooperating Agency Letter

Environmental Assessment for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft, Wendover, Utah

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Draft *September 2019*

U.S. Department of Transportation
Federal Aviation Administration

Airspace Services
800 Independence Ave., S.W.
Washington, DC 20591

MAR 2 4 2017

Lt. Col. Lenore A. Marentette
U.S. Air Force
Air Force Representative (AFREP) to the
FAA Western Service Center
1601 East Valley Road,
Renton, Washington 98057

Dear Lt. Col. Marentette:

Thank you for your October 5, 2016 letter requesting the Federal Aviation Administration (FAA) to participate as a cooperating agency in the Air Force's Environmental Assessment for the lateral expansion of the Utah Test and Training Range (UTTR) in northern Utah. Specifically, the addition of nearly 20 square mile restricted area airspace (R-6401) to the northwest of the current restricted area (R-6405).

Since the project proposal involves special use airspace (SUA), the FAA will act as a cooperating agency in accordance with the guidelines set forth in the Memorandum of Understanding (MOU) between the FAA and the Department of Defense (DoD) Concerning SUA Environmental Actions, dated October 4, 2005, and in accordance with federal NEPA regulation 40 C.F.R. Section 1501.6 regarding cooperating agencies, and with FAA Order 7400.2, Chapter 32, Appendix 8 – *FAA Special Use Airspace Environmental Processing Procedures* which outlines the process by which FAA works with DoD as a cooperating agency on projects involving SUA.

Projects concerning SUA at the UTTR reside under the jurisdiction of the Western Service Center, Operations Support Group at 1601 East Valley Road, Renton, Washington 98057. Tracey Johnson, Manager of the Operations Support Group, will assign NEPA documentation review of your project to an Environmental Specialist in the Service Center. The Western Service Center will be the focal point for matters related to the review of the Air Force's NEPA documentation for this project and any related airspace issues which will be tracked and coordinated by Airspace Services' Environmental Policy Group.

While Appendix 8 of FAA Order 7400.2 indicates that the airspace review and environmental impacts review should be conducted in tandem as much as possible, they are still separate processes. Approval of either the aeronautical portion or the environmental impact analysis portion of the NEPA document does not automatically indicate approval of the entire proposal. Enclosed is Appendix 8 from FAA Order 7400.2K for additional details regarding FAA's environmental review process for SUA actions.

A copy of your request for FAA's cooperating agency status and this reply are being forwarded to Tracey Johnson of the Western Service Center's Operations Support Group. Tracey Johnson can be contacted at 425-203-4501 or Tracey.Johnson@faa.gov for further review of your NEPA document.

Sincerely,

William M. Alexander
Director, Airspace Services
Air Traffic Organization

Enclosure

Cc:

Christopher S. Gough, Col., USAF
Commander, UTTR

Tracey Johnson, FAA, Operations Support Group Manager, Western Service Center

Elizabeth Healthy, FAA, Environmental Specialist, Western Service Center

Paula Miller, FAA-HQ, Environmental Specialist, Environmental Policy Group

Appendix B
R-6401 Description

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R-6401, UT

Boundaries. Beginning	at lat. 40º36'00"N., long. 114º02'52"W.; to lat. 40º40'00"N., long. 114º02'51"W.; to lat. 40º39'59"N., long. 114º00'58"W.; to lat. 40º39'00"N., long. 114º00'03"W.; to the point of beginning.
Altitudes	Surface to 10,800 feet MSL.
Times of use	Eight 1-week periods per year: Monday-Thursday: 6 hours per day; by NOTAM, at least 4 hours prior to activation. *Expected use 32/days per year, 6 hours per day.*
Controlling agency	FAA, Salt Lake City ARTCC.
Using agency	USAF, Commander, HQ UTTR (ACC), Hill AFB, UT.
Scheduling Point of Contact	HQ UTTR, Hill AFB, DSN 777-4401, C801-777-4401.

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Appendix C

Public Involvement: Draft EA Newspaper Display Advertisement

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PUBLIC NOTICE
Notice of Availability (NOA) of the Draft Environmental Assessment (EA) for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft, Wendover, Utah

The Draft EA addresses the environmental consequences that could result from the creation of new Restricted Area (RA) airspace, proposed as R-6401, and the launch, control, recovery, and maintenance of Unmanned Aircraft (UA) near Wendover, Utah. The public is invited to review the Draft EA and provide comments.

An electronic copy of the Draft EA is available at: https://www.hill.af.mil/.
A printed copy of the Draft EA is available at the West Wendover Branch Library, 590 Camper Drive, West Wendover, NV 89883.

Substantive written comments and questions will be addressed in the Final EA. To be included in the Final EA, substantive comments and questions must be received prior to the close of the formal comment period on October 15, 2019. Comments and questions about the Draft EA or the comment process can be directed to: Mr. Sam Johnson, USAF NEPA Manager, 7290 Weiner St, Bldg. 583
Hill AFB, UT 84056
samuel.johnson.3@us.af.mil

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Appendix D
Cultural Resources Correspondence

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CORRESPONDENCE RELATED TO CURRENT ACTION

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STATE HISTORIC PRESERVATION OFFICE (SHPO)

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DEPARTMENT OF THE AIR FORCE
75th CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

20 August 2018

MEMORANDUM FOR DR. CHRIS MERRITT, PH.D,
DEPUTY STATE HISTORIC PRESERVATION OFFICER
300 RIO GRANDE
SALT LAKE CITY UTAH 84101

FROM: Ms. Michelle Cottle
Chief, Environmental Quality Branch
75 CEG/CEIE
7290 Weiner St., Bldg. 383
Hill Air Force Base Utah 84056-5003

SUBJECT: Environmental Assessment for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft at Wendover, Utah (Case Nos. 14-1492, 15-1065, 14-1656)

1. The U.S. Air Force is preparing an Environmental Assessment (EA) for establishing restricted area (R-6401) and operation of unmanned aircraft at Wendover, Utah in compliance with the NEPA (42 *United States Code [USC]* 4331 et seq.), the regulations of the President's Council on Environmental Quality (CEQ) that implement NEPA procedures (40 *Code of Federal Regulations [CFR]* 1500-1508), the Air Force Environmental Impact Assessment Process Regulations at 32 *CFR* 989, and Air Force Instruction (AFI) 32-7061. This EA will evaluate the effects of the proposed action near Wendover, Utah.

2. The USAF is providing information for your review and concurrence in accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 Code of Federal Regulations (CFR) §800. A Draft Description of Proposed Action and Alternatives (DOPAA), which has been prepared to support the EA is provided as Attachment 1. This information is provided to satisfy requirements listed under 36 CFR §800.11(d)(3)(e). The USAF requests concurrence with the APE as shown on the attached figure (Attachment 2) and with a finding of no adverse impacts to historic properties.

3. This action is a continuation of the WSEP Fiberline project (Case No. 14-1492 and Case No. 15-1065) and the drone launch facility (Case No. 14-1656). After the initial consultation on the above referenced cases, the USAF has determined that an EA is required for this project.

4. Previously completed studies identified two cultural resources (JB-2 Launch Site and the Deep Creek Railroad) within the APE of the project. All work conducted on the historic Deep Creek Railroad has previously been consulted on with your office concluding in a determination of No Adverse Effect. Additional minor construction for launch support facilities would occur on existing gravel pads that were previously evaluated for impacts to cultural resources (Case No. 14-1656). Therefore, implementation of the proposed construction activities would have no adverse effects on the Deep Creek Railroad.

After initial consultation, it was found that additional work would be required on a bunker which is a part of the Wendover Airfield (42TO855). Refurbishing of the historic WWII-era munitions bunker (Building 51) would be required as part of the Proposed Action. The door of the bunker requires improvements to restore its original purpose for secure storage of munitions. The refurbishment would maintain the historical look of the door by using in-kind paint colors and replacing broken pieces of the doors locking system. Improvements to the door are in keeping with the original mission of the facility and of Wendover Airfield. A fence currently exists but does not meet current safety standards for munitions storage so would be extended to a wider boundary. Additionally, a concrete pad would be installed in front of the bunker. These are both located within previously disturbed areas and would not impact the historic character of the building or airfield. USAF has determined that the refurbishment of the munitions door and other construction will have no adverse effects on the bunker or airfield.

5. The USAF is continuing the process of consulting with Federally-Recognized American Indian Tribes concerning this undertaking. (Attachment 3). It is considered unlikely that traditional resources will be identified within the APE; however, should traditional resources be identified within the APE, an amended consultation letter will be sent to your office.

6. Based on the evidence and data provided above, the USAF determines that the present undertaking will have no adverse affect on any historic properties that are eligible or potentially eligible for listing on the NRHP and we respectfully seek your concurrence with our determination of "no adverse affect to historic properties". The USAF will continue to consult on any changes to the project and the EA as it progresses forward.

7. Please review the enclosed material and provide your comments to Ms. Anya Kitterman, 75 CEG/CEIE, 7290 Weiner St., Building 383, Hill Air Force Base, Utah, 84056-5003, (801) 586-2464, anya.kitterman@us.af.mil. Thank you for your assistance in this matter.

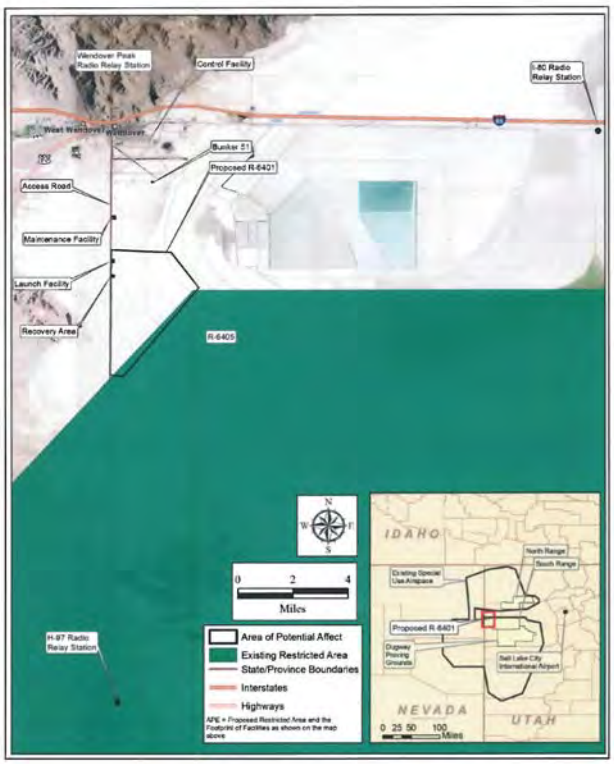
Sincerely,

MICHELLE COTTLE
Chief, Environmental Branch
75th Civil Engineer Group

3 Attachments:
Attachment 1. Description of the Proposed Action and Alternatives (DOPAA)
Attachment 2. Area of Potential Effect
Attachment 3. List of Federally-Recognized American Indian Tribes

ATTACHMENT 1. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

ATTACHMENT 2. AREA OF POTENTIAL AFFECT



Area of Potential Affect

ATTACHMENT 3. LIST OF FEDERALLY-RECOGNIZED AMERICAN INDIAN TRIBES CONTACTED CONCERNING THIS UNDERTAKING

LIST OF FEDERALLY-RECOGNIZED AMERICAN INDIAN TRIBES CONTACTED CONCERNING THIS UNDERTAKING

- Northern Arapaho Tribe
- Blackfeet Tribe
- Confederated Tribes of the Goshute Indian Reservation
- Confederated Salish & Kootenai Tribes of the Flathead Reservation (Deferred to local tribes)
- Crow Tribe
- Duckwater Shoshone Tribe
- Eastern Shoshone Tribe
- Ely Shoshone Tribe
- Hopi Tribe
- Navajo Nation
- Northwestern Band of Shoshone
- Paiute Indian Tribe of Utah
- Pueblo of Zuni
- San Juan Southern Paiute Tribe
- Shoshone-Bannock Tribes of the Fort Hall Reservation
- Shoshone-Paiute Tribes of the Duck Valley Reservation
- Skull Valley Band of Goshute
- Te-Moak Tribe of Western Shoshone
- Ute Indian Tribe
- Ute Mountain Ute
- Wells Band of Western Shoshone

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Jill Remington Love
Executive Director
Department of Heritage & Arts

Utah Division of State History

Don Hartley
Director
State Historic Preservation Officer

August 24, 2018

Anya Kitterman
Hill Air Force Base Archaeology
Hill AFB, Utah

RE: Wendover Operating Space EA Notification

For future correspondence, please reference Case No. 18-1894

Dear Ms. Kitterman:

The Utah State Historic Preservation Office received your request for our comment on the above-referenced undertaking on August 21, 2018.

Based on the information provided to our office, we concur with your determinations of eligibility and finding of no adverse effect for this undertaking.

This letter serves as our comment on the determinations you have made within the consultation process specified in §36CFR800.4. If you have questions, please contact me at (801) 245-7239 or by email at clhansen@utah.gov.

Sincerely,

Christopher Hansen
Preservation Planner/Utah SHPO

Utah Department of Heritage & Arts
300 S. Rio Grande Street • Salt Lake City, Utah 84101 • (801) 245-7225 • facsimile (801) 355-0587 • history.utah.gov

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TRIBAL MAILING LIST

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TRIBAL MAILING LIST FOR ENVIRONMENTAL ASSESSMENT FOR ESTABLISHING RESTRICTED AREA (R-6401) AND OPERATION OF UNMANNED AIRCRAFT, WENDOVER, UTAH

Mr. Harry Barnes
Chairman, Blackfeet Tribe
PO Box 850
Browning, MT 59417

Cc: John Murray, Tribal Historic Preservation Officer, Blackfeet Tribe

Mr. Rupert Steele
Chairman, Confederated Tribes of the Goshute Indian Reservation
HC 61
PO Box 6104
Ibapah, UT 84034

Cc: Zelda Johnny, Cultural Resources Representative, CTGR *(requested e-mail of all correspondence - zelda.johnny@ctgr.us)*

Cc: Phyllis Naranjo, Secretary, CTGR (*requested e-mail of all correspondence -* Phyllis.naranjo@ctgr.us)

Mr. Alvin Not Afraid
Chairman, Crow Tribe of Montana
PO Box 159
Crow Agency, MT 59022

Cc: William Big Day, Tribal Historic Preservation Officer, Crow Tribe of Montana

Ms. Rodney Mike
Chair, Duckwater Shoshone Tribe
PO Box 140068
Duckwater, NV 89314

Cc: Warren Graham, Cultural Resources Manager, Duckwater Shoshone Tribe

Mr. Clint Wagon
Chairman, Eastern Shoshone Tribe
PO Box 538
Fort Washakie, WY 82514

Cc: Wilford Ferris III, Tribal Historic Preservation Officer, Eastern Shoshone Tribe

Mr. Alvin S. Marques
Chairman, Ely Shoshone Tribe
16 Shoshone Circle
Ely, NV 89301

Cc: Cindy Marques, Cultural Resources, Ely Shoshone Tribe

Mr. Timothy Nuvangyaoma
Chairman, Hopi Tribe
PO Box 123
Kykotsmovi, AZ 86039

Cc: Mr. Leigh Kuwanisiwma, Director of Cultural Preservation, Hopi Tribe

Mr. Russell Begaye
President, Navajo Nation
PO Box 9000
Hwy 264, Tribal Hills Dr.
Window Rock, AZ 86515-9000

Cc: Tamara Billie, Acting Tribal Historic Preservation Officer, Navajo Nation

Mr. Roy B. Brown
Chairman, Northern Arapaho Tribe
PO Box 396
Fort Washakie, WY 82514

Cc: Devin Oldman, Tribal Historic Preservation Officer, Northern Arapaho Tribe

Mr. Darren Parry
Chairman, Northwestern Band of the Shoshone Nation
707 North Main Street
Brigham City, UT 84302

Cc: Patty Timbimboo-Madsen, Cultural and Natural Resources Manager, Northwestern Band of the Shoshone Nation

Ms. Tami Borchardt-Slayton
Chairwoman, Paiute Tribe of Utah
440 North Paiute Drive
Cedar City, UT 84721

Cc: Dorena Martineau, Cultural Resources Director, Paiute Indian Tribe of Utah

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

Cc: Kurt Dongoske, Tribal Historic Preservation Officer, Pueblo of Zuni

Mr. Nathan Small
Chairman, Shoshone-Bannock Tribes of the Fort Hall Reservation
PO Box 306
Fort Hall, ID 83203

Cc: Carolyn Smith, Cultural Resources Coordinator, Shoshone-Bannock Tribes of the Fort Hall Reservation

Mr. Ted Howard
Chairman, Shoshone-Paiute Tribes of the Duck Valley Reservation
PO Box 219
Owyhee, NV 89832

Mr. Luke Duncan
Chairman, Ute Indian Tribe
PO Box 190
Fort Duchesne, UT 84026

Cc: Betsy Chapoose, Cultural Rights and Protection, Ute Indian Tribe

Mr. Harold Cuthair
Chairman, Ute Mountain Ute Tribe
PO Box 248
Towaoc, CO 81334-0248

Cc: Terry Knight, Tribal Historic Preservation Officer, Ute Mountain Ute Tribe
Cc: Nichol Shurack, Cultural Resources Director, Ute Mountain Ute Tribe

Mr. Ron Trahan
Chairman, Conf. Salish & Kootenai Tribes of the Flathead Reservation
PO Box 278
Pablo, MT 59855

Cc: Kyle Felsman, Tribal Historic Preservation Officer, Salish & Kootenai Tribes

NO THPOs

Ms. Carlene Yellowhair
President, San Juan Southern Paiute Tribe
PO Box 1989
Tuba City, AZ 86045

Ms. Candace Bear *(requested e-mail of all correspondence - candaceb@svgoshutes.com) -* ***don't send certified mail, send as regular mail***

Chairwoman, Skull Valley Band of Goshute Indians
407 Skull Valley Rd.
Skull Valley, UT 84029

Ms. Lydia Johnson
Chairwoman, Te-Moak Tribe of Western Shoshone
525 Sunset Street
Elko, NV 89801

Mr. Casey Franco
Chairman, Wells Band of Western Shoshone
PO Box 809
Wells, NV 89835

Cc: Steven Brady, Vice-Chair, Wells Band of Western Shoshone
Cc: Heather Martinez, Tribal Administrator, Wells Band of Western Shoshone

TRIBAL EXAMPLE MAILING LETTER

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

24 August 2018

Allen Fry
Chief, Installation Management Division
75 CEG/CEI
3713 Lahm Lane, Bldg 593N
Hill AFB, UT 84056-5137

ROY BROWN, CHAIRMAN
ARAPAHO BUSINESS COUNCIL
PO BOX 396
FORT WASHAKIE WY 82514

Dear Chairman Brown,

The U.S. Air Force is preparing an Environmental Assessment (EA) for establishing a restricted area (R-6401) and operation of unmanned aircraft at Wendover, Utah in compliance with the NEPA (42 *United States Code [USC]* 4331 et seq.), the regulations of the President's Council on Environmental Quality (CEQ) that implement NEPA procedures (40 *Code of Federal Regulations [CFR]* 1500-1508), the Air Force Environmental Impact Assessment Process Regulations at 32 *CFR* 989, and Air Force Instruction (AFI) 32-7061. This EA will evaluate the effects of the proposed action near Wendover, Utah.

The USAF is providing information for your review and concurrence in accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 Code of Federal Regulations (CFR) §800 specific to cultural resource impacts. A Draft Description of Proposed Action and Alternatives (DOPAA), which has been prepared to support the EA is provided as Attachment 1. This information is provided to satisfy requirements listed under 36 CFR §800.11(d)(3)(e). The USAF requests concurrence with the APE as shown on the attached figure (Attachment 2) and with a finding of no adverse impacts to historic properties.

This action is a continuation of the WSEP Fiberline project and the drone launch facility which have undergone previous consultation. After the initial consultation on the above referenced cases, the USAF has determined that an EA is required for this project.

The proposed area of work for this project has been previously inventoried according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The inventories were completed in 1995 (U-95-WC-558m) and 2012 (U-12-UI-0371M). Three known eligible archaeological sites are within close proximity to the proposed Area of Potential Effect (APE). These include the Wendover Airfield (42TO855), the Deep Creek Railroad (42TO708), and the former JB-2 Test Launch Facility (42TO2749). Impacts to the Deep Creek and JB-2 sites were previously consulted on with the SHPO and tribes. No Adverse Effects to the Wendover Airfield site are anticipated and Hill AFB is consulting with the SHPO on that site. Should you or your staff wish to review prior consultations, please contact the Hill AFB Cultural Resources Manager.

The potential for additional archaeological historic properties is low; however if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in

accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 3). The USAF will continue to consult on any changes to the project and the EA as it progresses forward.

In consideration of these facts, we request your concurrence with the determination of "no adverse effect" to cultural resources as specified in accordance 36 CFR §800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, 75 CEG/CEIE, 7290 Weiner St., Building 383, Hill Air Force Base, Utah, 84056-5003, (801) 586-2464, anya.kitterman@us.af.mil.

Sincerely,

Allen W. Fry
Chief, Installation Management Division
Installation Tribal Liaison Officer

3 Attachments:
Attachment 1. Description of the Proposed Action and Alternatives (DOPAA)
Attachment 2. Area of Potential Effect
Attachment 3. Hill AFB Unanticipated Discovery of Archaeological Deposits

Cc: Devin Oldman, Tribal Historic Preservation Officer, Northern Arapaho Tribe

DISTRIBUTION LIST
Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
Duckwater Shoshone Tribe
Eastern Shoshone Tribe
Ely Shoshone Tribe
Hopi Tribe
Navajo Nation
Northern Arapaho Tribe
Northwestern Band of Shoshone Nation
Paiute Indian Tribe of Utah
Pueblo of Zuni
San Juan Southern Paiute Tribe
Shoshone-Bannock Tribes of the Fort Hall Reservation
Shoshone-Paiute Tribes of the Duck Valley Reservation
Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone
Utah State Historic Preservation Office

TRIBAL RESPONSES

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

24 August 2018

Allen Fry
Chief, Installation Management Division
75 CEG/CEI
5713 Lahm Lane, Bldg 593N
Hill AFB, UT 84056-5137

TIMOTHY NUVANGYAOMA, CHAIRMAN
HOPI TRIBAL COUNCIL
PO BOX 9000
KYKOTSMOVI AZ 86039

Dear Chairman Nuvangyaoma,

The U.S. Air Force is preparing an Environmental Assessment (EA) for establishing a restricted area (R-6401) and operation of unmanned aircraft at Wendover, Utah in compliance with the NEPA (42 *United States Code [USC]* 4331 et seq.), the regulations of the President's Council on Environmental Quality (CEQ) that implement NEPA procedures (40 *Code of Federal Regulations [CFR]* 1500-1508), the Air Force Environmental Impact Assessment Process Regulations at 32 *CFR* 989, and Air Force Instruction (AFI) 32-7061. This EA will evaluate the effects of the proposed action near Wendover, Utah.

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The potential for additional archaeological historic properties is low; however if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in

accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 3). The USAF will continue to consult on any changes to the project and the EA as it progresses forward.

In consideration of these facts, we request your concurrence with the determination of "no adverse effect" to cultural resources as specified in accordance 36 CFR §800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, 75 CEG/CEJE, 7290 Weiner St., Building 383, Hill Air Force Base, Utah, 84056-5003, (801) 586-2464, anya.kitterman@us.af.mil.

Sincerely,

8-29-19

Allen W. Fry
Chief, Installation Management Division
Installation Tribal Liaison Officer

3 Attachments:
Attachment 1. Description of the Proposed Action and Alternatives (DOPAA)
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Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone
Utah State Historic Preservation Office

CORRESPONDENCE RELATED TO PAST ACTIONS

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STATE HISTORIC PRESERVATION OFFICE (SHPO)

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From: Christopher Merritt <cmerritt@utah.gov>
Sent: Tuesday, October 28, 2014 6:05 PM
To: KITTERMAN, ANYA D GS-12 USAF AFMC 75 CEG/CEIE
Subject: Re: Site Visit for WSEP Launch Pad Project

Follow Up Flag: Follow up
Flag Status: Flagged

HI Anya,
That looks like a solid run down of what we discussed. I might add to #1, that use of similar gravel to what is currently located on the grade is preferred. (I can't see anyone getting red gravels or something, but I thought I should mention that).

Is this a new case then? At the end of the day yesterday I think I erroneously asked you to include the case #, but I was thinking of the Ore Processing consultation. If we need a case number we'll get one checked out.

Thanks for the summary, and the field trip!

On Tue, Oct 28, 2014 at 1:24 PM, KITTERMAN, ANYA D GS-12 USAF AFMC 75 CEG/CEIE <anya.kitterman@us.af.mil> wrote:

Hello,

Here is the follow up email as promised for our site visit yesterday. We are currently looking at a no adverse effect utilizing the criteria below. I will be forwarding a formal letter in the future with details and final plans as well. We realize your response does not constitute formal concurrence but rather advice on how to proceed forward.

1. Road bed
- As long as the road bed is maintained at its current width, repairs and regarding as needed will constitute a no adverse effect.

2. Pad/Maintenance development
-Hill will provide a non-permanent base for the entrance/road to the pad where it meets with the historic Deep Creek Railroad. There will be no alteration to the grading as it stands and everything added will be able to be removed so the grading can be returned to its current condition should the facility be decommissioned.

3. Culverts
-The culverts can be upgraded under the condition that the exterior remains visually the same, reusing historic materials as much as possible.
-An archaeologist/architectural historian will be on site during the construction of C-29 and if necessary, C-31, in order to record the original construction as the work is being undertaken.
-No modern construction will be visible.
-Rocks supports to the base of the culvert will be retained in order to maintain historic design and materials.
-The historic elements/materials do not need to be load bearing, more visual.
-C-31, preference to maintain historic central beam
-If possible, surplus historic material (i.e. beams) should be stored for future maintenance.

I think that is everything, but if there is something I missed, needs clarification or you have a question about, please let me know. Thanks again for coming out and visiting!

Anya Kitterman
Archaeologist/Cultural Resource Manager
75th CEG/CEIE
Hill Air Force Base
7290 Weiner St.
Bldg 383
Hill AFB, UT 84056-5003
(801) 586-2464
anya.kitterman@us.af.mil

--
****
Christopher W. Merritt, Ph.D., RPA
Senior Preservation Specialist
Utah State History
Phone: (801) 245-7263
Email: cmerritt@utah.gov

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Julie Fisher
Executive Director
Department of
Heritage & Arts

Utah Division of
State History

Brad Westwood
Director

November 24, 2014

Joseph A. Martone, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base, Utah 84056-5137

RE: Drone Facility at the UTTR

For future correspondence, please reference Case No. 14-1656

Dear Dr. Martone:

The Utah State Historic Preservation Office received your request for our comment on the above-referenced undertaking on November 21, 2014.

We concur with your determination of effect for this undertaking.

This letter serves as our comment on the determinations you have made, within the consultation process specified in §36CFR800.4. If you have questions, please contact me at 801-245-7263 or Lori Hunsaker at 801-245-7241 *lhunsaker@utah.gov*.

Sincerely,

Chris Merritt, Ph.D.
Deputy State Historic Preservation Officer
Archaeology
cmerritt@utah.gov

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

13 April 2015

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Mr. Chris Merritt, Ph.D.
Deputy State Historic Preservation Officer
300 Rio Grande
Salt Lake City Utah 84101

Dear Mr. Merritt,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) previously contacted you concerning plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). Please see Case No. 14-1656. As previously stated, On October 27th, 2014, Chris Merritt from the SHPO visited in order to discuss options to minimize impacts. The following approaches were discussed:

- The road bed will be maintained at its current width but will be repaired and re-graded as needed. This will be done with gravel and materials similar to what are already in place.
- The two access routes for the proposed pads will utilize a non-permanent geotextile base where the proposed work encounters the slope and former railroad grade. There will be no alteration to the current grade in order that the grade could return to its original condition should the site be disbanded in the future.
- The culvert C-29, C-30, and C-31 will be upgraded with the condition that the exterior view remains the same and utilizes historic materials as much as feasible. A qualified archaeologist or architectural historian will be on site during the deconstruction of C-29, and if modifications are necessary, C-31 (Attachment 3, Details on Culverts to be Upgraded). This will allow for the original design to be recorded during any deconstruction. No modern construction will be visible. C-31 will contain a central interior beam in order to maintain the design. The rocks to the base of the culvert will be retained, though neither the historic beams nor rocks will need to be load bearing.
- If possible, historic materials will be stored for future maintenance of the culverts.

In a letter dated 24 November 2014, SHPO concurred that as long as these stipulations were adhered to the project would have no adverse effect to cultural resources.

Due to further investigation of the site, it has been found that erosion controls on the sides of the culverts would be necessary in order to fully maintain the road and culverts. Hill AFB proposes to create rip-rap walls to each side of the culvert which maintain its current angle and slope. This rip-rap would then be fully covered with native soil and vegetation in order to preserve the historic visual of the culverts. The site would be annually monitored in order to assure the site maintains its historical look and feel. Due to this approach, we uphold that there will be no adverse effect to historic resources.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan.

Archaeological surveys, including Utah State Historic Site Forms have been completed for this area and are on file in your office.

In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Julie Fisher
Executive Director
Department of
Heritage & Arts

Utah Division of
State History

Brad Westwood
Director

April 15, 2015

Ms. Anya Kitterman, Archaeologist
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base, Utah 84056-5137

RE: UTTR New Drone Launch Facility

For future correspondence, please reference Case No. 14-01656

Dear Ms. Kitterman:

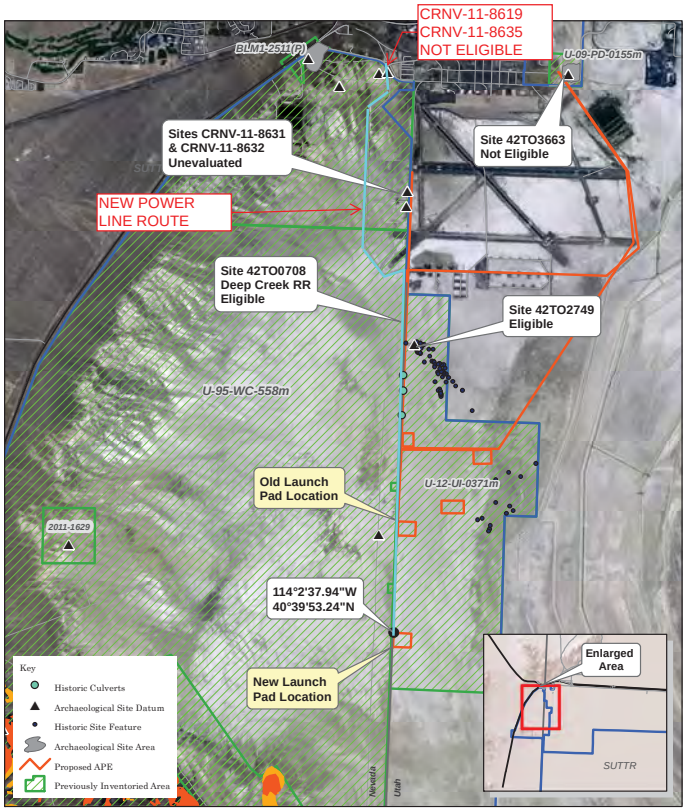
The Utah State Historic Preservation Office received your request for our comment on the above-referenced undertaking on April 14, 2015.

We concur with your determination of effect for this undertaking.

This letter serves as our comment on the determinations you have made, within the consultation process specified in §36CFR800.4. If you have questions, please contact me at 801-245-7263 or Lori Hunsaker at 801-245-7241 *lhunsaker@utah.gov*.

Sincerely,

Chris Merritt, Ph.D.
Deputy State Historic Preservation Officer
Archaeology
cmerritt@utah.gov



CRM Previously Inventoried Areas &
Site Locations
Proposed WSEP Launch Pad
Wendover Parcel - SUTTR

N

1: 46,000

0 0.5 1 2 Miles

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Julie Fisher
Executive Director
Department of
Heritage & Arts

Utah Division of
State History

Brad Westwood
Director

July 1, 2015

Ms. Anya Kitterman
Cultural Resource Program Manager
75 CEG/CEIE
7290 Weiner St., Bldg. 383
Hill Air Force Base, Utah 84056-5003

RE: Commercial Power to the New WSEP Launch Site at Hill Air Force Base

For future correspondence, please reference Case No. 14-1492

Dear Ms. Kitterman:

The Utah State Historic Preservation Office received your request for our comment on the above-referenced undertaking on June 30, 2015.

We concur with your determinations of eligibility and effect for this undertaking.

This letter serves as our comment on the determinations you have made, within the consultation process specified in §36CFR800.4. If you have questions, please contact me at 801-245-7263.

Sincerely,

Chris Merritt, Ph.D.
Deputy State Historic Preservation Officer
Archaeology
cmerritt@utah.gov

Utah Department of Heritage & Arts
300 S. Rio Grande Street • Salt Lake City, Utah 84101 • (801) 245-7225 • Facsimile (801) 355-0587 • [illegible]

From: Christopher Merritt
To: KITTERMAN, ANYA D GS-12 USAF AFMC 75 CEG/CEIE
Subject: Re: Wendover Launch Pad Follow Up
Date: Tuesday, November 10, 2015 4:53:41 PM

Looks great!

On Tue, Nov 10, 2015 at 3:42 PM, KITTERMAN, ANYA D GS-12 USAF AFMC 75 CEG/CEIE <anya.kitterman@us.af.mil> wrote:

> Hello,
>
> Here is the promised follow up email detailing what measures would need to be taken in order to maintain a No Adverse Effect on the railroad grade work. Do let me know if you have any questions or need clarification. Thank you again for taking the time to meet with us today, it is appreciated!
>
> 1. The concrete can be used as a base. The material has been pulled from the construction at the Peppermill Casino, they will be following up with me on any additional sources.
> 2. The concrete will be covered and filled with materials and soils similar to what already exists on the grade.
> 3. The height and width of the grade will remain the same.
> 4. The final cover of the road will be gravel the same or mirroring that which was present on the road prior to work being undertaken.
> 5. The road will be annually inspected to assure it maintains the historic integrity and character of the former railroad. Any necessary maintenance will be undertaken, as needed, to assure this throughout the years.
>
> Basically, the road will look the same as it did prior to any work being done and will maintain the look and feel of the original railroad grade.
>
> Anya Kitterman
> Archaeologist/Cultural Resource Manager
> 75th CEG/CEIE
> Hill Air Force Base
> 7290 Weiner St.
> Bldg 383
> Hill AFB, UT 84056-5003
> (801) 586-2464
> anya.kitterman@us.af.mil

--
****
Christopher W. Merritt, Ph.D., RPA
Deputy SHPO, Antiquities Section Coordinator
Utah Division of State History
Phone: (801) 245-7263
Email: cmerritt@utah.gov

TRIBAL

Environmental Assessment for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft, Wendover, Utah

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Draft *September 2019*

Summary Report Worksheet Consultation

Tribal Contact	Title	Address	Letter sent	Number	Return Receipt	Response
Northern Arapaho Tribe						
Dean Goggles	Chairman	Arapaho Business Council PO Box 396 Fort Washakie, WY 82514		0334.7385	12/29	
Yufna Soldierwolf	THPO			0334.7583	1/4	
Blackfeet Tribe						
Willie A. Sharp, Jr.	Chairman	Blackfeet Tribal Business Council PO Box 850 Browning, MT 59417		0334.7392	12/29	
John Murray	THPO			0334.7590	12/29	
Confederated Tribes of the Goshute Indian Reservation						
Virgil W. Johnson	Chairperson	CTGR PO Box 6104 Ibapah, UT 83034		0334.7422	12/28	
Confederated Salish & Kootenai Tribes of the Flathead Reservation						
Vernon Finley	Chairman	CSKT PO Box 278 Pablo, MT 59855		0334.7651		
Ira L. Matt	THPO			0334.7644	12/26	
Crow Tribe						
Darrin Old Coyote	Chairman	Crow Tribe Council PO Box 159 Crow Agency, MT 59022		0334.7408	12/28	
Emerson Bull Chief	THPO			0334.7606	12/28	
Duckwater Shoshone Tribe						
Adams-Blackeye	Chairwoman	Duckwater Shoshone Tribe PO Box 140068 Duckwater, NV 89314		0334.7576	12/28	
Maurice Churchill	CR Manager			0334.7736	12/28	
Eastern Shoshone Tribe						
Darwin St. Clair, Jr.	Chairman	Eastern Shoshone Tribe PO Box 538 Fort Washakie, WY 82514		0334.7415	12/29	
Willford Ferris III	Dir of Cultural Preservation			0334.7613	12/28	
Ely Shoshone Tribe						
Alvin S. Marques	Chairman	Ely Shoshone Tribe 16 Shoshone Circle Ely, NV 89301		0334.7477	12/28	
Cindy Marques	CR			0334.7668	12/28	
Hopi Tribe						
Herman Honanie	Chair	Hopi Tribal Council PO Box 123 Kykotsmovi, AZ 86039		0334.7439	12/30	
Mr. Leigh Kuwanwisiwma	Dir of Cultural Preservation			0334.7620	12/28	
Navajo Nation						
Begaye	President	Navajo Nation PO Box 9000 HWY 264, Tribal Hills Drive Window Rock, AZ 86515-9000		0334.7446	12/28	
Ora Marek-Martinez, PhD	THPO			0334.7637	1/5	
Northwestern Band of Shoshone						
Shane Warner	Chairman	Northwestern Band of Shoshone Nation 707 North Main Street Brigham City, UT 84302		0334.7453	12/28	
Patty Timbimboo-Madsen	CR Dir			0334.7705	12/23	
Paiute Indian Tribe of Utah						
Gari Lafferty	Chairperson	PITU 440 North Paiute Drive Cedar City, UT 84721		0334.7460	12/28	
Dorena Martineau	CR Dir			0334.7712	12/28	
Pueblo of Zuni						
Val R. Panteah Sr.	Governor	Pueblo of Zuni PO Box 339 Zuni, NM 87327		0334.7484	12/28	
Kurt Dongoske	THPO			0334.7729	12/29	
San Juan Southern Paiute Tribe						

May Preston	President	SJSPT PO Box 1989 Tuba City, AZ 86045		0334.7569	1/7	
Shoshone-Bannock Tribes of the Fort Hall Reservation						
Nathan Small	Chair	S-B Tribes of Fort Hall Reservation PO Box 306 Fort Hall, ID 83203		0334.7491	12/28	
Carolyn Smith	CR Coordinator			0334.7675	12/28	
Shoshone-Paiute Tribes of the Duck Valley Reservation						
Mr. Lindsey Manning	Chairman	S-P tribes of the Duck Valley Reservation PO Box 219 Owyhee, NV		0334.7507	12/29	
Skull Valley Band of Goshute						
Candace Bear	Chairwoman	Skull Valley Band of Goshute Indians PO Box 448 Grantsville, UT 84029		0334.7514	12/28	
Te-Moak Tribe of Western Shoshone						
Davis Gonzales	Chairman	Te-Moak Tribe of Western Shoshone 525 Sunset Street Elko, NV 89801		0334.7521	12/23	
Ute Indian Tribe						
Gordon Howell	Chairman	Ute Indian Tribe PO Box 190 Fort Duchesne, UT 84026		0334.7538	12/23	
Betsy Chapoose	Cultural Rights & Protection			0334.7682	12/28	
Ute Mountain Ute						
Manuel Heart	Chairman	Ute Mountain Ute Tribe PO Box 248 Towaoc, CO 81334-0248		0334.7545	12/28	
Mr. Terry Knight	NAGPRA Specialist			0334.7699	12/31	
Wells Band of Western Shoshone						
Michelle Cure	Chairperson	Wells Band of Western Shoshone PO Box 809 Wells, NV 89835		0334.7552	12/23	
SHPO						
Lori Hunsaker	Deputy SHPO	State Historic Preservation Office 300 Rio Grande Salt Lake City, UT 84101				

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Ms. Lori Hunsaker
Deputy State Historic Preservation Officer
300 Rio Grande
Salt Lake City Utah 84101

Dear Ms. Hunsaker,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility at Dugway Proving Ground Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile layer will be laid and follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future (Attachment 2, Details of Geotextile Layer). An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. This is in order to ground the building. A recovery area will be established near the maintenance facility and launch site, though have no new construction itself.

The proposed area of work on the UTTR has been surveyed according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation (Attachment 1). The survey (U-12-UI-0371m) was completed in 2012. Two known eligible archaeological sites are near the area of potential effect (APE). Site 42TO2749 has been avoided and will not be impacted by this project. Site42TO708, the Deep Creek Railroad, will have minimal impact and follow the stipulations listed below.

EXAMPLE LETTER

On October 27th, 2014, Chris Merritt from the SHPO visited in order to discuss options to minimize impacts. The following approaches were discussed:

- The road bed will be maintained at its current width but will be repaired and re-graded as needed. This will be done with gravel and materials similar to what are already in place.
- The two access routes for the proposed pads will utilize a non-permanent geotextile base where the proposed work encounters the slope and former railroad grade. There will be no alteration to the current grade in order that the grade could return to its original condition should the site be disbanded in the future.
- The culvert C-29, C-30, and C-31 will be upgraded with the condition that the exterior view remains the same and utilizes historic materials as much as feasible. A qualified archaeologist or architectural historian will be on site during the deconstruction of C-29, and if modifications are necessary, C-31 (Attachment 3, Details on Culverts to be Upgraded). This will allow for the original design to be recorded during any deconstruction. No modern construction will be visible. C-31 will contain a central interior beam in order to maintain the design. The rocks to the base of the culvert will be retained, though neither the historic beams nor rocks will need to be load bearing.
- If possible, historic materials will be stored for future maintenance of the culverts.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 4).

EXAMPLE LETTER

Archaeological surveys, including Utah State Historic Site Forms have been completed for this area and are on file in your office.

In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

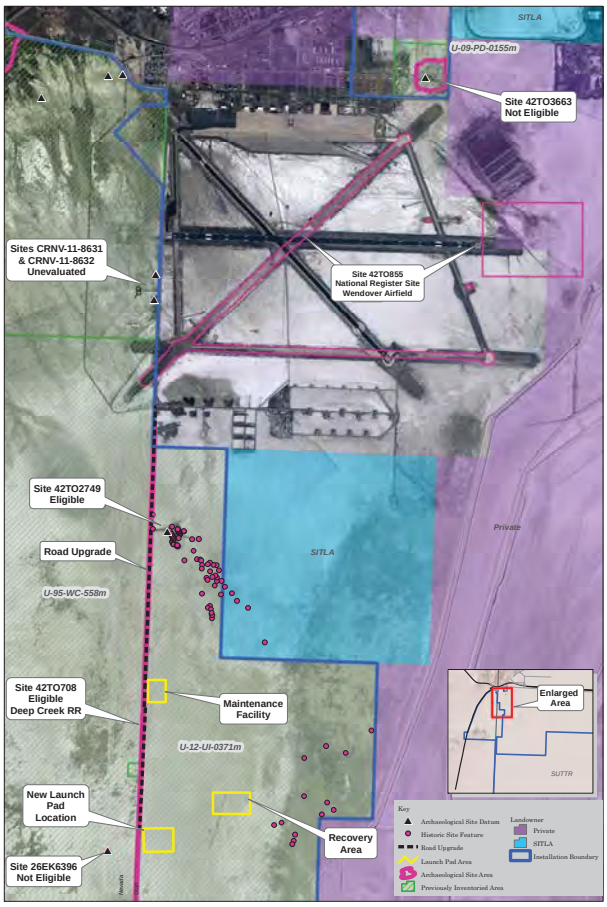
Sincerely

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Details of Geotextile Layer
3. Details of Culverts to be Upgraded
4. Unanticipated Discovery Protocol

Distribution List:
Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
Duckwater Shoshone Tribe
Eastern Shoshone Tribe
Ely Shoshone Tribe
Hopi Tribe
Navajo Nation
Northern Arapaho Tribe
Northwestern Band of the Shoshone Nation
Paiute Indian Tribe of Utah
Pueblo of Zuni
San Juan Southern Paiute Tribe
Shoshone-Bannock Tribes of the Fort Hall Reservation
Shoshone-Paiute Tribes of the Duck Valley Reservation
Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone Indians
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone

EXAMPLE LETTER



CRM Previously Inventoried Areas & Site Locations
Proposed WSEP Launch Pad
Wendover Parcel - SUTTR

1: 18,000

N

0 0.25 0.5 1 Miles

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

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

Dear Chairman Honanie,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

The proposed area of work on the UTTR has been surveyed according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The survey (U-12-UI-0371m) was completed in 2012. Two known eligible historic archaeological sites are near the area of potential effect (APE). Site 42TO2749 has been avoided and will not be impacted by this project. Site42TO708, the Deep Creek Railroad and will have minimal impact.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 2).

Archaeological surveys, including Utah State Historic Site Forms have been completed for this area and are on file in your office.

In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

Concur
Margaret
for
Kuwanisiwma
11-27-14

Michelle L Cottle

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Mr. Leigh Kuwanisiwma, Hopi Tribe Director of Cultural Preservation

Distribution List:
Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
Duckwater Shoshone Tribe
Eastern Shoshone Tribe
Ely Shoshone Tribe
Hopi Tribe
Navajo Nation
Northern Arapaho Tribe
Northwestern Band of the Shoshone Nation
Paiute Indian Tribe of Utah
Pueblo of Zuni
San Juan Southern Paiute Tribe
Shoshone-Bannock Tribes of the Fort Hall Reservation
Shoshone-Paiute Tribes of the Duck Valley Reservation
Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone Indians
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone

Hoinon'einino'

Northern Arapaho Tribe
TRIBAL HISTORIC PRESERVATION OFFICE

P.O. Box 67 - St. Stephens, Wyoming 82524 - PH: 307.856.1628 - narapahothpo_2009@ymail.com

Dec 15, 2014

Attention of:

Department of Air Force
75th Civil Engineering Group (AFMC)
Hill Air Force Base Utah
Michelle Cottle
Anya.kitterman@us.af.mil.

Subject: "Construction of new drone launch facility"

The office of the Northern Arapaho Tribal Historic Preservation Office has reviewed this project.

Project for review: Construction of drone launch facility for use on the Utah Test and Training Range (UTTR). The only other alteration is a 2" diameter pipe installed to the northwest of the structure which protrudes six inches above ground surface.

Our office would like to report that our office at this time have no concerns about the project and can move forward. With the two eligible historical archaeological site near the APE and will not be impacted and avoided. Our office concludes the project as NO ADVERSE EFFECT. However with any new project we ask that if there are any inadvertent discoveries found we be contacted and our office is provided a report.

Darlene Conrad
Tribal Historic Preservation Officer

THE NAVAJO NATION

BEN SHELLY
PRESIDENT

REX LEE JIM
VICE-PRESIDENT

Historic Preservation Department, POB 4950, Window Rock, AZ 86515 • PH: 928.871-7198 • FAX: 928.871.7886

January 21, 2015

Joseph A. Martone, Chief
Department of the Air Force
75th Civil Engineer Group
Hill Air Force Base Utah

Subject: **DRONE LAUNCH FACILITY AT UTAH TEST AND TRAINING RANGE**

Dear Mr. Martone,

The Historic Preservation Department-Traditional Culture Program, hereafter (HPD-TCP) is in receipt of your letter regarding a proposed construction of a new drone launch facility for use on the Utah Test and Training Range which would provide for more efficient and safer operations located at Hill Air Force Base.

After reviewing the information documents provided, HPD-TCP has determined the project proposed **will not have** adverse effects to Navajo Traditional Cultural Properties. HPD-TCP on behalf of the Navajo Nation has no concerns at this time.

If the proposed application inadvertently discovers habitation sites, plant gathering areas, human remains and objects of cultural patrimony, HPD-TCP request that we be notified respectively in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA). ***(The Navajo Nation claims cultural affiliation to all Anaasazi people (periods from Archaic to Pueblo IV) of the southwest. The Navajo Nation makes this claim through Navajo oral history and ceremonial history, which has been documented as early as 1880 and taught from generation to generations).***

The HPD-TCP appreciates the Department of the Air Force's consultation efforts regarding this document. Should you have any additional concerns and/or questions do not hesitate to contact me electronically at tjoe@navajohistoricpreservation.org or telephone at 928-871-7750.

Sincerely,

Tony H. Joe, Jr., Supervisory Anthropologist
Section 106 Consultation
Traditional Culture Program
Historic Preservation Department

WSEP Fiber Line Worksheet Consultation

Tribal Contact	Title	Address	Letter sent	Number	Return Receipt	Response
Northern Arapaho Tribe						
Dean Goggles	Chairman	Arapaho Business Council PO Box 396 Fort Washakie, WY 82514	6/24/15	7574.0277	6/30	
Corinne Headley	THPO			7574.0413	6/30	
Blackfeet Tribe						
Willie A. Sharp, Jr.	Chairman	Blackfeet Tribal Business Council PO Box 850 Browning, MT 59417		7574.0345	6/29	
John Murray	THPO			7574.0482	6/29	
Confederated Tribes of the Goshute Indian Reservation						
Madeleine Greymountain	Chairperson	CTGR PO Box 6104 Ibapah, UT 83034		7574.0208	6/29	
Confederated Salish & Kootenai Tribes of the Flathead Reservation						
Vernon Finley	Chairman	CSKT PO Box 278 Pablo, MT 59855				
Ira L. Matt	THPO					
Crow Tribe						
Darrin Old Coyote	Chairman	Crow Tribe Council PO Box 159 Crow Agency, MT 59022		7574.0338	6/30	
Emerson Bull Chief	THPO			7574.0475	6/30	
Duckwater Shoshone Tribe						
Virginia Sanchez	Chairwoman	Duckwater Shoshone Tribe PO Box 140068 Duckwater, NV 89314		7574.0321	6/30	
Maurice Churchill	CR Manager			7574.0468	6/30	
Eastern Shoshone Tribe						
Darwin St. Clair, Jr.	Chairman	Eastern Shoshone Tribe PO Box 538 Fort Washakie, WY 82514		7574.0314	6/27	
Willford Ferris III	Dir of Cultural Preservation			7574.0451	6/27	
Ely Shoshone Tribe						
Alvin S. Marques	Chairman	Ely Shoshone Tribe 16 Shoshone Circle Ely, NV 89301		7574.0307	6/29	
Cindy Marques	CR			7574.0444	6/29	
Hopi Tribe						
Herman Honanie	Chair	Hopi Tribal Council PO Box 123 Kykotsmovi, AZ 86039		7574.0291	6/30	
Mr. Leigh Kuwanwisiwma	Dir of Cultural Preservation			7574.0437	6/30	
Navajo Nation						
Ben Shelly	President	Navajo Nation PO Box 9000 HWY 264, Tribal Hills Drive Window Rock, AZ 86515-9000		7574.0284	6/29	
Timothy Begay	THPO			7574.0420		
Northwestern Band of Shoshone						
Jason Walker	Chairman	Northwestern Band of Shoshone Nation 707 North Main Street Brigham City, UT 84302		7574.0260	6/29	
Patty Timbimboo-Madsen	CR Dir			7574.0406	6/29	
Paiute Indian Tribe of Utah						
Corrina Bow	Chairperson	PITU 440 North Paiute Drive Cedar City, UT 84721		7574.0253	6/29	
Dorena Martineau	CR Dir			7574.0390	6/29	
Pueblo of Zuni						
Val R. Panteah Sr.	Governor	Pueblo of Zuni PO Box 339 Zuni, NM 87327		7574.0246	6/29	
Kurt Dongoske	THPO			7574.0383	7/1	
San Juan Southern Paiute Tribe						

May Preston	President	SJSPT PO Box 1989 Tuba City, AZ 86045		7574.0192	7/2	
Shoshone-Bannock Tribes of the Fort Hall Reservation						
Nathan Small	Chair	S-B Tribes of Fort Hall Reservation PO Box 306 Fort Hall, ID 83203		7574.0239	6/29	
Carolyn Smith	CR Coordinator			7574.0376	6/29	
Shoshone-Paiute Tribes of the Duck Valley Reservation						
Mr. Lindsey Manning	Chairman	S-P tribes of the Duck Valley Reservation PO Box 219 Owyhee, NV		7574.0185	6/29	
Skull Valley Band of Goshute						
Lori Bear	Chairwoman	Skull Valley Band of Goshute Indians PO Box 448 Grantsville, UT 84029		7574.0178	7/8	
Te-Moak Tribe of Western Shoshone						
Davis Gonzales	Chairman	Te-Moak Tribe of Western Shoshone 525 Sunset Street Elko, NV 89801		7574.0161	6/29	
Ute Indian Tribe						
Gordon Howell	Chairman	Ute Indian Tribe PO Box 190 Fort Duchesne, UT 84026		7574.0222	6/29	
Betsy Chapoose	Cultural Rights & Protection			7574.0369	6/29	
Ute Mountain Ute						
Manuel Heart	Chairman	Ute Mountain Ute Tribe PO Box 248 Towaoc, CO 81334-0248		75743.0215	7/1	
Mr. Terry Knight	NAGPRA Specialist			7574.0352	7/1	
Wells Band of Western Shoshone						
Michelle Cure	Chairperson	Wells Band of Western Shoshone PO Box 809 Wells, NV 89835		7574.0154	6/29	
SHPO						
Lori Hunsaker	Deputy SHPO	State Historic Preservation Office 300 Rio Grande Salt Lake City, UT 84101		7574.0499	6/29	

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

24 June 2015

Ms. Anya Kitterman
Cultural Resource Program Manager
75 CEG/CEIE
7290 Weiner St., Bldg. 383
Hill Air Force Base Utah 84056-5003

Michelle Cure, Chairwoman
Wells Band of Western Shoshone
PO Box 809
Wells, NV 89835

Dear Chairwoman Cure,

EXAMPLE LETTER

The United States Air Force (USAF) located at Hill Air Force Base (AFB) is proposing to establish commercial power by the new WSEP launch site in order to reduce utilizing on site generators. The proposed action includes plowing both power and fiber lines just to the west of the current road where there has already been previous disturbance from commercial fiber line installation (Attachment 1). Hill AFB and the Utah Test and Training Range-South (UTTRS) are unable to use this existing line. New disturbance will go to a depth of approximately 48" with the top end width being 16". Hill AFB specifically chose this route in order to avoid known historic properties and utilize areas of existing disturbance.

The proposed area of work for this project has been previously inventoried according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The inventories were completed in 1995 (U-95-WC-558m) and 2012 (U-12-UI-0371M). Additionally, this area was visited on October 27th, 2014 by Hill AFB Archaeologist, Anya Kitterman, and SHPO representative, Chris Merritt, in association with a nearby project (14-1656). Three known eligible archaeological sites are within close proximity to the proposed Area of Potential Effect (APE). These include the Wendover Airfield (42TO855), the Deep Creek Railroad (42TO708), and the former JB-2 Test Launch Facility (42To2749). All three sites and their associated features will be avoided and will not be impacted by this project.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan.

Archaeological surveys, including Utah State Historic Site Forms have been completed for this area and are on file in your office.

In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Proposed work and Cultural Survey Map

DISTRIBUTION LIST

EXAMPLE LETTER

Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
Duckwater Shoshone Tribe
Eastern Shoshone Tribe
Ely Shoshone Tribe
Hopi Tribe
Navajo Nation
Northern Arapaho Tribe
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Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone
Utah State Historic Preservation Office

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

24 June 2015

Ms. Anya Kitterman
Cultural Resource Program Manager
75 CEG/CEIE
7290 Weiner St., Bldg. 383
Hill Air Force Base Utah 84056-5003

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

Dear Chairman Honanie,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) is proposing to establish commercial power to the new WSEP launch site in order to reduce utilizing on site generators. The proposed action includes plowing both power and fiber lines just to the west of the current road where there has already been previous disturbance from commercial fiber line installation (Attachment 1). Hill AFB and the Utah Test and Training Range-South (UTTRS) are unable to use this existing line. New disturbance will go to a depth of approximately 48" with the top end width being 16". Hill AFB specifically chose this route in order to avoid known historic properties and utilize areas of existing disturbance.

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In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

concur
for Kuwanwisiwma
6-30-15

Attachments:
1. Proposed work and Cultural Survey Map

cc: Mr. Leigh Kuwanisiwma, Director of Cultural Preservation, Hopi Tribe

DISTRIBUTION LIST

Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
Duckwater Shoshone Tribe
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Hopi Tribe
Navajo Nation
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Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone
Utah State Historic Preservation Office

WSEP Launch Pad Consultation

Tribal Contact	Title	Address	Letter sent	Number	Return Receipt	Response
Northern Arapaho Tribe						
Darrell O'Neal, Sr.	Chairman	Arapaho Business Council PO Box 396 Fort Washakie, WY 82514		7028 6793	11/24	
Corinne Headley	THPO			7013 1710 0000 7028 6984	11/24	
Blackfeet Tribe						
Willie A. Sharp, Jr.	Chairman	Blackfeet Tribal Business Council PO Box 850 Browning, MT 59417		7028 6717	11/24	
John Murray	THPO			7028 6915	11/25	
Confederated Tribes of the Goshute Indian Reservation						
Madeleine Greymountain	Chairperson	CTGR PO Box 6104 Ibapah, UT 83034		7028 6724	11/21	
Confederated Salish & Kootenai Tribes of the Flathead Reservation						
Ron Trahan	Chairman	CSKT PO Box 278 Pablo, MT 59855		NONE		
Ira L. Matt	THPO			NONE		
Crow Tribe						
Darrin Old Coyote	Chairman	Crow Tribe Council PO Box 159 Crow Agency, MT 59022		7028 6731	11/24	
Emerson Bull Chief	THPO			7028 6922	11/24	
Duckwater Shoshone Tribe						
Virginia Sanchez	Chairwoman	Duckwater Shoshone Tribe PO Box 140068 Duckwater, NV 89314		7028 6748	11/26	
Maurice Churchill	CR Manager			7028 6939	11/26	
Eastern Shoshone Tribe						
Darwin St. Clair, Jr.	Chairman	Eastern Shoshone Tribe PO Box 538 Fort Washakie, WY 82514		7028 6755	11/24	
Wilford Ferris III	Dir of Cultural Preservation			7028 6946	11/24	
Ely Shoshone Tribe						
Alvin S. Marques	Chairman	Ely Shoshone Tribe 16 Shoshone Circle Ely, NV 89301		7028 6762	11/24	
Cindy Marques	CR			7028 6953	11/24	
Hopi Tribe						
Herman Honanie	Chair	Hopi Tribal Council PO Box 123 Kykotsmovi, AZ 86039		7028 6779	11/24	
Mr. Leigh Kuwanwisiwma	Dir of Cultural Preservation			7028 6960	11/24	
Navajo Nation						
Ben Shelly	President	Navajo Nation PO Box 9000 HWY 264, Tribal Hills Drive Window Rock, AZ 86515-9000		7028 6786	11/24	
Timothy Begay	THPO			7028 6977	12/5	
Northwestern Band of Shoshone						
Jason Walker	Chairman	Northwestern Band of Shoshone Nation 707 North Main Street Brigham City, UT 84302		7028 6809	11/21	
Patty Timbimboo-Madsen	CR Dir			7028 6991	11/21	
Paiute Indian Tribe of Utah						
Gari Lafferty	Chairperson	PITU 440 North Paiute Drive Cedar City, UT 84721		7028 6816	11/24	
Dorena Martineau	CR Dir			7028 7004	11/24	
Pueblo of Zuni						
Arlen P. Quetawki, Sr.	Governor	Pueblo of Zuni PO Box 339 Zuni, NM 87327		7028 6823	11/24	
Kurt Dongoske	THPO			7028 7011	11/24	
San Juan Southern Paiute Tribe						

May Preston	President	SJSPT PO Box 1989 Tuba City, AZ 86045		7028 6830	11/25	
Shoshone-Bannock Tribes of the Fort Hall Reservation						
Nathan Small	Chair	S-B Tribes of Fort Hall Reservation PO Box 306 Fort Hall, ID 83203		7028 6847	11/24	
Carolyn Smith	CR Coordinator			7028 7028	11/24	
Shoshone-Paiute Tribes of the Duck Valley Reservation						
Mr. Lindsey Manning	Chairman	S-P tribes of the Duck Valley Reservation PO Box 219 Owyhee, NV		7028 6854	11/24	
Skull Valley Band of Goshute						
Lori Bear	Chairwoman	Skull Valley Band of Goshute Indians PO Box 448 Grantsville, UT 84029		7028 6861	11/24	
Te-Moak Tribe of Western Shoshone						
Davis Gonzales	Chairman	Te-Moak Tribe of Western Shoshone 525 Sunset Street Elko, NV 89801		7028 6878	11/24	
Ute Indian Tribe						
Gordon Howell	Chairman	Ute Indian Tribe PO Box 190 Fort Duchesne, UT 84026		7028 6885	11/24	
Betsy Chapoose	Cultural Rights & Protection			7028 7035	11/24	
Ute Mountain Ute						
Manuel Heart	Chairman	Ute Mountain Ute Tribe PO Box 248 Towaoc, CO 81334-0248		7028 6892	11/25	
Mr. Terry Knight	NAGPRA Specialist			7028 7042	12/1	
Wells Band of Western Shoshone						
Michelle Cure	Chairperson	Wells Band of Western Shoshone PO Box 809		7028 6908	12/3	

		Wells, NV 89835				
SHPO						
Lori Hunsaker	Deputy SHPO	State Historic Preservation Office 300 Rio Grande Salt Lake City, UT 84101		7028 6700	11/21	
Chris Hansen	SHPO	State Historic Preservation Office		7028 6694	11/21	
John M. Fowler	ED, office of Exec Dir	Advisory Council on Historic Preservation 401 F Street NW, Suite 308 Washington DC 20001-2637		7028 6687	11/18	

From: Yufna Soldier Wolf
To: KITTERMAN, ANYA D GS-12 USAF AFMC 75 CEG/CEIE
Subject: WSEP launch site
Date: Wednesday, July 01, 2015 3:15:18 PM

Anya Kitterman,

Hello. I read your letter regarding this project.
The office of the Northern Arapaho THPO would
like to the opportunity to comment in the following:

Following the disturbed corridor would be ideal, however
once ground disturbance happens for the depth of 48" to avoid know
historic properties and utilize areas of existing disturbance. If there should
be any inadvertent discoveries please contact my office and provide a
preliminary report and halt all work until it can be decided upon.

I'd request a buffer of at least 25 to 50 feet for site 42TO3663, 42TO2749, 42TO0708, 42TO2749,
Even though these sites may not be eligible we would request the buffer
to ensure the protection of each site. I'd also request a concluding report to show none of the properties were disturbed.

Thank you for consulting with the Northern Arapaho THPO.

--
Yufna Soldier Wolf
NATHPO-Director
307-840-0837 call or text Cell
307-856-1628 Office call or lv msg

Tutterow, Brian W. [US-US]

From: KITTERMAN, ANYA D GS-12 USAF AFMC 75 CEG/CEIE
Sent: Wednesday, July 01, 2015 3:33 PM
To: 'Yufna Soldier Wolf'
Subject: RE: WSEP launch site
Attachments: Unanticipated discovery of archaeological deposits.pdf

Good Afternoon,

Thank you so much for your reply. In reference to your comments, if any
historic properties or archaeological remains are inadvertently discovered,
our unanticipated discovery protocol will go into effect and the project
halted immediately. I am happy to contact your office with a preliminary
report in this instance. I have also attached a copy of our unanticipated
discovery protocol for your records.

Most of the sites will have a minimum of a 25 foot buffer in order to avoid
any disturbance. The only one where this is not feasible is 42TO708, the
historic Deep Creek Railroad grade. The existing fiber line and previously
disturbed area runs approximately 10-15 feet from the west edge of the
remaining railroad grade. We will be keeping that same distance and the grade
itself will not be impacted by the work. Ideally, we would like to create a
larger buffer, but this would include new disturbance and a higher likelihood
for disturbing unknown buried archaeology. The base has chosen to stay within
the previously disturbed area in order to minimize impact.

We will provide a summary report once the work has been completed to
demonstrate the properties were not impacted.

Thank you again for your comments and concerns. Please feel free to contact me
anytime for further information or clarification.

Sincerely,

Anya Kitterman
Archaeologist/Cultural Resource Manager
75th CEG/CEIE
Hill Air Force Base
7290 Weiner St.
Bldg 383
Hill AFB, UT 84056-5003
(801) 586-2464
anya.kitterman@us.af.mil

-----Original Message-----
From: Yufna Soldier Wolf [mailto:yufnanathpo@gmail.com]
Sent: Wednesday, July 01, 2015 2:15 PM
To: KITTERMAN, ANYA D GS-12 USAF AFMC 75 CEG/CEIE

Subject: WSEP launch site

Anya Kitterman,

Hello. I read your letter regarding this project.
The office of the Northern Arapaho THPO would like to the opportunity to comment in the following:

Following the disturbed corridor would be ideal, however once ground disturbance happens for the depth of 48" to avoid know historic properties and utilize areas of existing disturbance. If there should be any inadvertent discoveries please contact my office and provide a preliminary report and halt all work until it can be decided upon.

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Thank you for consulting with the Northern Arapaho THPO.

--

Yufna Soldier Wolf
NATHPO-Director
307-840-0837 call or text Cell
307-856-1628 Office call or lv msg

Annual American Indian Meeting Summary Report

August 20-21 2015

Organized by Hill Air Force Base, Utah National Guard, and Dugway Proving Ground

Co-hosted by the Paiute Indian Tribe of Utah

Attendees of 2015 Annual American Indian Meeting

American Indian Tribal Representatives

Crow Nation of Montana

www.crow-nsn.gov/ 406.638.3708

Name	Title	Email
Emerson Bull Chief	Tribal Historic Preservation Officer	Emerson.bullchief@crow-nsn.gov

Northwestern Band of the Shoshone Nation

www.nwbshoshone.com 435.734.2286

Name	Title	Email
Darren Parry	Vice-Chairman	dparry@arrowpoint.us
Jeff Parry	Economic Coordinator	jparry@tope.us
Dennis A. Alex	Tribal Representative	
Patty Timbimboo-Madsen	Cultural Resources Manager	ptimbimboo@nwbshoshone.com

Paiute Tribe of Utah

www.utahpaiutes.org 435.586.1112

Name	Title	Email
Corrina Bow	Chairwoman	corrina.bow@ihs.gov
Jeanine Borchardt	Chairwoman Indian Peaks Band	jeanine.borchardt@ihs.gov
Eleanor Tom	Tribal Representative	
Jetta Wood	Chairwoman Shivwits Band	jettawood@yahoo.com
Rita Walker	Tribal Representative	
Vala Parashonts	Tribal Elder Cedar Band	
Dorena Martineau	Cultural Resources Director	Dorena.martineau@ihs.gov

Ute Indian Tribe

www.utetribe.com 435.722.5141

Name	Title	Email
Betsy Chapoose	Director, Cultural Rights and Protection	betsyc@utetribe.com

Additional Representatives

Utah Division of Indian Affairs

http://heritage.utah.gov/utah-division-of-indian-affairs

Name	Title	Email
Shirlee Silversmith	Director	ssilversmith@utah.gov

U.S. Military Representatives

Air Force

www.hill.af.mil

Name	Title	Email
Col Wade Lawrence	Vice Commander, 75th Air Base Wing	david.lawrence.2@us.af.mil
James Wilde	AF Cultural Resources Subject Matter Expert (SME), AFCEC	james.wilde@us.af.mil
Allen Fry	Installation Management Division Chief, ITLO	allen.fry@us.af.mil
Ryan Shaw	Environmental Attorney	ryan.shaw@us.af.mil
Jaynie Hirschi	Hill Installation Support Team AFCEC/CZOM	jaynie.hirschi@us.af.mil
Anya Kitterman	Cultural Resources Manager, Archaeologist	anya.kitterman@us.af.mil
Russell Lawrence	Natural Resources Manager	clair.lawrence@us.af.mil
Mike Shane	Environmental Liaison, Headquarters UTTR	michael.shane@us.af.mil
Jamie Brand	Native American Outreach Coordinator, CSU-CEMML	jamie.brand.ctr@us.af.mil
Kelly Merrifield	Cultural Resource Program Associate, OASD/ESOH	kelly.merrifield@colostate.edu

Utah National Guard

www.ut.ngb.army.mil

Name	Title	Email
BG Val L. Peterson	Land Component Commander	val.l.peterson@mail.mil
Col Robert T. Dunton	Director, Construction Facilities Management Office	robert.t.dunton.mil@mail.mil
SFC Chevonne Day	Medical Command Operations NCO	chevonne.a.day.mil@mail.mil
SFC Levi John	Environmental Protection	levi.s.john.mil@mail.mil

	Specialist	
Shaun Nelson	Cultural Resources Manager	shaun.r.nelson4.mil@mail.mil

Army Dugway Proving Ground

www.dugway.army.mil

Name	Title	Email
Don Smith	Garrison Manager	donald.e.smith238.civ@mail.mil
Rachel Quist	Cultural Resources Manager/Native American Coordinator	rachel.quist.civ@mail.mil
Jenni DeGraffenried	Archaeologist	
Nate Anderson	Archaeologist, CSU-CEMML	robert.n.anderson81.ctr@mail.mil
Nate Nelson	Archaeologist, LoganSimpson Design	nnelson@logansimpson.com
Ellyse Simons	Intern	ellysesimons@gmail.com

Army Fort Sill

sill-www.army.mil/

Name	Title	Email
David Fritz	Support Branch Chief, Environmental Quality Division-DPW	david.e.fritz8.civ@mail.mil
Melissa Heindselman	Environmental JAG	melissa.a.heindselman.civ@mail.mil

Slideshow Presentation
By Anya Kitterman

[redacted]

Hill AFB Cultural Resources Management Presentation Notes

- **Hill AFB Projects**
  - [redacted]
  - [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
    - [redacted]
- **UTTR Projects**
  - UTTR currently has hundreds of archaeological sites, historic buildings, and 1 sacred site identified.
  - [redacted]
    - [redacted]
    - [redacted]
    - [redacted]
  - [redacted]
    - [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
  - WSEP Launch Pad
    - Area has been previous surveyed, only one historic site identified.
    - Proposed work coordinated with SHPO and work will not have an adverse effect to the site.

- [redacted]
  - [redacted]
  - [redacted]
  - [redacted]

- [redacted]
  - [redacted]
  - [redacted]
  - [redacted]

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

12 November 2015

Allen Fry
Chief, Installation Management Division
75 CEG/CEI
5713 Lahm Lane, Building 593N
Hill AFB, UT 84056-5137

Madeline Greymountain, Chairwoman
Confederated Tribes of the Goshute Indian Reservation
HC 61
PO Box 6104
Ibapah, UT 84034

Dear Chairwoman Greymountain,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) previously notified you on 19 November 2014 about the proposal to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. In association with the launch facility, there is a requirement to establish airspace to accommodate the launch and recovery of the aircraft. The land proposed for the airspace is owned primarily by the Air Force, with a small section owned privately. The expected utilization of the airspace and launch facility would be four periods annually, not to exceed one week per period. This is in line with Federal Aviation Administration Order JO 7400.2K, para 23-1-6 which states, "Temporary restricted areas may be designated when necessary to accommodate hazardous activities associated with military exercises, test programs, etc."

As stated above, the land below the proposed airspace is currently owned primarily by the Air Force, with a small section privately owned. The privately owned land belongs to the Intrepid Potash Company and is currently used as evaporative or 'drying' ponds. The land is not inhabited and not used for agricultural practices. The current proposed project operations will launch drones from a site just south of Wendover east over the range, and then the drones will be recovered as they fly west towards the launch/recovery area. The operations will be limited to land just east of the Wendover parcel and will not go any further south than Snoopy Mountain.

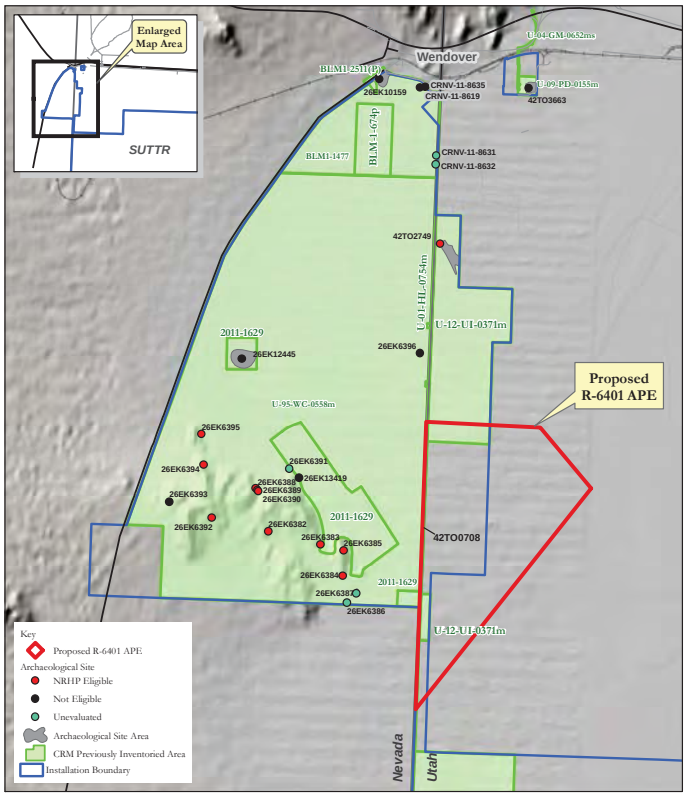
In consideration of these facts, we wish to consult with your office and offer the opportunity to discuss this project further should you request. Should you or your staff have any questions.

comments or would like to set up a face to face meeting, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

ALLEN FRY
Chief, Installation Management Division
Installation Tribal Liaison Officer

Attachments:
1. Proposed Airspace and Impacted Lands Map



Proposed R-6401 APE
Utah Test and Training Range - South

N

1: 80,000

0 0.5 1 2 Miles

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 75TH AIR BASE WING (AFMC)
HILL AIR FORCE BASE UTAH

18 December 2015

Colonel Ronald E. Jolly, SR., USAF
Commander
75th Air Base Wing
7981 Georgia St., Bldg. 1102, Ste. 100
Hill AFB UT 84056

Mr. Dean Goggles
Chairman
Northern Arapaho Tribe
P.O. Box 396
Fort Washakie WY 82514

Dear Chairman Goggles

On 20-21 August 2015, Hill Air Force Base (AFB), Army Dugway Proving Ground (DPG), and the Utah National Guard (UTNG) held their 10th Annual American Indian Meeting. The purpose of this meeting was to continue established government-to-government relationships with American Indian Tribes identified as having a history of land use in areas managed by Hill AFB, DPG, and UTNG, and to further assess the interest level each tribe has in consulting with Hill AFB, DPG, and UTNG. It also served to provide an open forum for tribal members to ask questions, state concerns, and receive updates regarding Hill AFB/DGP/UTNG-managed properties, the cultural resources located on these lands, and any projects that may have effects on resources of interest.

The attached summary report is a compilation of notes, slides, and information regarding the 2015 Annual American Indian Meeting. We have also provided an electronic version of the report on the enclosed CD, as well as digital photos from the event. The 2016 Hill AFB/DPG/UTNG Annual American Indian Meeting is tentatively scheduled for fall 2016, and will be hosted by the Utah National Guard. You will be contacted with additional information in the upcoming months.

Should you or your staff have any questions or suggestions regarding the meeting, please feel free to contact our Cultural Resources Program Manager, Ms. Anya Kitterman, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

RONALD E. JOLLY, SR., Colonel, USAF
Commander, 75th Air Base Wing

EXAMPLE LETTER EXAMPLE LETTER

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

15 August 2016

Mr. Allen Fry
Chief, Installation Management Division
5713 Lahm Lane, Building 593N
Hill AFB, UT 84056-5137

Dean Goggles
Chairman, Arapaho Business Council
PO Box 396
Fort Washakie, WY 82514

Dear Chairman Goggles,

On behalf of Hill Air Force Base, it is my pleasure to remind you of the Annual American Indian Meeting on August 25-26, 2016 at the Bear River Migratory Bird Refuge, Brigham City, Utah. As with previous meetings, this is a joint effort among Hill Air Force Base (Hill AFB), the Utah National Guard (UTNG), U.S. Army Dugway Proving Ground (DPG), and Tribal representatives from across the region. The purpose of this meeting is to maintain established government-to-government relationships with American Indian Tribes identified as having a history of land use in areas managed by Hill AFB, DPG, and the UTNG. During the meeting, we will provide updates on current and upcoming projects on the various installations as well as offer a discussion forum for questions and concerns. Included with this letter is a packet of current and upcoming projects which will be discussed. Please take a moment to review and bring questions, comments or concerns to the meeting.

If you need any further information, please contact Ms. Anya Kitterman, 75th CEG/CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely,

Allen W. Fry
Chief, Installation Management Division
Installation Tribal Liaison Officer

Attachments:
1. 2016 Annual American Indian Meeting, Current and Upcoming Project Packet

cc:
Yufna Soldier Wolf, Tribal Historic Preservation Officer, Arapaho Tribe

DISTRIBUTION LIST

Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
Duckwater Shoshone Tribe
Eastern Shoshone Tribe
Ely Shoshone Tribe
Hopi Tribe
Navajo Nation
Northern Arapaho Tribe
Northwestern Band of Shoshone Nation
Paiute Indian Tribe of Utah
Pueblo of Zuni
San Juan Southern Paiute Tribe
Shoshone-Bannock Tribes of the Fort Hall Reservation
Shoshone-Paiute Tribes of the Duck Valley Reservation
Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone

EXAMPLE LETTER

75TH AIR BASE WING

Hill AFB 11th Annual American Indian Meeting

Anya Kitterman
75 CEG/CEIE
25 August 2016

UTTR Fiber Line Expansion

75TH AIR BASE WING

- On Range Fiber Line
  - Work completed during 2015 field season
  - No archaeological resources found
  - Final report forwarded to tribes 31 May 2016
- Off Range Fiber Line
  - Work being completed during 2016 field season
  - BLM is Section 106 Lead as most of the work is on their property
  - Hill will maintain oversight and assure that any concerns from the tribes are addressed.

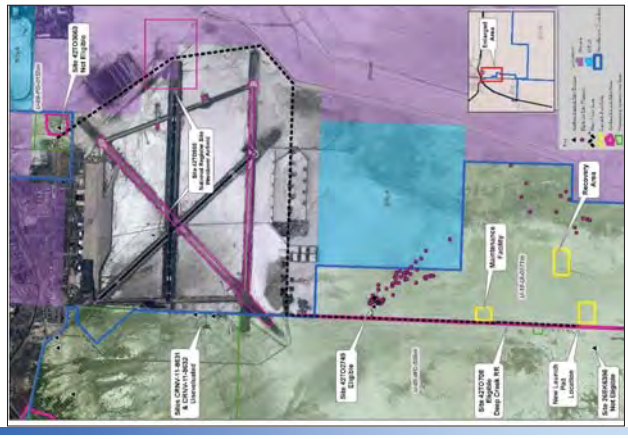
WSEP Launch Pad and MOA Expansion

75TH AIR BASE WING

- SHPO coordinated with on historic eligible site
  - No Adverse Effect
- Facility and infrastructure currently under construction
- Military Operating Space (MOA)
  - New launch facility requires expansion of MOA by 3,445 Acres
  - Required to accommodate the launch and recovery of unmanned aircraft into and out of the adjacent airspace
  - Operating period proposed is four periods annually; not to exceed one week per period

WSEP Launch Pad

75TH AIR BASE WING



Count on Us!

HILL AIR FORCE BASE
CURRENT AND UPCOMING PROJECTS
2016 ANNUAL AMERICAN INDIAN MEETING

UTAH TEST AND TRAINING RANGE (UTTR) PROJECTS

[redacted]

2. UTTR Fiber Line Expansion
   a. On Range Fiber Line
      i. Work completed during 2015 field season
      ii. No archaeological resources found
      iii. Final report forwarded to tribes 31 May 2016
   b. Off Range Fiber Line
      i. Work being completed during 2016 field season
      ii. BLM is Section 106 Lead as most of the work is on their property
      iii. Hill will maintain oversight and assure that any concerns from the tribe are addressed

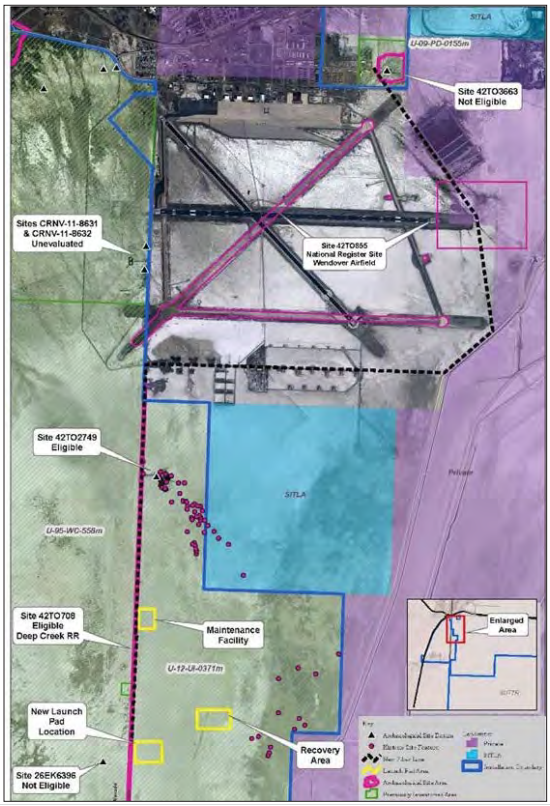
3. Weapons System Evaluation Program (WSEP) Launch Pad and MOA Expansion (See Attachment 2 & 3)
   a. Launch Pad APE previously surveyed – one eligible historic site
      i. SHPO consulted to impact; work will be No Adverse Effect to site
      ii. Facility and infrastructure currently under construction
   b. Military Operating Space (MOA)
      i. New launch facility requires expansion of MOA by 3,445 Acres
      ii. Required to accommodate the launch and recovery of unmanned aircraft into and out of the adjacent airspace
      iii. Operating period proposed is four periods annually; not to exceed one week per period

4. [redacted]

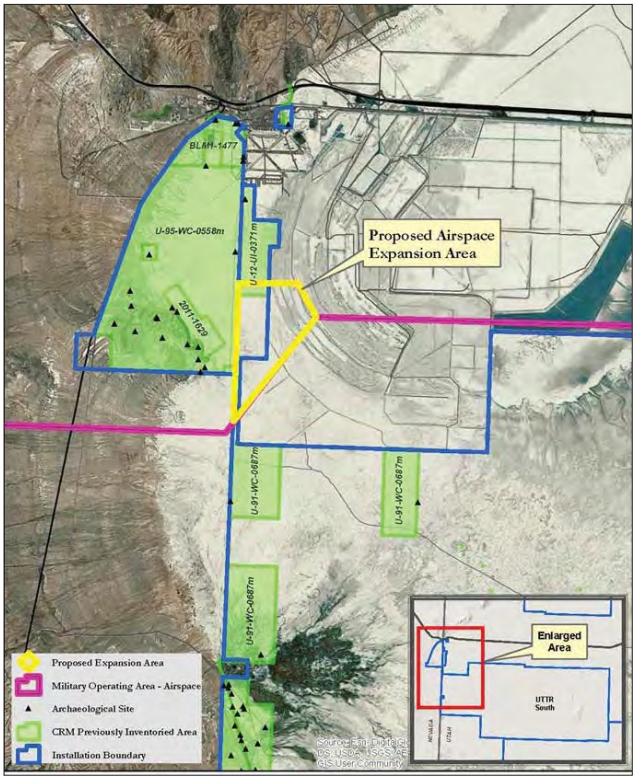
5. [redacted]

1 | Page

Attachment 2: WSEP Launch Pad Project Map



Attachment 3: MOA Expansion Map



DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

12 August 2016

Mr. Allen Fry
Chief, Installation Management Division
5713 Lahm Lane, Building 593N
Hill Air Force Base, Utah 84056-5137

Virgil W. Johnson
Chairman, Confederated Tribes of the Goshute Reservation
PO Box 6104
Ibapah, UT 83034

Dear Chairman Johnson,

The United States Air Force (USAF) proposes to create a new restricted airspace (R-6401) of approximately 3, 445 acres for use by the Headquarters UTTR and other USAF missions. This new area is adjacent to its current Military Operations Area (MOA) and restricted airspace (R-6405). The Headquarters UTTR is based at Hill Air Force Base (AFB), Utah and operates properties in the west desert. This work is proposed in order to accommodate the launch and recovery of unmanned aircraft into and out of the adjoining airspace (R-6405). The current launch facility limits the opportunity for future Full-Scale Aerial Target options due to its location on Army property and inability to support full scale testing. In addition, the expanded airspace required for the new launch facility (previously consulted on with tribes) will provide a larger safety area for launch and recovery. The expected utilization of the airspace and launch facility would be four periods annually, not to exceed one week per period.

Although the proposed undertaking would result in aerial target launch and recover procedures, none of the activities will adversely affect historic properties in the APE. The relatively short flight time in the area roughly around 20 min for launch and recover procedures would result in negligible change to the visual setting. There would be an imperceptible change in subsonic noise due to the proposed action. Finally, the location of flight operations and the short time span would ensure that there would be no adverse effect to historic structures.

Should you or your staff have any questions about the project, please contact our Cultural Resource Manager, Ms. Anya Kitterman, 75th CEG/CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely,

Allen W. Fry
Chief, Installation Management Division
Installation Tribal Liaison Officer

Attachments:
1. Location Map of proposed Military Operating Space Expansion

DISTRIBUTION LIST
Confederated Tribes of the Goshute Reservation
Skull Valley Band of the Goshute Indians
Northwestern Band of the Shoshone Nation

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

12 August 2016

Mr. Allen Fry
Chief, Installation Management Division
5713 Lahm Lane, Building 593N
Hill Air Force Base, Utah 84056-5137

Shane Warner
Chairman, Northwestern Band of Shoshone Nation
707 North Main Street
Brigham City, UT 84302

Dear Chairman Warner,

The United States Air Force (USAF) proposes to create a new restricted airspace (R-6401) of approximately 3, 445 acres for use by the Headquarters UTTR and other USAF missions. This new area is adjacent to its current Military Operations Area (MOA) and restricted airspace (R-6405). The Headquarters UTTR is based at Hill Air Force Base (AFB), Utah and operates properties in the west desert. This work is proposed in order to accommodate the launch and recovery of unmanned aircraft into and out of the adjoining airspace (R-6405). The current launch facility limits the opportunity for future Full-Scale Aerial Target options due to its location on Army property and inability to support full scale testing. In addition, the expanded airspace required for the new launch facility (previously consulted on with tribes) will provide a larger safety area for launch and recovery. The expected utilization of the airspace and launch facility would be four periods annually, not to exceed one week per period.

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Should you or your staff have any questions about the project, please contact our Cultural Resource Manager, Ms. Anya Kitterman, 75th CEG/CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely,

Allen W. Fry
Chief, Installation Management Division
Installation Tribal Liaison Officer

Attachments:
1. Location Map of proposed Military Operating Space Expansion

DISTRIBUTION LIST
Confederated Tribes of the Goshute Reservation
Skull Valley Band of the Goshute Indians
Northwestern Band of the Shoshone Nation

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

12 August 2016

Mr. Allen Fry
Chief, Installation Management Division
5713 Lahm Lane, Building 593N
Hill Air Force Base, Utah 84056-5137

Patty Timbimboo-Madsen
Cultural Resources Director, Northwestern Band of Shoshone Nation
707 North Main Street
Brigham City, UT 84302

Dear Ms. Timbimboo-Madsen,

The United States Air Force (USAF) proposes to create a new restricted airspace (R-6401) of approximately 3, 445 acres for use by the Headquarters UTTR and other USAF missions. This new area is adjacent to its current Military Operations Area (MOA) and restricted airspace (R-6405). The Headquarters UTTR is based at Hill Air Force Base (AFB), Utah and operates properties in the west desert. This work is proposed in order to accommodate the launch and recovery of unmanned aircraft into and out of the adjoining airspace (R-6405). The current launch facility limits the opportunity for future Full-Scale Aerial Target options due to its location on Army property and inability to support full scale testing. In addition, the expanded airspace required for the new launch facility (previously consulted on with tribes) will provide a larger safety area for launch and recovery. The expected utilization of the airspace and launch facility would be four periods annually, not to exceed one week per period.

Although the proposed undertaking would result in aerial target launch and recover procedures, none of the activities will adversely affect historic properties in the APE. The relatively short flight time in the area roughly around 20 min for launch and recover procedures would result in negligible change to the visual setting. There would be an imperceptible change in subsonic noise due to the proposed action. Finally, the location of flight operations and the short time span would ensure that there would be no adverse effect to historic structures.

Should you or your staff have any questions about the project, please contact our Cultural Resource Manager, Ms. Anya Kitterman, 75th CEG/CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely,

Allen W. Fry
Chief, Installation Management Division
Installation Tribal Liaison Officer

Attachments:
1. Location Map of proposed Military Operating Space Expansion

DISTRIBUTION LIST
Confederated Tribes of the Goshute Reservation
Skull Valley Band of the Goshute Indians
Northwestern Band of the Shoshone Nation

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

12 August 2016

Mr. Allen Fry
Chief, Installation Management Division
5713 Lahm Lane, Building 593N
Hill Air Force Base, Utah 84056-5137

Candace Bear
Chairwoman, Skull Valley Band of Goshute Indians
PO Box 448
Grantsville, UT 84029

Dear Chairwoman Bear,

The United States Air Force (USAF) proposes to create a new restricted airspace (R-6401) of approximately 3, 445 acres for use by the Headquarters UTTR and other USAF missions. This new area is adjacent to its current Military Operations Area (MOA) and restricted airspace (R-6405). The Headquarters UTTR is based at Hill Air Force Base (AFB), Utah and operates properties in the west desert. This work is proposed in order to accommodate the launch and recovery of unmanned aircraft into and out of the adjoining airspace (R-6405). The current launch facility limits the opportunity for future Full-Scale Aerial Target options due to its location on Army property and inability to support full scale testing. In addition, the expanded airspace required for the new launch facility (previously consulted on with tribes) will provide a larger safety area for launch and recovery. The expected utilization of the airspace and launch facility would be four periods annually, not to exceed one week per period.

Although the proposed undertaking would result in aerial target launch and recover procedures, none of the activities will adversely affect historic properties in the APE. The relatively short flight time in the area roughly around 20 min for launch and recover procedures would result in negligible change to the visual setting. There would be an imperceptible change in subsonic noise due to the proposed action. Finally, the location of flight operations and the short time span would ensure that there would be no adverse effect to historic structures.

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Appendix E
USFWS Correspondence and Special Status Species

Environmental Assessment for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft, Wendover, Utah

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Draft *September 2019*

Environmental Assessment for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft, Wendover, Utah

USFWS CORRESPONDENCE

Draft *September 2019*

Environmental Assessment for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft, Wendover, Utah

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Draft *September 2019*

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
Phone: (775) 861-6300 Fax: (775) 861-6301
http://www.fws.gov/nevada/

In Reply Refer To: September 27, 2018
Consultation Code: 08ENVD00-2017-SLI-0561
Event Code: 08ENVD00-2018-E-01966
Project Name: EA for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list indicates threatened, endangered, proposed, and candidate species and designated or proposed critical habitat that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act of 1973, as amended (ESA, 16 U.S.C. 1531 et seq.), for projects that are authorized, funded, or carried out by a Federal agency. Candidate species have no protection under the ESA but are included for consideration because they could be listed prior to the completion of your project. Consideration of these species during project planning may assist species conservation efforts and may prevent the need for future listing actions. For additional information regarding species that may be found in the proposed project area, visit http://www.fws.gov/nevada/es/ipac.html.

The purpose of the ESA is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the ESA and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or

designated or proposed critical habitat. Guidelines for preparing a Biological Assessment can be found at: http://www.fws.gov/midwest/endangered/section7/ba_guide.html.

If a Federal action agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:
http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this species list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally listed, proposed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally, as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation, for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the attached list.

The Nevada Fish and Wildlife Office (NFWO) no longer provides species of concern lists. Most of these species for which we have concern are also on the Animal and Plant At-Risk Tracking List for Nevada (At-Risk list) maintained by the State of Nevada's Natural Heritage Program (Heritage). Instead of maintaining our own list, we adopted Heritage's At-Risk list and are partnering with them to provide distribution data and information on the conservation needs for at-risk species to agencies or project proponents. The mission of Heritage is to continually evaluate the conservation priorities of native plants, animals, and their habitats, particularly those most vulnerable to extinction or in serious decline. In addition, in order to avoid future conflicts, we ask that you consider these at-risk species early in your project planning and explore management alternatives that provide for their long-term conservation.

For a list of at-risk species by county, visit Heritage's website (http://heritage.nv.gov). For a specific list of at-risk species that may occur in the project area, you can obtain a data request form from the website (http://heritage.nv.gov/get_data) or by contacting the Administrator of Heritage at 901 South Stewart Street, Suite 5002, Carson City, Nevada 89701-5245, (775) 684-2900. Please indicate on the form that your request is being obtained as part of your coordination with the Service under the ESA. During your project analysis, if you obtain new information or data for any Nevada sensitive species, we request that you provide the information to Heritage at the above address.

Furthermore, certain species of fish and wildlife are classified as protected by the State of Nevada (http://www.leg.state.nv.us/NAC/NAC-503.html). You must first obtain the appropriate license, permit, or written authorization from the Nevada Department of Wildlife (NDOW) to take, or possess any parts of protected fish and wildlife species. Please visit http://www.ndow.org or contact NDOW in northern Nevada (775) 688-1500, in southern Nevada (702) 486-5127, or in eastern Nevada (775) 777-2300.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Service's wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

The Service's Pacific Southwest Region developed the Interim Guidelines for the Development of a Project Specific Avian and Bat Protection Plan for Wind Energy Facilities (Interim Guidelines). This document provides energy facility developers with a tool for assessing the risk of potential impacts to wildlife resources and delineates how best to design and operate a bird- and bat-friendly wind facility. These Interim Guidelines are available upon request from the NFWO. The intent of a Bird and Bat Conservation Strategy is to conserve wildlife resources while supporting project developers through: (1) establishing project development in an adaptive management framework; (2) identifying proper siting and project design strategies; (3) designing and implementing pre-construction surveys; (4) implementing appropriate conservation measures for each development phase; (5) designing and implementing appropriate post-construction monitoring strategies; (6) using post-construction studies to better understand the dynamics of mortality reduction (e.g., changes in blade cut-in speed, assessments of blade “feathering” success, and studies on the effects of visual and acoustic deterrents) including efforts tied into Before-After/Control-Impact analysis; and (7) conducting a thorough risk assessment and validation leading to adjustments in management and mitigation actions.

The template and recommendations set forth in the Interim Guidelines were based upon the Avian Powerline Interaction Committee's Avian Protection Plan template (http://www.aplic.org/) developed for electric utilities and modified accordingly to address the unique concerns of wind energy facilities. These recommendations are also consistent with the Service's wind energy guidelines. We recommend contacting us as early as possible in the planning process to discuss the need and process for developing a site-specific Bird and Bat Conservation Strategy.

The Service has also developed guidance regarding wind power development in relation to prairie grouse leks (sage-grouse are included in this). This document can be found at: http://www.fws.gov/southwest/es/Oklahoma/documents/te_species/wind%20power/prairie%20grouse%20lek%205%20mile%20public.pdf.

Migratory Birds are a Service Trust Resource. Based on the Service's conservation responsibilities and management authority for migratory birds under the Migratory Bird Treaty Act of 1918, as amended (MBTA; 16 U.S.C. 703 et seq.), we recommend that any land clearing or other surface disturbance associated with proposed actions within the project area be timed to

avoid potential destruction of bird nests or young, or birds that breed in the area. Such destruction may be in violation of the MBTA. Under the MBTA, nests with eggs or young of migratory birds may not be harmed, nor may migratory birds be killed. Therefore, we recommend land clearing be conducted outside the avian breeding season. If this is not feasible, we recommend a qualified biologist survey the area prior to land clearing. If nests are located, or if other evidence of nesting (i.e., mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active.

Guidance for minimizing impacts to migratory birds for projects involving communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

If wetlands, springs, or streams are are known to occur in the project area or are present in the vicinity of the project area, we ask that you be aware of potential impacts project activities may have on these habitats. Discharge of fill material into wetlands or waters of the United States is regulated by the U.S. Army Corps of Engineers (ACOE) pursuant to section 404 of the Clean Water Act of 1972, as amended. We recommend you contact the ACOE's Regulatory Section regarding the possible need for a permit. For projects located in northern Nevada (Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, and Washoe Counties) contact the Reno Regulatory Office at 300 Booth Street, Room 3060, Reno, Nevada 89509, (775) 784-5304; in southern Nevada (Clark, Lincoln, Nye, and White Pine Counties) contact the St. George Regulatory Office at 321 North Mall Drive, Suite L-101, St. George, Utah 84790-7314, (435) 986-3979; or in California along the eastern Sierra contact the Sacramento Regulatory Office at 650 Capitol Mall, Suite 5-200, Sacramento, California 95814, (916) 557-5250.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

The table below outlines lead FWS field offices by county and land ownership/project type. Please refer to this table when you are ready to coordinate (including requests for section 7 consultation) with the field office corresponding to your project, and send any documentation regarding your project to that corresponding office. Therefore, the lead FWS field office may not be the office listed above in the letterhead.

Lead FWS offices by County and Ownership/Program

County	Ownership/Program	Species	Office Lead*

Alameda	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Alameda	All ownerships but tidal/estuarine	All	SFWO
Alpine	Humboldt Toiyabe National Forest	All	RFWO
Alpine	Lake Tahoe Basin Management Unit	All	RFWO
Alpine	Stanislaus National Forest	All	SFWO
Alpine	El Dorado National Forest	All	SFWO
Colusa	Mendocino National Forest	All	AFWO
Colusa	Other	All	By jurisdiction (see map)
Contra Costa	Legal Delta (Excluding ECCHCP)	All	BDFWO
Contra Costa	Antioch Dunes NWR	All	BDFWO
Contra Costa	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Contra Costa	All ownerships but tidal/estuarine	All	SFWO
Del Norte	All	All	AFWO
El Dorado	El Dorado National Forest	All	SFWO
El Dorado	LakeTahoe Basin Management Unit		RFWO
Glenn	Mendocino National Forest	All	AFWO
Glenn	Other	All	By jurisdiction (see map)
Humboldt	All except Shasta Trinity National Forest	All	AFWO

Humboldt	Shasta Trinity National Forest	All	YFWO
Lake	Mendocino National Forest	All	AFWO
Lake	Other	All	By jurisdiction (see map)
Lassen	Modoc National Forest	All	KFWO
Lassen	Lassen National Forest	All	SFWO
Lassen	Toiyabe National Forest	All	RFWO
Lassen	BLM Surprise and Eagle Lake Resource Areas	All	RFWO
Lassen	BLM Alturas Resource Area	All	KFWO
Lassen	Lassen Volcanic National Park	All (includes Eagle Lake trout on all ownerships)	SFWO
Lassen	All other ownerships	All	By jurisdiction (see map)
Marin	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Marin	All ownerships but tidal/estuarine	All	SFWO
Mendocino	Russian River watershed	All	SFWO
Mendocino	All except Russian River watershed	All	AFWO
Modoc	Modoc National Forest	All	KFWO
Modoc	BLM Alturas Resource Area	All	KFWO
Modoc	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Modoc	BLM Surprise and Eagle Lake Resource Areas	All	RFWO

Modoc	All other ownerships	All	By jurisdiction (See map)
Mono	Inyo National Forest	All	RFWO
Mono	Humboldt Toiyabe National Forest	All	RFWO
Napa	All ownerships but tidal/estuarine	All	SFWO
Napa	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Nevada	Humboldt Toiyabe National Forest	All	RFWO
Nevada	All other ownerships	All	By jurisdiction (See map)
Placer	Lake Tahoe Basin Management Unit	All	RFWO
Placer	All other ownerships	All	SFWO
Sacramento	Legal Delta	Delta Smelt	BDFWO
Sacramento	Other	All	By jurisdiction (see map)
San Francisco	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Francisco	All ownerships but tidal/estuarine	All	SFWO
San Mateo	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Mateo	All ownerships but tidal/estuarine	All	SFWO
San Joaquin	Legal Delta excluding San Joaquin HCP	All	BDFWO

San Joaquin	Other	All	SFWO
Santa Clara	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
Santa Clara	All ownerships but tidal/estuarine	All	SFWO
Shasta	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Shasta	Hat Creek Ranger District	All	SFWO
Shasta	Bureau of Reclamation (Central Valley Project)	All	BDFWO
Shasta	Whiskeytown National Recreation Area	All	YFWO
Shasta	BLM Alturas Resource Area	All	KFWO
Shasta	Caltrans	By jurisdiction	SFWO/AFWO
Shasta	Ahjumawi Lava Springs State Park	Shasta crayfish	SFWO
Shasta	All other ownerships	All	By jurisdiction (see map)
Shasta	Natural Resource Damage Assessment, all lands	All	SFWO/BDFWO
Sierra	Humboldt Toiyabe National Forest	All	RFWO
Sierra	All other ownerships	All	SFWO
Siskiyou	Klamath National Forest (except Ukonom District)	All	YFWO
Siskiyou	Six Rivers National Forest and Ukonom District	All	AFWO
Siskiyou	Shasta Trinity National Forest	All	YFWO

Siskiyou	Lassen National Forest	All	SFWO
Siskiyou	Modoc National Forest	All	KFWO
Siskiyou	Lava Beds National Volcanic Monument	All	KFWO
Siskiyou	BLM Alturas Resource Area	All	KFWO
Siskiyou	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Siskiyou	All other ownerships	All	By jurisdiction (see map)
Solano	Suisun Marsh	All	BDFWO
Solano	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Solano	All ownerships but tidal/estuarine	All	SFWO
Solano	Other	All	By jurisdiction (see map)
Sonoma	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Sonoma	All ownerships but tidal/estuarine	All	SFWO
Tehama	Mendocino National Forest	All	AFWO
Tehama	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Tehama	All other ownerships	All	By jurisdiction (see map)
Trinity	BLM	All	AFWO
Trinity	Six Rivers National Forest	All	AFWO
Trinity	Shasta Trinity National Forest	All	YFWO

Trinity	Mendocino National Forest	All	AFWO
Trinity	BIA (Tribal Trust Lands)	All	AFWO
Trinity	County Government	All	AFWO
Trinity	All other ownerships	All	By jurisdiction (See map)
Yolo	Yolo Bypass	All	BDFWO
Yolo	Other	All	By jurisdiction (see map)
All	FERC-ESA	All	By jurisdiction (see map)
All	FERC-ESA	Shasta crayfish	SFWO
All	FERC-Relicensing (non-ESA)	All	BDFWO

*Office Leads:

AFWO=Arcata Fish and Wildlife Office

BDFWO=Bay Delta Fish and Wildlife Office

KFWO=Klamath Falls Fish and Wildlife Office

RFWO=Reno Fish and Wildlife Office

YFWO=Yreka Fish and Wildlife Office

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
(775) 861-6300

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

Utah Ecological Services Field Office
2369 West Orton Circle, Suite 50
West Valley City, UT 84119-7603
(801) 975-3330

Project Summary

Consultation Code: 08ENVD00-2017-SLI-0561

Event Code: 08ENVD00-2018-E-01966

Project Name: EA for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft

Project Type: MILITARY OPERATIONS / MANEUVERS

Project Description: Environmental Assessment (EA) for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft, Wendover, Utah

Project Location:
Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/40.48993920814645N113.11284917816471W

Counties: Tooele, UT

Endangered Species Act Species

There is a total of 0 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Brewer's Sparrow Spizella breweri This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9291	Breeds May 15 to Aug 10
Green-tailed Towhee Pipilo chlorurus This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9444	Breeds May 1 to Aug 10

NAME	BREEDING SEASON
Lesser Yellowlegs Tringa flavipes This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Olive-sided Flycatcher Contopus cooperi This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Sage Thrasher Oreoscoptes montanus This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9433	Breeds Apr 15 to Aug 10
Willet Tringa semipalmata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5
Willow Flycatcher Empidonax traillii This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/3482	Breeds May 20 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

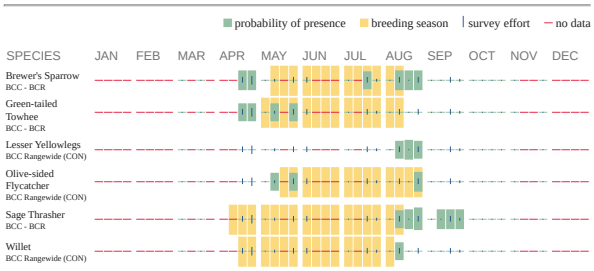
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.
Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird

model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND
- PEM1C

FRESHWATER FORESTED/SHRUB WETLAND
- PSSC

LAKE
- L2USJ

RIVERINE
- R4SBJ
- R4SBA
- R4SBC
- R5UBH

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Utah Ecological Services Field Office
2369 West Orton Circle, Suite 50
West Valley City, UT 84119-7603
Phone: (801) 975-3330 Fax: (801) 975-3331
http://www.fws.gov
http://www.fws.gov/utahfieldoffice/

In Reply Refer To: September 27, 2018
Consultation Code: 06E23000-2017-SLI-0407
Event Code: 06E23000-2018-E-01802
Project Name: EA for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Utah Ecological Services Field Office
2369 West Orton Circle, Suite 50
West Valley City, UT 84119-7603
(801) 975-3330

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
(775) 861-6300

Project Summary

Consultation Code: 06E23000-2017-SLI-0407

Event Code: 06E23000-2018-E-01802

Project Name: EA for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft

Project Type: MILITARY OPERATIONS / MANEUVERS

Project Description: Environmental Assessment (EA) for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft, Wendover, Utah

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/40.48993920814645N113.11284917816471W

Counties: Tooele, UT

STATE SPECIES LIST

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Yellow-billed Cuckoo Coccyzus americanus Population: Western U.S. DPS There is proposed critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Flowering Plants

NAME	STATUS
Jones Cycladenia Cycladenia humilis var. jonesii No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3336	Threatened
Ute Ladies'-tresses Spiranthes diluvialis No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2159	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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Utah's State Listed Species by County

Disclaimer: This list was compiled using known species occurrences and species observations from the Utah Natural Heritage Program's Biodiversity Tracking and Conservation System (BIOTICS); other species of special concern likely occur in Utah Counties. This list includes both current and historic records. (Last updated on October 1, 2015).

Beaver County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Big Free-tailed Bat	Nyctinomops macrotis	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Burrowing Owl	Athene cunicularia	SPC
Dark Kangaroo Mouse	Microdipodops megacephalus	SPC
Ferruginous Hawk	Buteo regalis	SPC
Fringed Myotis	Myotis thysanodes	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Hamlin Valley Pyrg	Pyrgulopsis hamlinensis	SPC
Kit Fox	Vulpes macrotis	SPC
Least Chub	Iotichthys phlegethontis	CS
Long-billed Curlew	Numenius americanus	SPC
Northern Goshawk	Accipiter gentilis	CS
Pygmy Rabbit	Brachylagus idahoensis	SPC
Short-eared Owl	Asio flammeus	SPC
Southern Leatherside Chub	Lepidomeda aliciae	SPC
Spotted Bat	Euderma maculatum	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Utah Prairie-dog	Cynomys parvidens	S-ESA
Western Toad	Bufo boreas	SPC

Box Elder County

Common Name	Scientific Name	State Status
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Bluehead Sucker	Catostomus discobolus	CS
Bobolink	Dolichonyx oryzivorus	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Burrowing Owl	Athene cunicularia	SPC
California Floater	Anodonta californiensis	SPC
Deseret Mountainsnail	Oreohelix peripherica	SPC
Ferruginous Hawk	Buteo regalis	SPC
Grasshopper Sparrow	Ammodramus savannarum	SPC
Gray Wolf	Canis lupus	S-ESA
Great Plains Toad	Bufo cognatus	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC

Box Elder County - continued

Common Name	Scientific Name	State Status
Kit Fox	Vulpes macrotis	SPC
Lahontan Cutthroat Trout	Oncorhynchus clarkii henshawi	S-ESA
Least Chub	Iotichthys phlegethontis	CS
Lewis's Woodpecker	Melanerpes lewis	SPC
Long-billed Curlew	Numenius americanus	SPC
Lyrate Mountainsnail	Oreohelix haydeni	SPC
Mountain Plover	Charadrius montanus	SPC
Northern Goshawk	Accipiter gentilis	CS
Northern Leatherside Chub	Lepidomeda copei	SPC
Northwest Bonneville Pyrg	Pyrgulopsis variegata	SPC
Preble's Shrew	Sorex preblei	SPC
Pygmy Rabbit	Brachylagus idahoensis	SPC
Sharp-tailed Grouse	Tympanuchus phasianellus	SPC
Short-eared Owl	Asio flammeus	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Utah Physa	Physella utahensis	SPC
Western Pearlshell	Margaritifera falcata	SPC
Western Toad	Bufo boreas	SPC
Yellowstone Cutthroat Trout	Oncorhynchus clarkii bouvieri	SPC

Cache County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Black Swift	Cypseloides niger	SPC
Bluehead Sucker	Catostomus discobolus	CS
Bobolink	Dolichonyx oryzivorus	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Brown (Grizzly) Bear	Ursus arctos	S-ESA
Burrowing Owl	Athene cunicularia	SPC
California Floater	Anodonta californiensis	SPC
Canada Lynx	Lynx canadensis	S-ESA
Deseret Mountainsnail	Oreohelix peripherica	SPC
Fringed Myotis	Myotis thysanodes	SPC
Grasshopper Sparrow	Ammodramus savannarum	SPC
Great Plains Toad	Bufo cognatus	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Least Chub	Iotichthys phlegethontis	CS
Lewis's Woodpecker	Melanerpes lewis	SPC
Long-billed Curlew	Numenius americanus	SPC
Lyrate Mountainsnail	Oreohelix haydeni	SPC
Northern Goshawk	Accipiter gentilis	CS
Pygmy Rabbit	Brachylagus idahoensis	SPC
Sharp-tailed Grouse	Tympanuchus phasianellus	SPC

Cache County - continued

Common Name	Scientific Name	State Status
Short-eared Owl	Asio flammeus	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Western Red Bat	Lasiurus blossevillii	SPC
Western Toad	Bufo boreas	SPC

Carbon County

Common Name	Scientific Name	State Status
Bald Eagle	Haliaeetus leucocephalus	SPC
Black-footed Ferret	Mustela nigripes	S-ESA
Bluehead Sucker	Catostomus discobolus	CS
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Bonytail	Gila elegans	S-ESA
Burrowing Owl	Athene cunicularia	SPC
Colorado Pikeminnow	Ptychocheilus lucius	S-ESA
Colorado River Cutthroat Trout	Oncorhynchus clarkii pleuriticus	CS
Ferruginous Hawk	Buteo regalis	SPC
Flannelmouth Sucker	Catostomus latipinnis	CS
Greater Sage-grouse	Centrocercus urophasianus	SPC
Humpback Chub	Gila cypha	S-ESA
Kit Fox	Vulpes macrotis	SPC
Northern Goshawk	Accipiter gentilis	CS
Razorback Sucker	Xyrauchen texanus	S-ESA
Roundtail Chub	Gila robusta	CS
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Western Red Bat	Lasiurus blossevillii	SPC
Western Toad	Bufo boreas	SPC
White-tailed Prairie-dog	Cynomys leucurus	SPC

Daggett County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Bear Lake Sculpin	Cottus extensus	SPC
Black-footed Ferret	Mustela nigripes	S-ESA
Bluehead Sucker	Catostomus discobolus	CS
Brown (Grizzly) Bear	Ursus arctos	S-ESA
Canada Lynx	Lynx canadensis	S-ESA
Colorado Pikeminnow	Ptychocheilus lucius	S-ESA
Colorado River Cutthroat Trout	Oncorhynchus clarkii pleuriticus	CS
Flannelmouth Sucker	Catostomus latipinnis	CS
Fringed Myotis	Myotis thysanodes	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Humpback Chub	Gila cypha	S-ESA
Lewis's Woodpecker	Melanerpes lewis	SPC
Northern Goshawk	Accipiter gentilis	CS

Daggett County - continued

Common Name	Scientific Name	State Status
Razorback Sucker	Xyrauchen texanus	S-ESA
Roundtail Chub	Gila robusta	CS
Short-eared Owl	Asio flammeus	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Western Toad	Bufo boreas	SPC
White-tailed Prairie-dog	Cynomys leucurus	SPC

Davis County

Common Name	Scientific Name	State Status
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Bluehead Sucker	Catostomus discobolus	CS
Bobolink	Dolichonyx oryzivorus	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Burrowing Owl	Athene cunicularia	SPC
Columbia Spotted Frog	Rana luteiventris	CS
Ferruginous Hawk	Buteo regalis	SPC
Grasshopper Sparrow	Ammodramus savannarum	SPC
Kit Fox	Vulpes macrotis	SPC
Least Chub	Iotichthys phlegethontis	CS
Lewis's Woodpecker	Melanerpes lewis	SPC
Long-billed Curlew	Numenius americanus	SPC
Short-eared Owl	Asio flammeus	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Western Pearlshell	Margaritifera falcata	SPC
Western Toad	Bufo boreas	SPC

Duchesne County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Black Swift	Cypseloides niger	SPC
Black-footed Ferret	Mustela nigripes	S-ESA
Bluehead Sucker	Catostomus discobolus	CS
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Brown (Grizzly) Bear	Ursus arctos	S-ESA
Burrowing Owl	Athene cunicularia	SPC
Colorado River Cutthroat Trout	Oncorhynchus clarkii pleuriticus	CS
Eureka Mountainsnail	Oreohelix eurekensis	SPC
Ferruginous Hawk	Buteo regalis	SPC
Flannelmouth Sucker	Catostomus latipinnis	CS
Fringed Myotis	Myotis thysanodes	SPC
Gray Wolf	Canis lupus	S-ESA
Greater Sage-grouse	Centrocercus urophasianus	SPC
Kit Fox	Vulpes macrotis	SPC

Duchesne County - continued

Common Name	Scientific Name	State Status
Lewis's Woodpecker	Melanerpes lewis	SPC
Long-billed Curlew	Numenius americanus	SPC
Mountain Plover	Charadrius montanus	SPC
Northern Goshawk	Accipiter gentilis	CS
Roundtail Chub	Gila robusta	CS
Short-eared Owl	Asio flammeus	SPC
Smooth Greensnake	Opheodrys vernalis	SPC
Spotted Bat	Euderma maculatum	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Western Toad	Bufo boreas	SPC
White-tailed Prairie-dog	Cynomys leucurus	SPC

Emery County

Common Name	Scientific Name	State Status
Bald Eagle	Haliaeetus leucocephalus	SPC
Black-footed Ferret	Mustela nigripes	S-ESA
Bluehead Sucker	Catostomus discobolus	CS
Bonytail	Gila elegans	S-ESA
Burrowing Owl	Athene cunicularia	SPC
Canada Lynx	Lynx canadensis	S-ESA
Colorado Pikeminnow	Ptychocheilus lucius	S-ESA
Colorado River Cutthroat Trout	Oncorhynchus clarkii pleuriticus	CS
Ferruginous Hawk	Buteo regalis	SPC
Flannelmouth Sucker	Catostomus latipinnis	CS
Great Plains Toad	Bufo cognatus	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Humpback Chub	Gila cypha	S-ESA
Kit Fox	Vulpes macrotis	SPC
Northern Goshawk	Accipiter gentilis	CS
Razorback Sucker	Xyrauchen texanus	S-ESA
Roundtail Chub	Gila robusta	CS
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Western Toad	Bufo boreas	SPC
White-tailed Prairie-dog	Cynomys leucurus	SPC

Garfield County

Common Name	Scientific Name	State Status
Allen's Big-eared Bat	Idionycteris phyllotis	SPC
American Three-toed Woodpecker	Picoides dorsalis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Arizona Toad	Bufo microscaphus	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Black Canyon Pyrg	Pyrgulopsis plicata	SPC
Bluehead Sucker	Catostomus discobolus	CS
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS

Garfield County - continued

Common Name	Scientific Name	State Status
Bonytail	Gila elegans	S-ESA
Brown (Grizzly) Bear	Ursus arctos	S-ESA
Burrowing Owl	Athene cunicularia	SPC
Colorado Pikeminnow	Ptychocheilus lucius	S-ESA
Colorado River Cutthroat Trout	Oncorhynchus clarkii pleuriticus	CS
Common Chuckwalla	Sauromalus ater	SPC
Desert Night Lizard	Xantusia vigilis	SPC
Flannelmouth Sucker	Catostomus latipinnis	CS
Fringed Myotis	Myotis thysanodes	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Humpback Chub	Gila cypha	S-ESA
Kit Fox	Vulpes macrotis	SPC
Lewis's Woodpecker	Melanerpes lewis	SPC
Northern Goshawk	Accipiter gentilis	CS
Pygmy Rabbit	Brachylagus idahoensis	SPC
Roundtail Chub	Gila robusta	CS
Short-eared Owl	Asio flammeus	SPC
Southern Leatherside Chub	Lepidomeda aliciae	SPC
Spotted Bat	Euderma maculatum	SPC
Spotted Owl	Strix occidentalis	S-ESA
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Utah Physa	Physella utahensis	SPC
Utah Prairie-dog	Cynomys parvidens	S-ESA
Western Toad	Bufo boreas	SPC

Grand County

Common Name	Scientific Name	State Status
Allen's Big-eared Bat	Idionycteris phyllotis	SPC
American Three-toed Woodpecker	Picoides dorsalis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Big Free-tailed Bat	Nyctinomops macrotis	SPC
Black-footed Ferret	Mustela nigripes	S-ESA
Bluehead Sucker	Catostomus discobolus	CS
Bonytail	Gila elegans	S-ESA
Burrowing Owl	Athene cunicularia	SPC
Colorado Pikeminnow	Ptychocheilus lucius	S-ESA
Cornsnake	Elaphe emoryi	SPC
Eureka Mountainsnail	Oreohelix eurekensis	SPC
Ferruginous Hawk	Buteo regalis	SPC
Flannelmouth Sucker	Catostomus latipinnis	CS
Fringed Myotis	Myotis thysanodes	SPC
Great Plains Toad	Bufo cognatus	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Gunnison Sage-grouse	Centrocercus minimus	S-ESA, CS

Grand County - continued

Common Name	Scientific Name	State Status
Gunnison's Prairie-dog	Cynomys gunnisoni	SPC
Humpback Chub	Gila cypha	S-ESA
Kit Fox	Vulpes macrotis	SPC
Lewis's Woodpecker	Melanerpes lewis	SPC
Northern Goshawk	Accipiter gentilis	CS
Razorback Sucker	Xyrauchen texanus	S-ESA
Roundtail Chub	Gila robusta	CS
Smooth Greensnake	Opheodrys vernalis	SPC
Spotted Bat	Euderma maculatum	SPC
Spotted Owl	Strix occidentalis	S-ESA
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
White-tailed Prairie-dog	Cynomys leucurus	SPC
Yellow-billed Cuckoo	Coccyzus americanus	S-ESA

Iron County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
Arizona Toad	Bufo microscaphus	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Black Swift	Cypseloides niger	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Brian Head Mountainsnail	Oreohelix parawanensis	SPC
Brown (Grizzly) Bear	Ursus arctos	S-ESA
Burrowing Owl	Athene cunicularia	SPC
Dark Kangaroo Mouse	Microdipodops megacephalus	SPC
Ferruginous Hawk	Buteo regalis	SPC
Fringed Myotis	Myotis thysanodes	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Kit Fox	Vulpes macrotis	SPC
Least Chub	Iotichthys phlegethontis	CS
Long-billed Curlew	Numenius americanus	SPC
Northern Goshawk	Accipiter gentilis	CS
Pygmy Rabbit	Brachylagus idahoensis	SPC
Short-eared Owl	Asio flammeus	SPC
Southern Leatherside Chub	Lepidomeda aliciae	SPC
Spotted Bat	Euderma maculatum	SPC
Spotted Owl	Strix occidentalis	S-ESA
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Utah Prairie-dog	Cynomys parvidens	S-ESA

Juab County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC

Juab County - continued

Common Name	Scientific Name	State Status
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Burrowing Owl	Athene cunicularia	SPC
California Floater	Anodonta californiensis	SPC
Columbia Spotted Frog	Rana luteiventris	CS
Dark Kangaroo Mouse	Microdipodops megacephalus	SPC
Eureka Mountainsnail	Oreohelix eurekensis	SPC
Ferruginous Hawk	Buteo regalis	SPC
Fringed Myotis	Myotis thysanodes	SPC
Grasshopper Sparrow	Ammodramus savannarum	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Kit Fox	Vulpes macrotis	SPC
Least Chub	Iotichthys phlegethontis	CS
Lewis's Woodpecker	Melanerpes lewis	SPC
Long-billed Curlew	Numenius americanus	SPC
Northern Goshawk	Accipiter gentilis	CS
Pygmy Rabbit	Brachylagus idahoensis	SPC
Short-eared Owl	Asio flammeus	SPC
Southern Leatherside Chub	Lepidomeda aliciae	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Utah Physa	Physella utahensis	SPC
Western Toad	Bufo boreas	SPC

Kane County

Common Name	Scientific Name	State Status
Allen's Big-eared Bat	Idionycteris phyllotis	SPC
American Three-toed Woodpecker	Picoides dorsalis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Arizona Toad	Bufo microscaphus	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Big Free-tailed Bat	Nyctinomops macrotis	SPC
Bluehead Sucker	Catostomus discobolus	CS
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Bonytail	Gila elegans	S-ESA
Burrowing Owl	Athene cunicularia	SPC
Common Chuckwalla	Sauromalus ater	SPC
Desert Night Lizard	Xantusia vigilis	SPC
Desert Sucker	Catostomus clarkii	SPC
Ferruginous Hawk	Buteo regalis	SPC
Flannelmouth Sucker	Catostomus latipinnis	CS
Fringed Myotis	Myotis thysanodes	SPC
Great Plains Toad	Bufo cognatus	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Humpback Chub	Gila cypha	S-ESA
Kanab Ambersnail	Oxyloma kanabense	S-ESA

Kane County - continued

Common Name	Scientific Name	State Status
Kit Fox	Vulpes macrotis	SPC
Northern Goshawk	Accipiter gentilis	CS
Roundtail Chub	Gila robusta	CS
Southern Leatherside Chub	Lepidomeda aliciae	SPC
Southwestern Willow Flycatcher	Empidonax traillii extimus	S-ESA
Spotted Bat	Euderma maculatum	SPC
Spotted Owl	Strix occidentalis	S-ESA
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Utah Prairie-dog	Cynomys parvidens	S-ESA
Virgin Spinedace	Lepidomeda mollispinis	CS
Western Toad	Bufo boreas	SPC

Millard County

Common Name	Scientific Name	State Status
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Bifid Duct Pyrg	Pyrgulopsis peculiaris	SPC
Big Free-tailed Bat	Nyctinomops macrotis	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Burrowing Owl	Athene cunicularia	SPC
California Floater	Anodonta californiensis	SPC
Cloaked Physa	Physa megalochlamys	SPC
Columbia Spotted Frog	Rana luteiventris	CS
Dark Kangaroo Mouse	Microdipodops megacephalus	SPC
Ferruginous Hawk	Buteo regalis	SPC
Fringed Myotis	Myotis thysanodes	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Kit Fox	Vulpes macrotis	SPC
Least Chub	Iotichthys phlegethontis	CS
Lewis's Woodpecker	Melanerpes lewis	SPC
Long-billed Curlew	Numenius americanus	SPC
Longitudinal Gland Pyrg	Pyrgulopsis anguina	SPC
Northern Goshawk	Accipiter gentilis	CS
Pygmy Rabbit	Brachylagus idahoensis	SPC
Short-eared Owl	Asio flammeus	SPC
Southern Leatherside Chub	Lepidomeda aliciae	SPC
Sub-globose Snake Pyrg	Pyrgulopsis saxatilis	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Utah Prairie-dog	Cynomys parvidens	S-ESA
Western Toad	Bufo boreas	SPC

Morgan County

Common Name	Scientific Name	State Status
Bald Eagle	Haliaeetus leucocephalus	SPC
Bluehead Sucker	Catostomus discobolus	CS

Morgan County - continued

Common Name	Scientific Name	State Status
Bobolink	Dolichonyx oryzivorus	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Deseret Mountainsnail	Oreohelix peripherica	SPC
Ferruginous Hawk	Buteo regalis	SPC
Grasshopper Sparrow	Ammodramus savannarum	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Lewis's Woodpecker	Melanerpes lewis	SPC
Lyrate Mountainsnail	Oreohelix haydeni	SPC
Northern Goshawk	Accipiter gentilis	CS
Sharp-tailed Grouse	Tympanuchus phasianellus	SPC
Western Pearlshell	Margaritifera falcata	SPC
Western Toad	Bufo boreas	SPC

Piute County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Brown (Grizzly) Bear	Ursus arctos	S-ESA
California Floater	Anodonta californiensis	SPC
Ferruginous Hawk	Buteo regalis	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Long-billed Curlew	Numenius americanus	SPC
Northern Goshawk	Accipiter gentilis	CS
Otter Creek Pyrg	Pyrgulopsis fusca	SPC
Pygmy Rabbit	Brachylagus idahoensis	SPC
Short-eared Owl	Asio flammeus	SPC
Southern Leatherside Chub	Lepidomeda aliciae	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Utah Physa	Physella utahensis	SPC
Utah Prairie-dog	Cynomys parvidens	S-ESA
Western Toad	Bufo boreas	SPC

Rich County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Bear Lake Sculpin	Cottus extensus	SPC
Bear Lake Springsnail	Pyrgulopsis pilsbryana	SPC
Bear Lake Whitefish	Prosopium abyssicola	SPC
Black-footed Ferret	Mustela nigripes	S-ESA
Bobolink	Dolichonyx oryzivorus	SPC
Bonneville Cisco	Prosopium gemmifer	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS

Rich County - continued

Common Name	Scientific Name	State Status
Bonneville Whitefish	Prosopium spilonotus	SPC
Burrowing Owl	Athene cunicularia	SPC
California Floater	Anodonta californiensis	SPC
Ferruginous Hawk	Buteo regalis	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Least Chub	Iotichthys phlegethontis	CS
Lewis's Woodpecker	Melanerpes lewis	SPC
Lyrate Mountainsnail	Oreohelix haydeni	SPC
Northern Goshawk	Accipiter gentilis	CS
Pygmy Rabbit	Brachylagus idahoensis	SPC
Short-eared Owl	Asio flammeus	SPC
Western Pearlshell	Margaritifera falcata	SPC
Western Toad	Bufo boreas	SPC
White-tailed Prairie-dog	Cynomys leucurus	SPC

Salt Lake County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Black Swift	Cypseloides niger	SPC
Bobolink	Dolichonyx oryzivorus	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Burrowing Owl	Athene cunicularia	SPC
California Floater	Anodonta californiensis	SPC
Columbia Spotted Frog	Rana luteiventris	CS
Ferruginous Hawk	Buteo regalis	SPC
Grasshopper Sparrow	Ammodramus savannarum	SPC
Kit Fox	Vulpes macrotis	SPC
Least Chub	Iotichthys phlegethontis	CS
Lewis's Woodpecker	Melanerpes lewis	SPC
Long-billed Curlew	Numenius americanus	SPC
Lyrate Mountainsnail	Oreohelix haydeni	SPC
Northern Goshawk	Accipiter gentilis	CS
Short-eared Owl	Asio flammeus	SPC
Smooth Greensnake	Opheodrys vernalis	SPC
Spotted Bat	Euderma maculatum	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Western Pearlshell	Margaritifera falcata	SPC
Western Toad	Bufo boreas	SPC
Yellow-billed Cuckoo	Coccyzus americanus	S-ESA

San Juan County

Common Name	Scientific Name	State Status
Allen's Big-eared Bat	Idionycteris phyllotis	SPC
American Three-toed Woodpecker	Picoides dorsalis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Arizona Toad	Bufo microscaphus	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Big Free-tailed Bat	Nyctinomops macrotis	SPC
Black-footed Ferret	Mustela nigripes	S-ESA
Bluehead Sucker	Catostomus discobolus	CS
Bobolink	Dolichonyx oryzivorus	SPC
Bonytail	Gila elegans	S-ESA
Burrowing Owl	Athene cunicularia	SPC
Colorado Pikeminnow	Ptychocheilus lucius	S-ESA
Common Chuckwalla	Sauromalus ater	SPC
Desert Night Lizard	Xantusia vigilis	SPC
Flannelmouth Sucker	Catostomus latipinnis	CS
Fringed Myotis	Myotis thysanodes	SPC
Gray Wolf	Canis lupus	S-ESA
Great Plains Toad	Bufo cognatus	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Gunnison Sage-grouse	Centrocercus minimus	S-ESA, CS
Gunnison's Prairie-dog	Cynomys gunnisoni	SPC
Humpback Chub	Gila cypha	S-ESA
Kit Fox	Vulpes macrotis	SPC
Lewis's Woodpecker	Melanerpes lewis	SPC
Mogollon Vole	Microtus mogollonensis	SPC
Northern Goshawk	Accipiter gentilis	CS
Razorback Sucker	Xyrauchen texanus	S-ESA
Roundtail Chub	Gila robusta	CS
Short-eared Owl	Asio flammeus	SPC
Silky Pocket Mouse	Perognathus flavus	SPC
Smooth Greensnake	Opheodrys vernalis	SPC
Southwestern Willow Flycatcher	Empidonax traillii extimus	S-ESA
Spotted Bat	Euderma maculatum	SPC
Spotted Owl	Strix occidentalis	S-ESA
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
White-tailed Prairie-dog	Cynomys leucurus	SPC
Yavapai Mountainsnail	Oreohelix yavapai	

Sanpete County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Bluehead Sucker	Catostomus discobolus	CS
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Brown (Grizzly) Bear	Ursus arctos	S-ESA

Sanpete County - continued

Common Name	Scientific Name	State Status
Burrowing Owl	Athene cunicularia	SPC
Canada Lynx	Lynx canadensis	S-ESA
Colorado River Cutthroat Trout	Oncorhynchus clarkii pleuriticus	CS
Columbia Spotted Frog	Rana luteiventris	CS
Ferruginous Hawk	Buteo regalis	SPC
Grasshopper Sparrow	Ammodramus savannarum	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Kit Fox	Vulpes macrotis	SPC
Lewis's Woodpecker	Melanerpes lewis	SPC
Long-billed Curlew	Numenius americanus	SPC
Ninemile Pyrg	Pyrgulopsis nonaria	SPC
Northern Goshawk	Accipiter gentilis	CS
Southern Bonneville Springsnail	Pyrgulopsis transversa	SPC
Southern Leatherside Chub	Lepidomeda aliciae	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Utah Prairie-dog	Cynomys parvidens	S-ESA
Western Toad	Bufo boreas	SPC

Sevier County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Big Free-tailed Bat	Nyctinomops macrotis	SPC
Black Swift	Cypseloides niger	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Brown (Grizzly) Bear	Ursus arctos	S-ESA
Burrowing Owl	Athene cunicularia	SPC
Canada Lynx	Lynx canadensis	S-ESA
Carinate Glenwood Pyrg	Pyrgulopsis inopinata	SPC
Colorado River Cutthroat Trout	Oncorhynchus clarkii pleuriticus	CS
Ferruginous Hawk	Buteo regalis	SPC
Fringed Myotis	Myotis thysanodes	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Kit Fox	Vulpes macrotis	SPC
Long-billed Curlew	Numenius americanus	SPC
Northern Goshawk	Accipiter gentilis	CS
Otter Creek Pyrg	Pyrgulopsis fusca	SPC
Pygmy Rabbit	Brachylagus idahoensis	SPC
Short-eared Owl	Asio flammeus	SPC
Smooth Glenwood Pyrg	Pyrgulopsis chamberlini	SPC
Southern Leatherside Chub	Lepidomeda aliciae	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Utah Prairie-dog	Cynomys parvidens	S-ESA
Western Toad	Bufo boreas	SPC

Summit County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Bluehead Sucker	Catostomus discobolus	CS
Bobolink	Dolichonyx oryzivorus	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Brown (Grizzly) Bear	Ursus arctos	S-ESA
Canada Lynx	Lynx canadensis	S-ESA
Colorado River Cutthroat Trout	Oncorhynchus clarkii pleuriticus	CS
Columbia Spotted Frog	Rana luteiventris	CS
Deseret Mountainsnail	Oreohelix peripherica	SPC
Ferruginous Hawk	Buteo regalis	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Lewis's Woodpecker	Melanerpes lewis	SPC
Northern Goshawk	Accipiter gentilis	CS
Northern Leatherside Chub	Lepidomeda copei	SPC
Short-eared Owl	Asio flammeus	SPC
Smooth Greensnake	Opheodrys vernalis	SPC
Western Pearlshell	Margaritifera falcata	SPC
Western Toad	Bufo boreas	SPC
White-tailed Prairie-dog	Cynomys leucurus	SPC

Tooele County

Common Name	Scientific Name	State Status
Allen's Big-eared Bat	Idionycteris phyllotis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Bobolink	Dolichonyx oryzivorus	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Burrowing Owl	Athene cunicularia	SPC
California Floater	Anodonta californiensis	SPC
Columbia Spotted Frog	Rana luteiventris	CS
Dark Kangaroo Mouse	Microdipodops megacephalus	SPC
Eureka Mountainsnail	Oreohelix eurekensis	SPC
Ferruginous Hawk	Buteo regalis	SPC
Fringed Myotis	Myotis thysanodes	SPC
Grasshopper Sparrow	Ammodramus savannarum	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Kit Fox	Vulpes macrotis	SPC
Least Chub	Iotichthys phlegethontis	CS
Lewis's Woodpecker	Melanerpes lewis	SPC
Long-billed Curlew	Numenius americanus	SPC
Lyrate Mountainsnail	Oreohelix haydeni	SPC
Northern Goshawk	Accipiter gentilis	CS
Northwest Bonneville Pyrg	Pyrgulopsis variegata	SPC
Preble's Shrew	Sorex preblei	SPC

Tooele County - continued

Common Name	Scientific Name	State Status
Pygmy Rabbit	Brachylagus idahoensis	SPC
Short-eared Owl	Asio flammeus	SPC
Southern Bonneville Springsnail	Pyrgulopsis transversa	SPC
Southern Tightcoil	Ogaridiscus subrupicola	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Utah Physa	Physella utahensis	SPC

Uintah County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Big Free-tailed Bat	Nyctinomops macrotis	SPC
Black-footed Ferret	Mustela nigripes	S-ESA
Bluehead Sucker	Catostomus discobolus	CS
Bobolink	Dolichonyx oryzivorus	SPC
Bonytail	Gila elegans	S-ESA
Brown (Grizzly) Bear	Ursus arctos	S-ESA
Burrowing Owl	Athene cunicularia	SPC
Canada Lynx	Lynx canadensis	S-ESA
Colorado Pikeminnow	Ptychocheilus lucius	S-ESA
Colorado River Cutthroat Trout	Oncorhynchus clarkii pleuriticus	CS
Cornsnake	Elaphe emoryi	SPC
Ferruginous Hawk	Buteo regalis	SPC
Flannelmouth Sucker	Catostomus latipinnis	CS
Fringed Myotis	Myotis thysanodes	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Humpback Chub	Gila cypha	S-ESA
Kit Fox	Vulpes macrotis	SPC
Lewis's Woodpecker	Melanerpes lewis	SPC
Long-billed Curlew	Numenius americanus	SPC
Mountain Plover	Charadrius montanus	SPC
Northern Goshawk	Accipiter gentilis	CS
Razorback Sucker	Xyrauchen texanus	S-ESA
Roundtail Chub	Gila robusta	CS
Short-eared Owl	Asio flammeus	SPC
Smooth Greensnake	Opheodrys vernalis	SPC
Spotted Bat	Euderma maculatum	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
White-tailed Prairie-dog	Cynomys leucurus	SPC
Yellow-billed Cuckoo	Coccyzus americanus	S-ESA

Utah County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Black Swift	Cypseloides niger	SPC
Bluehead Sucker	Catostomus discobolus	CS
Bobolink	Dolichonyx oryzivorus	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Brown (Grizzly) Bear	Ursus arctos	S-ESA
Burrowing Owl	Athene cunicularia	SPC
California Floater	Anodonta californiensis	SPC
Colorado River Cutthroat Trout	Oncorhynchus clarkii pleuriticus	CS
Columbia Spotted Frog	Rana luteiventris	CS
Eureka Mountainsnail	Oreohelix eurekensis	SPC
Ferruginous Hawk	Buteo regalis	SPC
Fringed Myotis	Myotis thysanodes	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
June Sucker	Chasmistes liorus	S-ESA
Kit Fox	Vulpes macrotis	SPC
Least Chub	Iotichthys phlegethontis	CS
Lewis's Woodpecker	Melanerpes lewis	SPC
Long-billed Curlew	Numenius americanus	SPC
Northern Goshawk	Accipiter gentilis	CS
Roundtail Chub	Gila robusta	CS
Short-eared Owl	Asio flammeus	SPC
Smooth Greensnake	Opheodrys vernalis	SPC
Southern Bonneville Springsnail	Pyrgulopsis transversa	SPC
Southern Leatherside Chub	Lepidomeda aliciae	SPC
Spotted Bat	Euderma maculatum	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Utah Physa	Physella utahensis	SPC
Western Red Bat	Lasiurus blossevillii	SPC
Western Toad	Bufo boreas	SPC
White-tailed Prairie-dog	Cynomys leucurus	SPC
Yellow-billed Cuckoo	Coccyzus americanus	S-ESA

Wasatch County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Black Swift	Cypseloides niger	SPC
Bluehead Sucker	Catostomus discobolus	CS
Bobolink	Dolichonyx oryzivorus	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Brown (Grizzly) Bear	Ursus arctos	S-ESA
Canada Lynx	Lynx canadensis	S-ESA

Wasatch County - continued

Common Name	Scientific Name	State Status
Colorado River Cutthroat Trout	Oncorhynchus clarkii pleuriticus	CS
Columbia Spotted Frog	Rana luteiventris	CS
Ferruginous Hawk	Buteo regalis	SPC
Fringed Myotis	Myotis thysanodes	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Lewis's Woodpecker	Melanerpes lewis	SPC
Northern Goshawk	Accipiter gentilis	CS
Roundtail Chub	Gila robusta	CS
Short-eared Owl	Asio flammeus	SPC
Smooth Greensnake	Opheodrys vernalis	SPC
Southern Leatherside Chub	Lepidomeda aliciae	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Western Toad	Bufo boreas	SPC
Yellow-billed Cuckoo	Coccyzus americanus	S-ESA

Washington County

Common Name	Scientific Name	State Status
Allen's Big-eared Bat	Idionycteris phyllotis	SPC
American Three-toed Woodpecker	Picoides dorsalis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Arizona Toad	Bufo microscaphus	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Big Free-tailed Bat	Nyctinomops macrotis	SPC
Black Swift	Cypseloides niger	SPC
Bluehead Sucker	Catostomus discobolus	CS
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Brown (Grizzly) Bear	Ursus arctos	S-ESA
Burrowing Owl	Athene cunicularia	SPC
Common Chuckwalla	Sauromalus ater	SPC
Desert Iguana	Dipsosaurus dorsalis	SPC
Desert Night Lizard	Xantusia vigilis	SPC
Desert Springsnail	Pyrgulopsis deserta	SPC
Desert Sucker	Catostomus clarkii	SPC
Desert Tortoise	Gopherus agassizii	S-ESA
Ferruginous Hawk	Buteo regalis	SPC
Flannelmouth Sucker	Catostomus latipinnis	CS
Fringed Myotis	Myotis thysanodes	SPC
Gila Monster	Heloderma suspectum	SPC
Gray Wolf	Canis lupus	S-ESA
Greater Sage-grouse	Centrocercus urophasianus	SPC
Kit Fox	Vulpes macrotis	SPC
Lewis's Woodpecker	Melanerpes lewis	SPC
Long-billed Curlew	Numenius americanus	SPC
Mojave Rattlesnake	Crotalus scutulatus	SPC
Mountain Plover	Charadrius montanus	SPC

Washington County - continued

Common Name	Scientific Name	State Status
Northern Goshawk	Accipiter gentilis	CS
Pygmy Rabbit	Brachylagus idahoensis	SPC
Relict Leopard Frog	Rana onca	S-ESA
Short-eared Owl	Asio flammeus	SPC
Sidewinder	Crotalus cerastes	SPC
Southwestern Willow Flycatcher	Empidonax traillii extimus	S-ESA
Speckled Rattlesnake	Crotalus mitchellii	SPC
Spotted Bat	Euderma maculatum	SPC
Spotted Owl	Strix occidentalis	S-ESA
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Virgin Chub	Gila seminuda	S-ESA
Virgin Spinedace	Lepidomeda mollispinis	CS
Western Banded Gecko	Coleonyx variegatus	SPC
Western Red Bat	Lasiurus blossevillii	SPC
Western Threadsnake	Leptotyphlops humilis	SPC
Western Toad	Bufo boreas	SPC
Wet-rock Physa	Physella zionis	SPC
Woundfin	Plagopterus argentissimus	S-ESA
Yellow-billed Cuckoo	Coccyzus americanus	S-ESA
Zebra-tailed Lizard	Callisaurus draconoides	SPC

Wayne County

Common Name	Scientific Name	State Status
Allen's Big-eared Bat	Idionycteris phyllotis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Big Free-tailed Bat	Nyctinomops macrotis	SPC
Bluehead Sucker	Catostomus discobolus	CS
Bonytail	Gila elegans	S-ESA
Burrowing Owl	Athene cunicularia	SPC
Colorado Pikeminnow	Ptychocheilus lucius	S-ESA
Colorado River Cutthroat Trout	Oncorhynchus clarkii pleuriticus	CS
Ferruginous Hawk	Buteo regalis	SPC
Flannelmouth Sucker	Catostomus latipinnis	CS
Fringed Myotis	Myotis thysanodes	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Humpback Chub	Gila cypha	S-ESA
Kit Fox	Vulpes macrotis	SPC
Northern Goshawk	Accipiter gentilis	CS
Pygmy Rabbit	Brachylagus idahoensis	SPC
Razorback Sucker	Xyrauchen texanus	S-ESA
Roundtail Chub	Gila robusta	CS
Short-eared Owl	Asio flammeus	SPC
Southern Leatherside Chub	Lepidomeda aliciae	SPC
Spotted Bat	Euderma maculatum	SPC

Wayne County - continued

Common Name	Scientific Name	State Status
Spotted Owl	Strix occidentalis	S-ESA
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Utah Prairie-dog	Cynomys parvidens	S-ESA
Western Toad	Bufo boreas	SPC

Weber County

Common Name	Scientific Name	State Status
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Bluehead Sucker	Catostomus discobolus	CS
Bobolink	Dolichonyx oryzivorus	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Burrowing Owl	Athene cunicularia	SPC
Columbia Spotted Frog	Rana luteiventris	CS
Deseret Mountainsnail	Oreohelix peripherica	SPC
Grasshopper Sparrow	Ammodramus savannarum	SPC
Gray Wolf	Canis lupus	S-ESA
Greater Sage-grouse	Centrocercus urophasianus	SPC
Kit Fox	Vulpes macrotis	SPC
Lewis's Woodpecker	Melanerpes lewis	SPC
Long-billed Curlew	Numenius americanus	SPC
Lyrate Mountainsnail	Oreohelix haydeni	SPC
Northern Goshawk	Accipiter gentilis	CS
Sharp-tailed Grouse	Tympanuchus phasianellus	SPC
Short-eared Owl	Asio flammeus	SPC
Smooth Greensnake	Opheodrys vernalis	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Yellow-billed Cuckoo	Coccyzus americanus	S-ESA

Key to State Status Field

Symbol	Definition
S-ESA	Federally-listed or candidate species under the Endangered Species Act.
SPC	Wildlife species of concern.
CS	Species receiving special management under a Conservation Agreement in order to preclude the need for Federal listing.

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BIRD CONSERVATION REGION (BCR) LIST

BCR 9 (Great Basin) *BCC 2008* list.[9]

Greater Sage-Grouse (Columbia Basin DPS) (a)
Eared Grebe (nb)
Bald Eagle (b)
Ferruginous Hawk
Golden Eagle
Peregrine Falcon (b)
Yellow Rail
Snowy Plover (c)
Long-billed Curlew
Marbled Godwit (nb)
Yellow-billed Cuckoo (w. U.S. DPS) (a)
Flammulated Owl
Black Swift
Calliope Hummingbird
Lewis's Woodpecker
Williamson's Sapsucker
White-headed Woodpecker
Willow Flycatcher (c)
Loggerhead Shrike
Pinyon Jay
Sage Thrasher
Virginia's Warbler
Green-tailed Towhee
Brewer's Sparrow
Black-chinned Sparrow
Sage Sparrow
Tricolored Blackbird
Black Rosy-Finch

9 (a) ESA candidate, (b) ESA delisted, (c) non-listed subspecies or population of Threatened or Endangered species, (d) MBTA protection uncertain or lacking, (nb) non-breeding in this BCR

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Appendix F
FAA Aeronautical Correspondence

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Federal Aviation Administration

Memorandum

Date: December 14, 2018

To: Manager, Operations Support Group, Western Service Center

From: Brett Waddoups, Air Space Manager, Salt Lake City ARTCC

Subject: Salt Lake City ARTCC Aeronautical Study Response to the U.S. Air Force, Headquarters Utah Test and Training Range Hill Air Force Base to Establish a new Restricted Area Airspace R-6401

The U.S. Air Force Headquarters, Utah Test and Training Range, Hill Air Force Base UT requests the establishment of Restricted Area R-6401, Wendover Site, Wendover UT.

The airspace will be vertically defined from the surface to 10,800 feet MSL. The site is owned and operated by the US Army and Dugway Proving Ground.

R-6401 times of use requested are Monday-Thursday: 0700-2400 Local; other times by NOTAM. Salt Lake City ARTCC will act as the Controlling Agency and the USAF, Commander, HQ UTTR (ACC), Hill AFB, UT as the using agency.

The proposal provides four alternatives:
Alternative A, Wendover Site and Proposed R-6401
Alternative B, Former JLENS Site
Alternative C, Former GLCM Site
Alternative D, South Range Sites

Wendover Site and Proposed R-6401 – This alternative consists of a new launch, control, recovery, and maintenance operation near Wendover, along with the creation of the proposed R-6401.

The attached document provides an overview of the existing and proposed airspace and impact on IFR/VFR operations, routes and existing air traffic procedures.

Attachments

Proposed R-6401, Wendover, UT Restricted Area

Aeronautical Study

Introduction:

The purpose of the proposed action is to provide the infrastructure and airspace necessary to accommodate the launch, control, recovery, and maintenance of UAS into and out of adjoining (proposed R-6401) and existing (R- 6405) RA airspace.

This proposal requests the establishment of the Restricted Area R-6401. The airspace will be vertically defined from the surface to 10,800 feet MSL.

Background:

Due to the increasing Army test and training operations at the former Ground Launch Cruise Missile (GLCM) site and the continued growth of the HQ UTTR UA program, the USAF needs to relocate the UAS program to a new site.

The former GLCM site has no opportunity for expansion and no opportunities to increase weapon system evaluations. HQ UTTR has access and scheduling limitations at the former GLCM site that could negatively impact the Air-to-Air Weapons System Evaluation Program (COMBAT ARCHER) mission by reducing the number of UA operations completed from the former GLCM site.

HQ UTTR needs to increase the capability and flexibility of test and training to meet expanding operational requirements to respond to increasingly complex combat conditions.

In addition, new RA is needed to segregate non-participating air traffic from the hazards associated with the launch, control, recovery, and maintenance of UAs proposed for use. SSATs use Rocket-Assisted Takeoff (RATO) bottles for launch and large parachutes for recovery.

Alternatives:

HQ UTTR identified four potential alternative sites that met the purpose and need. The four alternative sites are described below. For the purpose of this study, alternative A was the only alternative evaluated since alternatives B, C and D are already contained within existing restricted areas.

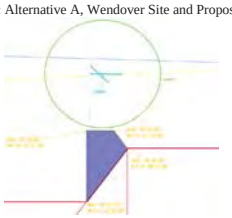
Alternative A, Wendover Site and Proposed R-6401(Fig 1) – This alternative consists of a new launch, control, recovery, and maintenance operation near Wendover, along with the creation of the proposed R-6401.

Alternative B, Former JLENS Site – This alternative includes the former Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) site on the North Range. This site was identified as a potential alternative for the proposed action.

Alternative C, Former GLCM Site – This alternative includes expanding the existing UA launch site on the former GLCM site at DPG. This site was identified as an alternative to the proposed action.

Alternative D, South Range Sites – This alternative consists of two sites located farther south on DoD land in the UTTR and under the existing RA. These sites were identified as an alternative to the proposed action.

Fig. 1: Alternative A, Wendover Site and Proposed R-6401



Airspace Review

For this Aeronautical review we did not review alternatives B, C and D as they are currently within restricted airspace. Salt Lake Center would prefer one of these alternatives. We have no objection to any of these sites as long as all activity remains within restricted airspace at all times. Because of this, only alternative A, Wendover Site and Proposed R-6401, was the only alternative reviewed.

For the review we used the Performance Data Analysis System (PDARS) and traffic count data derived from multiple sources. The PDARs system cannot track all VFR aircraft below 12,000msl in the Wendover area due to radar coverage, terrain and aircraft equipment capabilities. The result is the PDARs data does not reflect the actual traffic count numbers. VFR aircraft comprise the majority of Wendover traffic.

The PDARs review examined snapshots of 7 representative days of traffic over 3 periods: July 8-14, 2018, July 22-28, 2018 and August 5-11, 2018, in a 24 hour period. (See table below). The data reflects arrival and departures form Wendover airport, and aircraft that fly over and in close proximity to the proposed Restricted Airspace from SFC-10,800 MSL(Fig. 2).

The majority of aircraft that would fly in or near the proposed airspace below FL180 are IFR/VFR Wendover arrivals and departures. The PDARS review did not analyze airspace above FL180.

(Fig. 2)

		A/C Entering Proposed R-6401	ENV IFR Arrivals/Departures	VFR below 10,800
7/8/2018		0	4	0
7/9/2018		0	2	0
7/10/2018		0	3	0
7/11/2018		0	2	0
7/12/2018		0	5	0
7/13/2018		0	0	0
7/14/2018		0	0	0
7/22/2018		1	1	0
7/23/2018		0	6	0
7/24/2018		0	4	0
7/25/2018		0	9	0
7/26/2018		0	4	0
7/27/2018		1	6	0
7/28/2018		1	4	0
8/5/2018		2	2	0
8/6/2018		0	2	0
8/7/2018		0	2	0
8/8/2018		0	0	0
8/9/2018		0	2	0
8/10/2018		0	3	0
8/11/2018		0	1	0

Existing Airspace

The proposed R-6401 would lie approximately 3.14 miles south of Wendover airport. Wendover airport is located approximately 93 miles west of Salt Lake City, Utah. It lies between Utah Test and Training Ranges North and South Ranges. The North Range refers to R6404A, B, C, Lucin A, B and C MOAs. The "South Range" refers to R6402 A and B, R6405, R6406 A and B, R6407, Sevier A and B MOAs and the Gandy MOA/ATCAA.

Wendover airport is located at the west end of what is referred to as the west corridor. The corridor is roughly 15-25 miles wide and approximately 85 miles long. The corridor is the only East/West route between the North and South Ranges for both IFR and VFR aircraft. If this corridor did not exist all aircraft would have to fly around the UTTR ranges.

Wendover's annual operations are 803 Commercial Services, 3,025 General Aviation Operations and 161 Military Operations for end date 01/02/2018. Wendover airport is open to the public and has no control tower.

Aircraft based on the field: 5
Single engine airplanes: 1
Multi engine airplanes: 1
Jet airplanes: 3

Aircraft operations: avg 76/week *
74% transient general aviation
20% commercial
4% military
2% local general aviation
* for 12-month period ending 02 January 2018

Wendover airport has 6 IFR Instrument Approach procedures (IAP) and one IFR departure procedure. (below).

1. RNAV (GPS) RWY08
2. RNAV (GPS) RWY26
3. RNAV (GPS) -A
4. RNAV (GPS) -C
5. VOR/DME-B
6. VOR/DME or TACAN RWY26

Departure Procedures

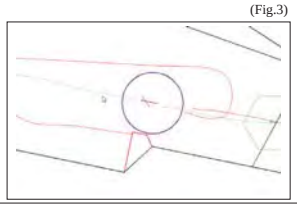
1. WENDOVER ONE (RNAV)

Other nearby airports with instrument procedures:
KDPG - Michael Army Airfield (Dugway Proving Ground) (59 nm SE)
KTVY - Bolinder Field-Tooele Valley Airport (77 nm E)
KEKO - Elko Regional Airport (80 nm W)
U42 - South Valley Regional Airport (93 nm E)
KELY - Ely Airport (Yelland Field) (93 nm SW)

IMPACTS to IFR AIRCRAFT:

There is no impact to enroute IFR aircraft above FL180. The only IFR aircraft impacted would be IFR arrival/departures from Wendover airport. Currently aircraft departing Wendover Airport using the Wendover One (RNAV departure) Takeoff Runway 26 and 12 point aircraft directly into Restricted Airspace, as do the missed approach procedures for IAP RWY 26. During these procedures it is often necessary for aircraft to enter restricted airspace. ZLC and Clover have attempted to fix this by creating IFR Approach/SID areas (attachment 4 of the "Interfaculty Coordination and Operating Procedures" LOA) (HAFB#1149). However this only available when Clover is open. The boundaries of the proposed restricted area would substantially increase the likelihood of aircraft entering the restricted area. PDARs data show IFR aircraft occasionally entering restricted airspace, including the proposed R-6401airspace (Fig.3). In each case a point out was obtained from Clover. When Clover is not open a point out would not be possible and these aircraft would have violated restricted airspace.

(Fig.3)



7/27/18 24hrs 1 ENV Departure through proposed R-6401 south of ENV, 6 arrivals/departures at ENV

IMPACTS To VFR AIRCRAFT:

The proposed restricted area will have minimal impact on Victor Route 32. Currently VFR aircraft below FL180 fly a narrow corridor between Salt Lake City and Wendover. The PDARS review above show no VFR aircraft below 10,800MSL because of PDARS limitations. So it is difficult to determine specific impacts. However, VFR aircraft comprise the bulk of Wendover traffic. It is common for VFR aircraft to fly along the I-80 freeway. With the proposed restricted airspace sticking out approx. 1 mile north of R6405 the potential for VFR aircraft to penetrate this airspace is extremely likely.

Due to the close proximity to restricted airspace, (UTTR range N and S), VFR aircraft departing Wendover are regularly unaware they have enter restricted airspace. ZLC currently has an open ATSAP report concerning this issue.

As with current restricted airspace, Clover Control will have jurisdiction and responsibility to provide radar services in the proposed airspace (Fig1). When not in use, this airspace would revert to Salt Lake Center airspace. Letter of Agreement, "Interfacility Coordination and Operating Procedures" LOA (HAFB#11B49) would need to be updated to reflect this.

All facilities in or adjoining to the R-6401 airspace must adhere to all SAA rules and regulations as per LOA, FAAO 7110.65 and other FAA orders, and will be responsible for ensuring separation of nonparticipating aircraft from the active airspace. All Wendover airport Initial Approach Procedures, IFR departures and Missed Approach procedures must be reevaluated by United Sates Standard for Terminal Instrument Procedures (TERPS) to insure all procedures remain clear of, and aircraft are capable of staying clear of, not only proposed R-6401, but all restricted airspace.

Recommendations

Salt Lake center has no objection to alternatives B, C and D as long as all activity remains within restricted airspace at all times.

Salt Lake Center has no objection to Alternative A with the following changes:

1. Boundaries requested should not protrude past the current R-6406A north boundary line.
2. Clover must be open during all active times.
3. Times of use must be activated/closed real time with Clover Control.
4. All Instrument Approach Procedures, IFR departures and Missed Approach procedures must be reevaluated by United Sates Standard for Terminal Instrument Procedures (TERPS) to insure all IAP procedures remain clear of and aircraft are capable of staying clear of restricted airspace.
5. Drones or any other UAV activity would be restricted to entering the south range only.

Federal Aviation Administration

Memorandum

Date: March 13, 2019

To: Manager, Operations Support Group, Western Service Center

From: Brett Waddoups, Air Traffic Manager, Salt Lake City ARTCC

Subject: Mitigation efforts for R-6401 proposal

Salt Lake Center recently completed an aeronautical study for the creation of R-6401. In the aeronautical, we detailed impacts to airspace in and around the proposed R6401 airspace, including IFR and VFR aircraft, and in particular, impacts to Wendover airport (ENV). In the aeronautical Salt Lake Center could not support the proposed airspace, and Salt Lake Center recommended changes to the airspace, as follows:

1. Boundaries requested should not protrude past the current R-6406A north boundary line.
2. Clover must be open during all active times.
3. Airspace must be activated/deactivated real time with Clover Control.
4. All Instrument Approach Procedures, Instrument Departures, and Missed Approach Procedures must be reevaluated by United Sates Standard for Terminal Instrument Procedures (TERPS) to insure all instrument procedures remain clear of and aircraft are capable of staying clear of restricted airspace.
5. Drones or any other UAV activity would be restricted to entering the south range only.

Since the aeronautical submission, Salt Lake Center has been working with Clover Control and will conditionally support the proposed R-6401 airspace under the following conditions:

1. Salt Lake Center will delegate airspace encompassing ENV, specifically areas X-Ray and Skull Valley, 13,000 and below to Clover.
2. An LOA is developed to delegate this airspace to Clover.
3. Clover will work all Wendover IFR arrivals, departures and overflights, VFR traffic, all traffic in area X-ray, Skull Valley, and R6401when open.
4. Clover must be open during all times R6401 is active.
5. Clover must submit regular working hours and may add to but not subtract from those hours.
6. NOTAMS must be issued for all times R6401 is in use.
7. Any and all changes to publications are accomplished reflecting the change.

Salt Lake Center still highly recommends all Instrument Approach Procedures and Departure Procedures be reevaluated by United Sates Standard for Terminal Instrument Procedures (TERPS) to ensure all procedures remain clear of and aircraft are capable of staying clear of restricted airspace. If for any reason any of the conditions are not met, our original response stands.

We value our relationship with Clover, the 388th. and all personnel at Hill AFB and look forward to working with you to develop procedures to safely transition and work this airspace.

Appendix G
Air Quality

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Acronyms and Abbreviations

Acronym	*Definition*
$\mu g/m^3$	Micrograms per cubic meter
CAA	Clean Air Act
CFR	*Code of Federal Regulations*
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalents
DoD	U.S. Department of Defense
ft	Feet
ft^2	Square feet
HDDV	Heavy Duty Diesel Vehicle
HDGV	Heavy Duty Gas Vehicle
Lb	pounds
LDDT	Light Duty Diesel Truck
LDDV	Light Duty Diesel Vehicle
LDGT	Light Duty Gas Truck
LDGV	Light Duty Gas Vehicle
MC	Motorcycle
mg/m^3	Milligrams per cubic meter
NAAQS	National Ambient Air Quality Standards
NEI	National Emissions Inventory
NO_2	Nitrogen dioxide
NO_x	Nitrogen oxides
O_3	Ozone
PM_{10}	particulate matter less than or equal to 10 microns in diameter
$PM_{2.5}$	particulate matter less than or equal to 2.5 microns in diameter
POV	Privately owned vehicle
ppb	Parts per billion
ppm	Parts per million
PSD	Prevention of Significant Deterioration
ROI	region of influence
SO_2	Sulfur dioxides
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound
Yd^3	Cubic yards

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G.1 AIR QUALITY METHODOLOGY AND CALCULATIONS

This appendix presents an overview of the Clean Air Act (CAA) requirements, as well as calculations, including the assumptions used for the air quality analyses presented in the Environmental Assessment.

G.1.1 Air Quality Program Overview

In order to protect public health and welfare, the U.S. Environmental Protection Agency (USEPA) has developed numerical concentration-based standards, or National Ambient Air Quality Standards (NAAQS), for six "criteria" pollutants (based on health-related criteria) under the provisions of the CAA Amendments of 1970. There are two kinds of NAAQS: primary and secondary standards. Primary standards prescribe the maximum permissible concentration in the ambient air to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards prescribe the maximum concentration or level of air quality required to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings (40 *Code of Federal Regulations [CFR]* 50).

The CAA gives states the authority to establish air quality rules and regulations. These rules and regulations must be equivalent to, or more stringent than, the federal program.

Utah has adopted the federal NAAQS as shown in Table G-1. Based on measured ambient air pollutant concentrations, the USEPA designates areas of the United States as having air quality better than the NAAQS (attainment), worse than the NAAQS (nonattainment), and unclassifiable. The areas that cannot be classified (on the basis of available information) as meeting or not meeting the NAAQS for a particular pollutant are "unclassifiable" and are treated as attainment areas until proven otherwise. Attainment areas can be further classified as "maintenance" areas, which are areas previously classified as nonattainment areas but where air pollutant concentrations have been successfully reduced to below the standard. Maintenance areas are subject to special maintenance plans and must operate under some of the nonattainment area plans to ensure compliance with the NAAQS. Tooele County is classified as being in serious nonattainment for the 2006 $PM_{2.5}$ standard and nonattainment for the 1971 sulfur dioxide standard.

A general conformity analysis is required to be conducted for areas designated as nonattainment or maintenance of the NAAQS if the action's direct and indirect emissions have a potential to emit one or more of the six criteria pollutants at or above concentrations standards shown in Table G-1 or the *de minimis* emission rate thresholds in Table G-2 or Table G-3.

Table G-1. Summary of National Ambient Air Quality Standards

Pollutants		Primary/Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)		primary	8 hours	9 ppm	Not to be exceeded more than once per year
			1 hour	35 ppm	
Lead (Pb)		primary and secondary	Rolling 3 month average	0.15 $\mu g/m^3$(1)	Not to be exceeded
Nitrogen Dioxide (NO_2)		primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		primary and secondary	1 year	53 ppb(2)	Annual mean
Ozone (O_3)		primary and secondary	8 hours	0.070 ppm(3)	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution	$PM_{2.5}$	primary	1 year	12.0 $\mu g/m^3$	annual mean, averaged over 3 years
		secondary	1 year	15 $\mu g/m^3$	annual mean, averaged over 3 years
		primary and secondary	24 hours	35 $\mu g/m^3$	98th percentile , averaged over 3 years
	PM_{10}	primary and secondary	24 hours	150 $\mu g/m^3$	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO_2)		primary	1 hour	75 ppb(4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

Source: (U.S. EPA, 2017)

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

Table G-2. Emission Rates for Criteria Pollutants in Nonattainment Areas[1]

Pollutant	*Emission Rate (tons/year)*
Ozone (VOCs or NO_x)	
Serious nonattainment areas	50
Severe nonattainment areas	25
Extreme nonattainment areas	10
Other ozone nonattainment areas outside an ozone transport region	100
Marginal and moderate nonattainment areas inside an ozone transport region	
VOCs	50
NO_x	100
CO: All nonattainment areas	100
SO_2 or NO_2: All nonattainment areas	100
PM_{10}	
Moderate nonattainment areas	100
Serious nonattainment areas	70
$PM_{2.5}$	
Direct emissions	100
SO_2	100
NO_x (unless determined not to be a significant precursor)	100
VOCs or ammonia (if determined to be significant precursors)	100
Pb: All nonattainment areas	25

Source: (U.S. EPA, 2017)

Key: CO = carbon monoxide; NO_2 = nitrogen dioxide; NO_x = nitrogen oxides; VOC = volatile organic compound; Pb = lead; $PM_{2.5}$ = particulate matter with a diameter less than or equal to 2.5 microns; PM_{10} = particulate matter with a diameter less than or equal to 10 microns; SO_2 = sulfur dioxide.

[1] *De minimis* threshold levels for conformity applicability analysis.

Table G-3. Emission Rates for Criteria Pollutants in Attainment (Maintenance) Areas[1]

Pollutant	*Emission Rate (tons/year)*
Ozone (NO_x, SO_2, or NO_2): All maintenance areas	100
Ozone (VOCs)	
Maintenance areas inside an ozone transport region	50
Maintenance areas outside an ozone transport region	100
CO: All maintenance areas	100
PM_{10}: All maintenance areas	100
$PM_{2.5}$	
Direct emissions	100
SO_2	100
NO_x (unless determined not to be a significant precursor)	100
VOCs or ammonia (if determined to be significant precursors)	100
Pb: All maintenance areas	25

Source: (U.S. EPA, 2017)

Key: CO = carbon monoxide; NO_x = nitrogen oxides; VOC = volatile organic compound; Pb = lead; $PM_{2.5}$ = particulate matter with a diameter less than or equal to 2.5 microns; PM_{10} = particulate matter with a diameter less than or equal to 10 microns; SO_2 = sulfur dioxide.

[1] *De minimis* threshold levels for conformity applicability analysis.

Each state is required to develop a State Implementation Plan (SIP) that sets forth how CAA provisions will be imposed within the state. The SIP is the primary means for the implementation, maintenance, and enforcement of the measures needed to attain and maintain the NAAQS within each state and includes control measures, emissions limitations, and other provisions required to attain and maintain the ambient air quality standards. The purpose of the SIP is twofold. First, it must provide a control strategy that will result in the attainment and maintenance of the NAAQS. Second, it must demonstrate that progress is being made in attaining the standards in each nonattainment area.

In attainment areas, major new or modified stationary sources of air emissions on and in the area are subject to Prevention of Significant Deterioration (PSD) review to ensure that these sources are constructed without causing significant adverse deterioration of the clean air in the area. A major new source is defined as one that has the potential to emit any pollutant regulated under the CAA in amounts equal to or exceeding specific major source thresholds, that is, 100 or 250 tons/year based on the source's industrial category. A major modification is a physical change or change in the method of operation at an existing major source that causes a significant "net emissions increase" at that source of any regulated pollutant. Table G-4 lists the PSD significant emissions rate thresholds for selected criteria pollutants (U.S. EPA, 1990).

Table G-4. Criteria Pollutant Significant Emissions Rate Increases Under PSD Regulations

Pollutant	*Significant Emissions Rate (tons/year)*
PM_{10}	15
$PM_{2.5}$	10
Total suspended particulates	25
SO_2	40
NO_x	40
Ozone (VOCs)	40
CO	100

Source: Title 40 CFR Part 51

Key: CO = carbon monoxide; NO_x = nitrogen oxides; VOC = volatile organic compound; Pb = lead; $PM_{2.5}$ = particulate matter with a diameter less than or equal to 2.5 microns; PM_{10} = particulate matter with a diameter less than or equal to 10 microns; PSD = Prevention of Significant Deterioration; SO_2 = sulfur dioxide; VOC = volatile organic compound.

The goals of the PSD program are to (1) ensure economic growth while preserving existing air quality; (2) protect public health and welfare from adverse effects that might occur even at pollutant levels better than the NAAQS; and (3) preserve, protect, and enhance the air quality in areas of special natural recreational, scenic, or historic value, such as national parks and wilderness areas. Sources subject to PSD review are required by the CAA to obtain a permit before commencing construction. The permit process requires an extensive review of all other major sources within a 50-mile radius and all Class I areas within a 62-mile radius of the facility. Emissions from any new or modified source must be controlled using best available control technology. The air quality, in combination with other PSD sources in the area, must not exceed the maximum allowable incremental increase identified in Table G-5. National parks and wilderness areas are designated as Class I areas, where any appreciable deterioration in air quality is considered significant. Class II areas are those where moderate, well-controlled industrial growth could be permitted. Class III areas allow for greater industrial development.

Table G-5. Federal Allowable Pollutant Concentration Increases Under PSD Regulations

Pollutant	*Averaging Time*	*Maximum Allowable Concentration (μg/m³)*		
		Class I	*Class II*	*Class III*
PM_{10}	Annual	4	17	34
	24-hour	8	30	60
SO_2	Annual	2	20	40
	24-hour	5	91	182
	3-hour	25	512	700
NO_2	Annual	2.5	25	50

Source: Title 40 CFR Part 51
Key: NO_2 = nitrogen dioxide; PM_{10} = particulate matter with a diameter less than or equal to 10 microns; PSD = Prevention of Significant Deterioration; SO_2 = sulfur dioxide; μg/m³ = micrograms per cubic meter.

The Ambient Monitoring Program measures levels of air pollutants throughout the state. The data are used to determine compliance with air standards established for five compounds and to evaluate the need for special controls for various other pollutants.

The air quality monitoring network is used to identify areas where the ambient air quality standards are being violated and plans are needed to reduce pollutant concentration levels to be in attainment with the standards. Also included are areas where the ambient standards are being met, but plans are necessary to ensure maintenance of acceptable levels of air quality in the face of anticipated population or industrial growth.

The result of this attainment/maintenance analysis is the development of local and statewide strategies for controlling emissions of criteria air pollutants from stationary and mobile sources. The first step in this process is the annual compilation of the ambient air monitoring results, and the second step is the analysis of the monitoring data for general air quality, exceedances of air quality standards, and pollutant trends.

G.1.2 Regulatory Comparisons

The CAA Section 176(c), General Conformity, requires federal agencies to demonstrate that their proposed activities would conform to the applicable SIP for attainment of the NAAQS. General Conformity applies only to nonattainment and maintenance areas. If the emissions from a federal action proposed in a nonattainment area exceed annual *de minimis* thresholds identified in the rule, a formal conformity determination is required of that action. The thresholds are more restrictive as the severity of the nonattainment status of the region increases. The criteria pollutants are compared with the region of influence (ROI) emissions (Tooele County), which contains portions of the county that are classified as being in nonattainment for $PM_{2.5}$ and SO_2 standard (U.S. EPA, 2017). However, the proposed project area is not located in the nonattainment areas, so a conformity determination is not required.

For the analysis, in order to evaluate air emissions and their impact on the overall ROI, the emissions associated with the project activities were compared with the total emissions on a pollutant-by-pollutant basis for the ROI's 2014 National Emissions Inventory (NEI) data. Potential impacts to air quality are evaluated with respect to the extent, context, and intensity of the impact in relation to relevant regulations, guidelines, and scientific documentation. The Council on Environmental Quality defines significance in terms of context and intensity in 40 CFR 1508.27. This requires that the significance of the action must be analyzed in respect to the

setting of the proposed action and based relative to the severity of the impact. The Council on Environmental Quality National Environmental Policy Act regulations (40 CFR 1508.27(b)) provide 10 key factors to consider in determining an impact's intensity. To provide a more conservative analysis, the county was selected as the ROI instead of the USEPA-designated Air Quality Control Region, which is a much larger area.

G.1.3 National Emissions Inventory

The NEI is operated under the USEPA's Emission Factor and Inventory Group, which prepares the national database of air emissions information with input from numerous state and local air agencies, tribes, and industries. The database contains information on stationary and mobile sources that emit criteria air pollutants and hazardous air pollutants. The database includes estimates of annual emissions, by source, of air pollutants in each area of the country on a yearly basis. The NEI includes emission estimates for all 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands. Emission estimates for individual point or major sources (facilities), as well as county-level estimates for area, mobile, and other sources, are currently available for years 2011 and 2014 for criteria pollutants and hazardous air pollutants. The 2014 NEI data was last updated April 5, 2017, so those data were used in all analysis.

Criteria air pollutants are those for which the USEPA has set health-based standards. Four of the six criteria pollutants are included in the NEI database:

- Carbon monoxide
- Nitrogen oxides
- Sulfur dioxide
- Particulate matter (with a diameter less than or equal to 10 and 2.5 microns)

The NEI also includes emissions of volatile organic compounds (VOCs), which are ozone precursors, emitted from motor vehicle fuel distribution and chemical manufacturing, as well as other solvent uses. VOCs react with nitrogen oxides in the atmosphere to form ozone. The NEI database defines three classes of criteria air pollutant sources:

- **Point sources.** Stationary sources of emissions, such as an electric power plant, that can be identified by name and location. A "major" source emits a threshold amount (or more) of at least one criteria pollutant and must be inventoried and reported. Many states also inventory and report stationary sources that emit amounts below the thresholds for each pollutant.
- **Area sources.** Small point sources such as a home or office building or a diffuse stationary source such as wildfires or agricultural tilling. These sources do not individually produce sufficient emissions to qualify as point sources. Dry cleaners are one example; for instance, a single dry cleaner within an inventory area typically will not qualify as a point source, but collectively the emissions from all of the dry cleaning facilities in the inventory area may be significant and, therefore, must be included in the inventory.
- **Mobile sources.** Any kind of vehicle or equipment with a gasoline or diesel engine (such as an airplane or ship).

The following are the main sources of criteria pollutant emissions data for the NEI:

- For electric generating units—USEPA's Emission Tracking System/Continuous Emissions Monitoring Data and Department of Energy fuel use data.
- For other large stationary sources—state data and older inventories where state data were not submitted.
- For on-road mobile sources—the Federal Highway Administration's estimate of vehicle miles traveled and emission factors from USEPA's MOBILE Model.
- For nonroad mobile sources—USEPA's NONROAD Model.
- USEPA's Clean Air Market program supplies emissions data for electric power plants.
- For stationary area sources—state data, USEPA-developed estimates for some sources, and older inventories where state or USEPA data were not submitted.
- State and local environmental agencies supply most of the point source data.

G.2 PROJECT EMISSION CALCULATIONS

G.2.1 General Information

- Action Location

Base: HILL AFB

State: Utah

County(s): Tooele

Regulatory Area(s): NOT IN A REGULATORY AREA

- Action Title: ESTABLISHING RESTRICTED AREA (R-6401) AND OPERATION OF UNMANNED AIRCRAFT, WENDOVER, UTAH

- Project Number/s (if applicable):

- Projected Action Start Date: 1 / 2020

- Action Purpose and Need:

The proposed action is the relocation of the UA launch and recovery system from the former GLCM site at DPG to the Wendover Site, the creation of the new RA R-6401, and the launch, control, recovery, and maintenance of UA from the Wendover Site.

- Action Description:

The proposed action is the relocation of the UA launch and recovery system from the former GLCM site at DPG to the Wendover Site, the creation of the new RA R-6401 (Figure 2-1), and the launch, control, recovery, and maintenance of UA from the Wendover Site. The proposed R 6401 would extend from the ground surface

up to and including 6,500 feet AGL/10,800 feet MSL. The proposed RA would be activated in the same manner as the existing RA (i.e., through the Salt Lake City FAA Center).

The Wendover Site would be used to launch and recover UAs. The BQM-167 and BQM-34 are the SSATs that would be launched from this site. Three primary facilities would be required for this operation. These facilities consist of the launch, control, and maintenance facilities (Table 2-2). As described in Section 1.1, renovation of the control facility (Building 625) and partial construction of the maintenance and launch facilities was completed under a separate NEPA analysis using CATEXs.

- Point of Contact

Name: Brad Boykin

Title: CTR

Organization: Leidos

Email: boykinb@leidos.com

Phone Number: 9795753552

- Activity List:

Activity Type		Activity Title
2.	Construction / Demolition	Launch and Control Facilities
3.	Construction / Demolition	Control Facility
4.	Construction / Demolition	Maintenance Facility
5.	Personnel	40 Personnel
6.	Aircraft	BQM-167 and BQM-34 Operations
7.	Tanks	500-gal Jet Fuel AST
8.	Tanks	500-gal Jet Fuel Recovery AST
9.	Emergency Generator	Control Facility Emergency Generator
10.	Emergency Generator	Launch Facility Generator
11.	Emergency Generator	Maintenance Facility Generator

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.

G.2.2 Construction / Demolition

G.2.2.1 General Information & Timeline Assumptions

- Activity Location

County: Tooele

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Launch and Control Facilities

- Activity Description:

100x250' gravel pad covered by 55x100'concrete pad
Armored launch building 50x50'
Four storage buildings 25x25'
A 30' radio relay towers
Covered drum storage area 50x50'

- Activity Start Date

Start Month: 1
Start Month: 2020

- Activity End Date

Indefinite: False
End Month: 12
End Month: 2020

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	1.034261
SO_x	0.009655
NO_x	4.401960
CO	4.029791
PM 10	4.216605

Pollutant	Total Emissions (TONs)
PM 2.5	0.194701
Pb	0.000000
NH_3	0.002792
CO_2e	950.5

G.2.2.2 Site Grading Phase

G.2.2.2.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

Start Month: 1
Start Quarter: 1
Start Year: 2020

- Phase Duration

Number of Month: 12
Number of Days: 0

G.2.2.2.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft^2): 33687.5
Amount of Material to be Hauled On-Site (yd^3): 33.6
Amount of Material to be Hauled Off-Site (yd^3): 33.6

- Site Grading Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	6
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	6
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

G.2.2.2.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Graders Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0919	0.0014	0.5823	0.5765	0.0280	0.0280	0.0082	132.95
Other Construction Equipment Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0562	0.0012	0.3519	0.3508	0.0138	0.0138	0.0050	122.62
Rubber Tired Dozers Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.2117	0.0024	1.5772	0.8005	0.0630	0.0630	0.0191	239.56
Tractors/Loaders/Backhoes Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0436	0.0007	0.2744	0.3616	0.0134	0.0134	0.0039	66.897

- 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	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

G.2.2.2.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD}$ = (20 * ACRE * WD) / 2000

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

VMT_{VE} = (HA_{OnSite} + $HA_{OffSite}$) * (1 / HC) * HT

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^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: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

VMT_{WT} = WD * WT * 1.25 * NE

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

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

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

G.2.2.3 Building Construction Phase

G.2.2.3.1 Building Construction Phase Timeline Assumptions

- Phase Start Date

Start Month: 1
Start Quarter: 1
Start Year: 2020

- Phase Duration

Number of Month: 12
Number of Days: 0

G.2.2.3.2 Building Construction Phase Assumptions

- General Building Construction Information

Building Category: Office or Industrial
Area of Building (ft^2): 30625
Height of Building (ft): 50
Number of Units: N/A

- Building Construction Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	6
Forklifts Composite	2	6
Generator Sets Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8
Welders Composite	3	8

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

G.2.2.3.3 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	0.0898	0.0013	0.6610	0.3917	0.0256	0.0256	0.0081	128.83
Forklifts Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0320	0.0006	0.1690	0.2160	0.0070	0.0070	0.0028	54.467
Generator Sets Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0395	0.0006	0.3232	0.2731	0.0149	0.0149	0.0035	61.081
Tractors/Loaders/Backhoes Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0436	0.0007	0.2744	0.3616	0.0134	0.0134	0.0039	66.897
Welders Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0310	0.0003	0.1734	0.1816	0.0102	0.0102	0.0027	25.672

- 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	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

G.2.2.3.4 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

G.2.2.4 Architectural Coatings Phase

G.2.2.4.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date
Start Month: 7
Start Quarter: 1
Start Year: 2020

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

G.2.2.4.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information
Building Category:
Total Square Footage (ft^2): 30625
Number of Units: N/A

- Architectural Coatings Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

D.2.2.3.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

G.2.2.4.3 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase

VMT_{WT} = (1 * WT * PA) / 800

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
1: Conversion Factor man days to trips (1 trip / 1 man * day)
WT: Average Worker Round Trip Commute (mile)

PA: Paint Area (ft^2)
800: Conversion Factor square feet to man days (1 ft^2 / 1 man * day)

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

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

- Off-Gassing Emissions per Phase

VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0

VOC_{AC}: Architectural Coating VOC Emissions (TONs)
BA: Area of Building (ft^2)
2.0: Conversion Factor total area to coated area (2.0 ft^2 coated area / total area)
0.0116: Emission Factor (lb/ft^2)
2000: Conversion Factor pounds to tons

G.2.3 Construction / Demolition

G.2.3.1 General Information & Timeline Assumptions

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

- Activity Title: Control Facility

- Activity Description:
H-97 and I-80 Radio Relay Stations

- Activity Start Date
Start Month: 1
Start Month: 2020

- Activity End Date
Indefinite: False
End Month: 12
End Month: 2020

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.554476
SO_x	0.007350
NO_x	3.217122
CO	2.917357
PM 10	0.852748

Pollutant	Total Emissions (TONs)
PM 2.5	0.136420
Pb	0.000000
NH_3	0.001385
CO_2e	724.0

G.2.3.2 Site Grading Phase

G.2.3.2.1 Site Grading Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2020

- Phase Duration
Number of Month: 12
Number of Days: 0

G.2.3.2.2 Site Grading Phase Assumptions

- General Site Grading Information
Area of Site to be Graded (ft^2): 6000
Amount of Material to be Hauled On-Site (yd^3): 6
Amount of Material to be Hauled Off-Site (yd^3): 6

- Site Grading Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	6
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	6
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

G.2.3.2.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Graders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0919	0.0014	0.5823	0.5765	0.0280	0.0280	0.0082	132.95
Other Construction Equipment Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0562	0.0012	0.3519	0.3508	0.0138	0.0138	0.0050	122.62
Rubber Tired Dozers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.2117	0.0024	1.5772	0.8005	0.0630	0.0630	0.0191	239.56
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0436	0.0007	0.2744	0.3616	0.0134	0.0134	0.0039	66.897

- 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	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

G.2.3.2.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD}$ = (20 * ACRE * WD) / 2000

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

VMT_{VE} = (HA_{OnSite} + $HA_{OffSite}$) * (1 / HC) * HT

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)

$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^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: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

VMT_{WT} = WD * WT * 1.25 * NE

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

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

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

G.2.3.3 Building Construction Phase

G.2.3.3.1 Building Construction Phase Timeline Assumptions

- Phase Start Date

Start Month: 1
Start Quarter: 1
Start Year: 2020

- Phase Duration

Number of Month: 12
Number of Days: 0

G.2.3.3.2 Building Construction Phase Assumptions

- General Building Construction Information

Building Category: Office or Industrial
Area of Building (ft^2): 5000
Height of Building (ft): 15
Number of Units: N/A

- Building Construction Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	4
Forklifts Composite	2	6
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- 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

G.2.3.3.3 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	0.0898	0.0013	0.6610	0.3917	0.0256	0.0256	0.0081	128.83
Forklifts Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0320	0.0006	0.1690	0.2160	0.0070	0.0070	0.0028	54.467
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0436	0.0007	0.2744	0.3616	0.0134	0.0134	0.0039	66.897

- 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	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

G.2.3.3.4 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

G.2.3.4 Architectural Coatings Phase

G.2.3.4.1 D.2.3.3.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date

Start Month: 7
Start Quarter: 1
Start Year: 2020

- Phase Duration

Number of Month: 6
Number of Days: 0

G.2.3.4.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information

Building Category:
Total Square Footage (ft^2): 5000
Number of Units: N/A

- Architectural Coatings Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

G.2.3.4.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

G.2.3.4.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase

$VMT_{WT} = (1 * WT * PA) / 800$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
1: Conversion Factor man days to trips (1 trip / 1 man * day)
WT: Average Worker Round Trip Commute (mile)
PA: Paint Area (ft^2)
800: Conversion Factor square feet to man days (1 ft^2 / 1 man * day)

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

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

- Off-Gassing Emissions per Phase

$VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0$

VOC_{AC}: Architectural Coating VOC Emissions (TONs)
BA: Area of Building (ft^2)
2.0: Conversion Factor total area to coated area (2.0 ft^2 coated area / total area)
0.0116: Emission Factor (lb/ft^2)
2000: Conversion Factor pounds to tons

G.2.4 Construction / Demolition

G.2.4.1 General Information & Timeline Assumptions

- Activity Location

County: Tooele
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Maintenance Facility

- Activity Description:

Covered drum storage area 50x50'

- Activity Start Date

Start Month: 1
Start Month: 2020

- Activity End Date

Indefinite: False
End Month: 12
End Month: 2020

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.830708
SO_x	0.009020
NO_x	4.117656
CO	3.888096
PM 10	0.483042

Pollutant	Total Emissions (TONs)
PM 2.5	0.184461
Pb	0.000000
NH_3	0.002141
CO_2e	882.9

G.2.4.2 Site Grading Phase

G.2.4.2.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

Start Month: 1
Start Quarter: 1
Start Year: 2020

- Phase Duration

Number of Month: 12
Number of Days: 0

G.2.4.2.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft^2): 2500
Amount of Material to be Hauled On-Site (yd^3): 25
Amount of Material to be Hauled Off-Site (yd^3): 25

- Site Grading Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	6
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	6
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

G.2.4.2.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Graders Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0919	0.0014	0.5823	0.5765	0.0280	0.0280	0.0082	132.95
Other Construction Equipment Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0562	0.0012	0.3519	0.3508	0.0138	0.0138	0.0050	122.62
Rubber Tired Dozers Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.2117	0.0024	1.5772	0.8005	0.0630	0.0630	0.0191	239.56
Tractors/Loaders/Backhoes Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0436	0.0007	0.2744	0.3616	0.0134	0.0134	0.0039	66.897

- 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	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

G.2.4.2.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

VMT_{VE} = (HA_{OnSite} + $HA_{OffSite}$) * (1 / HC) * HT

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^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: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

VMT_{WT} = WD * WT * 1.25 * NE

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

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

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

G.2.4.3 Building Construction Phase

G.2.4.3.1 Building Construction Phase Timeline Assumptions

- Phase Start Date

Start Month: 1
Start Quarter: 1
Start Year: 2020

- Phase Duration

Number of Month: 12
Number of Days: 0

G.2.4.3.2 Building Construction Phase Assumptions

- General Building Construction Information

Building Category: Office or Industrial
Area of Building (ft^2): 16000
Height of Building (ft): 15
Number of Units: N/A

- Building Construction Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	4
Forklifts Composite	2	6
Generator Sets Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8
Welders Composite	3	8

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

G.2.4.3.3 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	0.0898	0.0013	0.6610	0.3917	0.0256	0.0256	0.0081	128.83
Forklifts Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0320	0.0006	0.1690	0.2160	0.0070	0.0070	0.0028	54.467
Generator Sets Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0395	0.0006	0.3232	0.2731	0.0149	0.0149	0.0035	61.081
Tractors/Loaders/Backhoes Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0436	0.0007	0.2744	0.3616	0.0134	0.0134	0.0039	66.897
Welders Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0310	0.0003	0.1734	0.1816	0.0102	0.0102	0.0027	25.672

- 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	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

G.2.4.3.4 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

G.2.4.4 Architectural Coatings Phase

G.2.4.4.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2020

- Phase Duration
Number of Month: 12
Number of Days: 0

G.2.4.4.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information
Building Category:
Total Square Footage (ft^2): 16000
Number of Units: N/A

- Architectural Coatings Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

G.2.4.4.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

G.2.4.4.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase

$VMT_{WT} = (1 * WT * PA) / 800$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
1: Conversion Factor man days to trips (1 trip / 1 man * day)
WT: Average Worker Round Trip Commute (mile)

PA: Paint Area (ft^2)
800: Conversion Factor square feet to man days (1 ft^2 / 1 man * day)

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

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

- Off-Gassing Emissions per Phase

$VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0$

VOC_{AC}: Architectural Coating VOC Emissions (TONs)
BA: Area of Building (ft^2)
2.0: Conversion Factor total area to coated area (2.0 ft^2 coated area / total area)
0.0116: Emission Factor (lb/ft^2)
2000: Conversion Factor pounds to tons

G.2.5 Personnel

G.2.5.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

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

- Activity Title: 40 Personnel

- Activity Description:
Up to 40 new full-time personnel.

- Activity Start Date

Start Month: 1

Start Year: 2020

- Activity End Date

Indefinite: Yes

End Month: N/A

End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.087885
SO_x	0.000602
NO_x	0.077686
CO	0.997492
PM 10	0.002426

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.002184
Pb	0.000000
NH_3	0.005535
CO_2e	88.9

G.2.5.2 Personnel Assumptions

- Number of Personnel

Active Duty Personnel: 40

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)

G.2.5.3 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

G.2.5.4 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	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

G.2.5.5 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.2.6 Aircraft

G.2.6.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Tooele

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: BQM-167 and BQM-34 Operations

- Activity Description:

Up to 6 operations per day for up to 208 days annually

- Activity Start Date

Start Month: 1

Start Year: 2020

- Activity End Date

Indefinite: Yes

End Month: N/A

End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	3.255097
SO_x	1.666653
NO_x	22.706989
CO	30.125287
PM 10	1.441906

Pollutant	Emissions Per Year (TONs)
PM 2.5	1.342016
Pb	0.000000
NH_3	0.000000
CO_2e	4555.9

- Activity Emissions [Flight Operations (includes Trim Test & APU) part]:

Pollutant	Emissions Per Year (TONs)
VOC	2.629519
SO_x	1.389781
NO_x	8.528451
CO	15.633486
PM 10	0.835766

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.754707
Pb	0.000000
NH_3	0.000000
CO_2e	3900.5

- Activity Emissions [Aerospace Ground Equipment (AGE) part]:

Pollutant	Emissions Per Year (TONs)
VOC	0.625578
SO_x	0.276873
NO_x	14.178539
CO	14.491801
PM 10	0.606140

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.587308
Pb	0.000000
NH_3	0.000000
CO_2e	655.3

G.2.6.2 Aircraft & Engines

G.2.6.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine

Aircraft Designation: RA-5C

Engine Model: J79-GE-10

Primary Function: Combat

Number of Engines: 2

- Aircraft & Engine Surrogate

Is Aircraft & Engine a Surrogate? No

Original Aircraft Name:

Original Engine Name:

G.2.6.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1000lb fuel)

	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
Idle	1374.58	37.37	1.06	1.33	111.18	0.88	0.79	3234
Approach	3489.59	2.80	1.06	4.22	20.00	0.63	0.57	3234
Intermediate	7673.93	1.34	1.06	8.24	4.69	0.72	0.65	3234
Military	10096.89	1.34	1.06	10.24	2.83	0.72	0.65	3234
After Burn	35339.12	1.01	1.06	4.50	8.63	0.37	0.33	3234

G.2.6.3 Flight Operations

G.2.6.3.1 Flight Operations Assumptions

- Flight Operations

Number of Aircraft: 10
Number of Annual LTOs (Landing and Take-off) cycles for all Aircraft: 1248
Number of Annual TGOs (Touch-and-Go) cycles for all Aircraft: 0
Number of Annual Trim Test(s) per Aircraft: 24

- Default Settings Used: No

- Flight Operations TIMs (Time In Mode)

Taxi/Idle Out [Idle] (mins): 0
Takeoff [Military and/or After Burn] (mins): 0.4
Climb Out [Intermediate] (mins): 0.8
Approach [Approach] (mins): 3.5
Taxi/Idle In [Idle] (mins): 0

Per the Air Emissions Guide for Air Force Mobile Sources, the defaults values for military aircraft equipped with after burner for takeoff is 50% military power and 50% afterburner.

- Trim Test

Idle (mins): 0
Approach (mins): 27
Intermediate (mins): 0
Military (mins): 9
AfterBurn (mins): 0

G.2.6.3.2 Flight Operations Formula(s)

- Aircraft Emissions per Mode for LTOs per Year

AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * LTO / 2000

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
LTO: Number of Landing and Take-off Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for LTOs per Year

$AE_{LTO} = AEM_{IDLE\_IN} + AEM_{IDLE\_OUT} + AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{LTO}: Aircraft Emissions (TONs)
AEM_{IDLE_IN}: Aircraft Emissions for Idle-In Mode (TONs)
AEM_{IDLE_OUT}: Aircraft Emissions for Idle-Out Mode (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for TGOs per Year

AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * TGO / 2000

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
TGO: Number of Touch-and-Go Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for TGOs per Year

$AE_{TGO} = AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{TGO}: Aircraft Emissions (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for Trim per Year

$AEPS_{POL}$ = (TD / 60) * (FC / 1000) * EF * NE * NA * NTT / 2000

$AEPS_{POL}$: Aircraft Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
NA: Number of Aircraft
NTT: Number of Trim Test
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for Trim per Year

$AE_{TRIM} = AEPS_{IDLE} + AEPS_{APPROACH} + AEPS_{INTERMEDIATE} + AEPS_{MILITARY} + AEPS_{AFTERBURN}$

AE_{TRIM}: Aircraft Emissions (TONs)
$AEPS_{IDLE}$: Aircraft Emissions for Idle Power Setting (TONs)
$AEPS_{APPROACH}$: Aircraft Emissions for Approach Power Setting (TONs)
$AEPS_{INTERMEDIATE}$: Aircraft Emissions for Intermediate Power Setting (TONs)
$AEPS_{MILITARY}$: Aircraft Emissions for Military Power Setting (TONs)
$AEPS_{AFTERBURN}$: Aircraft Emissions for After Burner Power Setting (TONs)

G.2.6.4 Auxiliary Power Unit (APU)

G.2.6.4.1 Auxiliary Power Unit (APU) Assumptions

- Default Settings Used: Yes

- Auxiliary Power Unit (APU) (default)

Number of APU per Aircraft	Operation Hours for Each LTO	Exempt Source?	Designation	Manufacturer

G.2.6.4.2 Auxiliary Power Unit (APU) Emission Factor(s)

- Auxiliary Power Unit (APU) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e

G.2.6.4.3 Auxiliary Power Unit (APU) Formula(s)

- Auxiliary Power Unit (APU) Emissions per Year

$APU_{POL} = APU * OH * LTO * EF_{POL} / 2000$

APU_{POL}: Auxiliary Power Unit (APU) Emissions per Pollutant (TONs)
APU: Number of Auxiliary Power Units
OH: Operation Hours for Each LTO (hour)
LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

G.2.6.5 Aerospace Ground Equipment (AGE)

G.2.6.5.1 Aerospace Ground Equipment (AGE) Assumptions

- Default Settings Used: No

- AGE Usage

Number of Annual LTO (Landing and Take-off) cycles for AGE: 1248

- Aerospace Ground Equipment (AGE)

Total Number of AGE	Operation Hours for Each LTO	Exempt Source?	AGE Type	Designation
1	1	No	Air Conditioner	MA-3D - 120hp
1	2	No	Generator Set	805
1	2	No	Heater	H1
1	3	No	Light Cart	FL-1D

G.2.6.5.2 Aerospace Ground Equipment (AGE) Emission Factor(s)

- Aerospace Ground Equipment (AGE) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
MA-3D - 120hp	7.1	0.053	0.050	4.167	0.317	0.109	0.105	161.7
805	17.1	0.337	0.121	8.863	11.078	0.185	0.180	389.3
H1	0.4	0.100	0.011	0.160	0.180	0.006	0.006	8.9
FL-1D	0.0	0.025	0.043	0.170	0.130	0.160	0.155	30.7

G.2.6.5.3 Aerospace Ground Equipment (AGE) Formula(s)

- Aerospace Ground Equipment (AGE) Emissions per Year

AGE_{POL} = AGE * OH * LTO * EF_{POL} / 2000

AGE_{POL}: Aerospace Ground Equipment (AGE) Emissions per Pollutant (TONs)
AGE: Total Number of Aerospace Ground Equipment
OH: Operation Hours for Each LTO (hour)
LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

G.2.7 Tanks

G.2.7.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

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

- Activity Title: 500-gal Jet Fuel AST

- Activity Description:
Portable double-wall, above ground storage tank for jet fuel

- Activity Start Date
Start Month: 1
Start Year: 2020

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.001013
SO_x	0.000000
NO_x	0.000000
CO	0.000000
PM 10	0.000000

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.000000
Pb	0.000000
NH_3	0.000000
CO_2e	0.0

G.2.7.2 Tank Assumptions

- Chemical
Chemical Name: Jet kerosene (JP-5, JP-8 or Jet-A)
Chemical Category: Petroleum Distillates
Chemical Density: 7
Vapor Molecular Weight (lb/lb-mole): 130
Stock Vapor Density (lb/ft^3): 0.000170775135930213
Vapor Pressure: 0.00725
Vapor Space Expansion Factor (dimensionless): 0.068

- Tank
Type of Tank: Horizontal Tank
Tank Length (ft): 8

Tank Diameter (ft): 3.25
Annual Net Throughput (gallon/year): 10000

G.2.7.3 Tank Formula(s)

- Vapor Space Volume
VSV = (PI / 4) * D^2 * L / 2

VSV: Vapor Space Volume (ft^3)
PI: PI Math Constant
D^2: Tank Diameter (ft)
L: Tank Length (ft)
2: Convertion Factor (Vapor Space Volume is assumed to be one-half of the tank volume)

- Vented Vapor Saturation Factor
VVSF = 1 / (1 + (0.053 * VP * L / 2))

VVSF: Vented Vapor Saturation Factor (dimensionless)
0.053: Constant
VP: Vapor Pressure (psia)
L: Tank Length (ft)

- Standing Storage Loss per Year
SSL_{VOC} = 365 * VSV * SVD * VSEF * VVSF / 2000

SSL_{VOC}: Standing Storage Loss Emissions (TONs)
365: Number of Daily Events in a Year (Constant)
VSV: Vapor Space Volume (ft^3)
SVD: Stock Vapor Density (lb/ft^3)
VSEF: Vapor Space Expansion Factor (dimensionless)
VVSF: Vented Vapor Saturation Factor (dimensionless)
2000: Conversion Factor pounds to tons

- Number of Turnovers per Year
NT = (7.48 * ANT) / ((PI / 4.0) * D * L)

NT: Number of Turnovers per Year
7.48: Constant
ANT: Annual Net Throughput
PI: PI Math Constant
D^2: Tank Diameter (ft)
L: Tank Length (ft)

- Working Loss Turnover (Saturation) Factor per Year
WLSF = (18 + NT) / (6 * NT)

WLSF: Working Loss Turnover (Saturation) Factor per Year
18: Constant
NT: Number of Turnovers per Year
6: Constant

- Working Loss per Year
WL_{VOC} = 0.0010 * VMW * VP * ANT * WLSF / 2000

0.0010: Constant
VMW: Vapor Molecular Weight (lb/lb-mole)
VP: Vapor Pressure (psia)
ANT: Annual Net Throughput
WLSF: Working Loss Turnover (Saturation) Factor
2000: Conversion Factor pounds to tons

G.2.8 Tanks

G.2.8.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

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

- Activity Title: 500-gal Jet Fuel Recovery AST

- Activity Description:

Portable 500-gallon, double-wall, above ground storage tank for jet fuel recovery

- Activity Start Date

Start Month: 1

Start Year: 2020

- Activity End Date

Indefinite: Yes

End Month: N/A

End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.001013
SO_x	0.000000
NO_x	0.000000
CO	0.000000
PM 10	0.000000

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.000000
Pb	0.000000
NH_3	0.000000
CO_2e	0.0

G.2.8.2 Tank Assumptions

- Chemical

Chemical Name: Jet kerosene (JP-5, JP-8 or Jet-A)

Chemical Category: Petroleum Distillates

Chemical Density: 7

Vapor Molecular Weight (lb/lb-mole): 130

Stock Vapor Density (lb/ft^3): 0.000170775135930213

Vapor Pressure: 0.00725

Vapor Space Expansion Factor (dimensionless): 0.068

- Tank

Type of Tank: Horizontal Tank

Tank Length (ft): 8

Tank Diameter (ft): 3.25

Annual Net Throughput (gallon/year): 10000

G.2.8.3 Tank Formula(s)

- Vapor Space Volume

$VSV = (PI / 4) * D^2 * L / 2$

VSV: Vapor Space Volume (ft^3)

PI: PI Math Constant

D^2: Tank Diameter (ft)

L: Tank Length (ft)

2: Convertion Factor (Vapor Space Volume is assumed to be one-half of the tank volume)

- Vented Vapor Saturation Factor

$VVSF = 1 / (1 + (0.053 * VP * L / 2))$

VVSF: Vented Vapor Saturation Factor (dimensionless)

0.053: Constant

VP: Vapor Pressure (psia)

L: Tank Length (ft)

- Standing Storage Loss per Year

$SSL_{VOC} = 365 * VSV * SVD * VSEF * VVSF / 2000$

SSL_{VOC}: Standing Storage Loss Emissions (TONs)

365: Number of Daily Events in a Year (Constant)

VSV: Vapor Space Volume (ft^3)

SVD: Stock Vapor Density (lb/ft^3)

VSEF: Vapor Space Expansion Factor (dimensionless)

VVSF: Vented Vapor Saturation Factor (dimensionless)

2000: Conversion Factor pounds to tons

- Number of Turnovers per Year

$NT = (7.48 * ANT) / ((PI / 4.0) * D * L)$

NT: Number of Turnovers per Year

7.48: Constant

ANT: Annual Net Throughput

PI: PI Math Constant

D^2: Tank Diameter (ft)

L: Tank Length (ft)

- Working Loss Turnover (Saturation) Factor per Year

$WLSF = (18 + NT) / (6 * NT)$

WLSF: Working Loss Turnover (Saturation) Factor per Year

18: Constant

NT: Number of Turnovers per Year

6: Constant

- Working Loss per Year

$WL_{VOC} = 0.0010 * VMW * VP * ANT * WLSF / 2000$

0.0010: Constant

VMW: Vapor Molecular Weight (lb/lb-mole)

VP: Vapor Pressure (psia)

ANT: Annual Net Throughput

WLSF: Working Loss Turnover (Saturation) Factor

2000: Conversion Factor pounds to tons

G.2.9 Emergency Generator

G.2.9.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Tooele

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Control Facility Emergency Generator

- Activity Description:

- Activity Start Date

Start Month: 1

Start Year: 2020

- Activity End Date

Indefinite: Yes

End Month: N/A

End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.005650
SO_x	0.004759
NO_x	0.023288
CO	0.015552
PM 10	0.005083

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.005083
Pb	0.000000
NH_3	0.000000
CO_2e	2.7

G.2.9.2 Emergency Generator Assumptions

- Emergency Generator

Type of Fuel used in Emergency Generator: Diesel

Number of Emergency Generators: 1

- Default Settings Used: Yes

- Emergency Generators Consumption

Emergency Generator's Horsepower: 135 (default)

Average Operating Hours Per Year (hours): 30 (default)

G.2.9.3 Emergency Generator Emission Factor(s)

- Emergency Generators Emission Factor (lb/hp-hr)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
0.00279	0.00235	0.0115	0.00768	0.00251	0.00251			1.33

G.2.9.4 Emergency Generator Formula(s)

- Emergency Generator Emissions per Year

AE_{POL}= (NGEN * HP * OT * EF_{POL}) / 2000

AE_{POL}: Activity Emissions (TONs per Year)
NGEN: Number of Emergency Generators
HP: Emergency Generator's Horsepower (hp)
OT: Average Operating Hours Per Year (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hp-hr)

G.2.10 Emergency Generator

G.2.10.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

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

- Activity Title: Launch Facility Generator

- Activity Description:
100 kW diesel generator operated up to 6 hours per day for 32 days = 192 hrs annually

- Activity Start Date
Start Month: 1
Start Year: 2020

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.036158
SO_x	0.030456
NO_x	0.149040
CO	0.099533
PM 10	0.032530

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.032530
Pb	0.000000
NH_3	0.000000
CO_2e	17.2

G.2.10.2 Emergency Generator Assumptions

- Emergency Generator
Type of Fuel used in Emergency Generator: Diesel
Number of Emergency Generators: 1

- Default Settings Used: No

- Emergency Generators Consumption
Emergency Generator's Horsepower: 135
Average Operating Hours Per Year (hours): 192

G.2.10.3 Emergency Generator Emission Factor(s)

- Emergency Generators Emission Factor (lb/hp-hr)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
0.00279	0.00235	0.0115	0.00768	0.00251	0.00251			1.33

G.2.10.4 Emergency Generator Formula(s)

- Emergency Generator Emissions per Year

AE_{POL}= (NGEN * HP * OT * EF_{POL}) / 2000

AE_{POL}: Activity Emissions (TONs per Year)
NGEN: Number of Emergency Generators
HP: Emergency Generator's Horsepower (hp)
OT: Average Operating Hours Per Year (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hp-hr)

G.2.11 Emergency Generator

G.2.11.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

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

- Activity Title: Maintenance Facility Generator

- Activity Description:
30 kW diesel generator operated up to 8 hours 96 days annually = 768 hrs annually

- Activity Start Date
Start Month: 1
Start Year: 2020

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.042854
SO_x	0.036096
NO_x	0.176640
CO	0.117965
PM 10	0.038554

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.038554
Pb	0.000000
NH_3	0.000000
CO_2e	20.4

G.2.11.2 Emergency Generator Assumptions

- Emergency Generator
Type of Fuel used in Emergency Generator: Diesel
Number of Emergency Generators: 1

- Default Settings Used: No

- Emergency Generators Consumption
Emergency Generator's Horsepower: 40
Average Operating Hours Per Year (hours): 768

G.2.11.3 Emergency Generator Emission Factor(s)

- Emergency Generators Emission Factor (lb/hp-hr)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
0.00279	0.00235	0.0115	0.00768	0.00251	0.00251			1.33

G.2.11.4 Emergency Generator Formula(s)

- Emergency Generator Emissions per Year

AE_{POL}= (NGEN * HP * OT * EF_{POL}) / 2000

AE_{POL}: Activity Emissions (TONs per Year)
NGEN: Number of Emergency Generators
HP: Emergency Generator's Horsepower (hp)
OT: Average Operating Hours Per Year (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hp-hr)

AIR CONFORMITY APPLICABILITY MODEL REPORT
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 Instruction 32-7040, Air Quality Compliance And Resource Management; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: HILL AFB

State: Utah

County(s): Tooele

Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: ESTABLISHING RESTRICTED AREA (R-6401) AND OPERATION OF UNMANNED AIRCRAFT, WENDOVER, UTAH

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2020

e. Action Description:

The proposed action is the relocation of the UA launch and recovery system from the former GLCM site at DPG to the Wendover Site, the creation of the new RA R-6401 (Figure 2-1), and the launch, control, recovery, and maintenance of UA from the Wendover Site. The proposed R 6401 would extend from the ground surface up to and including 6,500 feet AGL/10,800 feet MSL. The proposed RA would be activated in the same manner as the existing RA (i.e., through the Salt Lake City FAA Center).

The Wendover Site would be used to launch and recover UAs. The BQM-167 and BQM-34 are the SSATs that would be launched from this site. Three primary facilities would be required for this operation. These facilities consist of the launch, control, and maintenance facilities (Table 2-2). As described in Section 1.1, renovation of the control facility (Building 625) and partial construction of the maintenance and launch facilities was completed under a separate NEPA analysis using CATEXs.

f. Point of Contact:

Name: Brad Boykin

Title: CTR

Organization: Leidos

Email: boykinb@leidos.com

Phone Number: 9795753552

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

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 combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions.

"Air Quality Indicators" were used to provide an indication of the significance of potential impacts to air quality. These air quality indicators are EPA General Conformity Rule (GCR) thresholds (de minimis levels) that are applied out of context to their intended use. Therefore, these indicators do not trigger a regulatory requirement; however, they provide a warning that the action is potentially significant. It is important to note that these indicators only provide a clue to the potential impacts to air quality.

Given the GCR de minimis threshold values are the maximum net change an action can acceptably emit in non-attainment and maintenance areas, these threshold values would also conservatively indicate an actions emissions within an attainment would also be acceptable. An air quality indicator value of 100 tons/yr is used based on the GCR de minimis threshold for the least severe non-attainment classification for all criteria pollutants (see 40 CFR 93.153). Therefore, the worst-case year emissions were compared against the GCR Indicator and are summarized below.

Analysis Summary:

2020

Pollutant	Action Emissions (ton/yr)	AIR QUALITY INDICATOR	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	5.849	100	No
NOx	34.870	100	No
CO	42.191	100	No
SOx	1.765	100	No
PM 10	7.073	100	No
PM 2.5	1.936	100	No
Pb	0.000	25	No
NH3	0.012	100	No
CO2e	7242.6		

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

2021 - (Steady State)

Pollutant	Action Emissions (ton/yr)	AIR QUALITY INDICATOR	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	3.430	100	No
NOx	23.134	100	No
CO	31.356	100	No
SOx	1.739	100	No
PM 10	1.520	100	No
PM 2.5	1.420	100	No
Pb	0.000	25	No
NH3	0.006	100	No
CO2e	4685.1		

None of estimated emissions associated with this action are above the GCR indicators, indicating no significant impact to air quality; therefore, no further air assessment is needed.

Brad Boykin, CTR

04 April 2019

DATE

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Appendix H
FAA Noise Correspondence

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leidos

15 March 2019

Mr. Shawn Kozica
Operations Support Group, Manager
2200 216th Street
Des Moines, WA 98198-6547

Subject: **Request to use non-default methods for analysis of sub-scale aerial target (SSAT) noise in support of Environmental Assessment for Establishing Restricted Area R-6401 and Operations of Unmanned Aircraft, Wendover, UT**

Dear Mr. Kozika:

This letter is a formal request for approval to use non-default methods for noise analysis. In accordance with FAA Order 1050.1, Guidance Memo dated 9 Sep 2016 (Guidance on Using the Aviation Environmental Design Tool [AEDT] to Conduct Environmental Modeling for FAA Actions Subject to NEPA), this letter provides background information on the Subject Project, provides a description of the benefits of using the non-default methods along with a description of the proposed methods. If you or any subsequent FAA reviewers have questions regarding this request, please feel free to contact me at (757) 269-2037 or john.k.austin@leidos.com.

Sincerely,

Leidos Incorporated,

Jay K. Austin
Noise Analyst

Distribution: Ms. Elizabeth Healy, Operations Support Group
Ms. Laura Dell'Olio, Operations Support Group
Mr. Matthew Bolduc, UTTR/DOS
Mr. Michael Shane, UTTR/DOO
Mr. Matthew Genelin, 53 WEG/TA
Ms. Kathleen Roland, USARMY CESAM-CESAD

REQUEST TO USE NON-DEFAULT NOISE MODELING METHOD

Background: Non-default noise analysis methods are proposed to assess noise associated with sub-scale aerial target (SSAT) operations at a location on Utah Test and Training Range approximately 4.5 miles south of the town of Wendover, UT (Wendover Site). The SSATs that would be used at this location (BQM-167 and BQM-34) are launched from metal rails using a rocket-assisted takeoff (RATO) bottle. The RATO bottle is a small rocket that propels the SSAT into the air. Once the SSATs reach 500 feet AGL, the RATO bottles would drop off the SSATs and the jet engine would propel the SSAT through the exercise until recovery. All launches would occur in a southeasterly direction, and the SSAT would immediately transition from R-6401 (proposed) into R-6405 (existing). Recovery of the SSATs would occur on USAF property at a location approximately 0.5 mile south of the launch facility below the proposed R-6401. The SSAT would enter recovery at 2,500 feet above ground level and descend under a recovery parachute. Up to six SSAT sorties (launch and recovery) would be conducted per day. The proposed action is described in greater detail in the Draft Environmental Assessment (EA) for Establishing Restricted Area R-6401 and Operation of Unmanned Aircraft, at Wendover, UT (referred to hereafter as 'the Draft EA').

Statement of Benefit: The Aviation Environment Design Tool (AEDT) is not designed to model noise levels associated with rocket launches (large-scale or small-scale), and is therefore not appropriate for this analysis. Similarly, the Department of Defense aircraft noise modeling programs Noisemap and MRNMAP do not have capability to model large-scale or small-scale rocket launch noise. The U.S. Army noise modeling program BNOISE2 does have the ability to model small-scale rocket launch noise (e.g., munitions such as the Multiple Launch Rocket System), but its reference noise level data set does not contain SSATs or any surrogate noise source with comparable characteristics to an SSAT. The 53rd Weapons Evaluation Group (WEG) has obtained well-documented noise level measurements on BQM-167 launches at Tyndall AFB. Because no FAA or DoD noise model has the capability to accurately model SSAT noise, we propose to use the measured SSAT noise levels from Tyndall AFB in conjunction with conservative noise propagation algorithms to estimate noise levels at the closest noise-sensitive locations. Even when using conservative noise propagation algorithms, calculated noise levels at the closest noise-sensitive locations (approximately 4.5 miles from the proposed launch site) near the Wendover Site are well below impact thresholds.

Additional Specific Information Regarding Proposed Method:

Noise levels generated by BQM-167 launches were measured at Tyndall AFB in May 2017; these launches generated L_{max} of 119.5 dBA at a distance of 400 feet. The BQM-167 launch procedure includes a period of time in which the engine runs at relatively low power followed by ignition of the RATO bottle and rapid acceleration of the SSAT away from the launch pad. At the noise-sensitive locations nearest to the Wendover Site, which would be approximately 3 miles away, the portion of the launch prior to ignition would not be audible. The ignition portion of the launch would quickly generate the L_{max} associated with the launch. The sound level would then decrease as the SSAT travels into the distance to the south, away from noise-sensitive locations.

As shown below, Formula 1 calculates change in sound level with change in distance based on spherical spreading of sound energy and atmospheric absorption of sound energy over distance.

This formula provides a conservative estimate of actual noise levels because it does not account for additional sound energy that would be absorbed by the ground during transmission. Atmospheric absorption was estimated to be 1.4 dB per 1,000 feet.

Formula 1: L2 = L1 - 20 * LOG (D1/D2) - A

Where: L1 is the sound level at the location where BQM-167 noise was measured

L2 is the sound level at the location of interest (i.e., a noise-sensitive location)

D1 is the distance between the noise source and L1

D2 is the distance between the noise source and L2

A is sound energy (in dB) absorbed by the atmosphere

During launches, the exterior L_{max} at the nearest residence would be approximately 51 dBA, a sound level that would be audible but unlikely to interrupt conversation. Typical residences provide 15 dB of structural sound level attenuation with windows open and 25 dB with windows closed. At the nearest residence (approximately 3 miles to the north), noise levels generated by launch activities would not be noticeable indoors.

The West Wendover Equestrian Park is located 4.8 miles north of the launch facility. Wendover Airport is located approximately 1.5 miles southeast of this park. The L_{max} at the West Wendover Equestrian Park during launches would be approximately 48 dBA. Horses could be frightened by sudden noises such as those generated by SSAT launches. An L_{max} of 48 dBA may or may not be noticeable, depending on the noise generated by other activities occurring simultaneously.

The SEL metric effectively compresses all of the noise energy of a launch event into a single second. Launch SEL was conservatively estimated based on a simplified representation of the launch sound level time-history. Under this simplified representation, the sound level increases instantaneously to L_{max} when the RATO ignites and then continues at L_{max} for 5 seconds, after which the SSAT would be distant enough that the noise level would have decreased from L_{max} by 10 dB. Sound levels of 10 dB or greater below the L_{max} do not appreciably contribute to the overall sound level.

DNL was calculated for a month in which every week includes four flying days with six launch and recovery events per day. This scenario is extremely conservative, because that tempo of operations would likely never actually be sustained for more than 1 week at a time. The DNL at the nearest residence and the West Wendover Equestrian Park would be 16 dBA and 13 dBA, respectively. This DNL would be below the land use compatibility threshold of 65 dBA.

Formulas 2 and 3 were used to calculate SEL and DNL, respectively.

Formula 2: SEL = 10 * LOG (T * $10^{(L2/10)}$)

Where: T is the duration (in seconds) of an event with constant noise level

L2 is the sound level (in dBA) at the location of interest

Formula 3: DNL = SEL + 10 * LOG(Nday + 10*Nnight) – 49.4

Where: Nday is the number of events per average day during the time period between 7:00 A.M. and 10:00 P.M.

Nnight is the number of events per average day during the time period between 10:00 P.M. and 7:00 A.M. (Because no launches would occur after 10:00 P.M., this number is zero.)

Recovery of the SSATs after launch would involve the SSAT being flown toward the recovery area at 2,500 feet AGL, engine shutdown, and deployment of a parachute in the proposed R-6401. Noise generated by SSATs being flown at low engine power or with engines powered off during the final approach would be minimal.

Summary

In conclusion, individual launch and recovery events would generate L_{max} of 51 dBA or lower at noise-sensitive locations. These events would be audible outdoors, but would not be expected to interfere with noise-sensitive activities such as conversation. Launch and recovery events would typically not occur on weekends, and would not occur after 10:00 P.M. These events would occur in the context of an area that is exposed to military aircraft noise and civilian aircraft noise from Wendover Airport on a regular basis under existing conditions. The DNL generated by the proposed launch and recovery events would remain below land use compatibility thresholds. Noise levels generated by construction and day-to-day Operation and Maintenance (O&M) of ground vehicles and equipment associated with the proposed action would be below background sound levels at the nearest noise-sensitive locations and would therefore not be noticeable. Implementation of the proposed action would not result in significant noise impacts.

This concludes this memorandum and if you have any further questions or require additional information, please feel free to contact me at (757) 269-2037 or john.k.austin@leidos.com.

U.S. Department of Transportation
Federal Aviation Administration

Office of Environment and Energy

600 Independence Ave., S.W.
Washington, D.C. 20591

3/25/2019

Shawn Kozica
Operations Support Group Manager
Federal Aviation Administration
Wester Service Center
Operations Support Group
2200 S. 216th St
Des Moines, WA 98198

Dear Shawn,

The Office of Environment and Energy (AEE) has received the memo from Leidos dated March 15, 2019 referencing the Environmental Assessment considering the establishment of the R-6401 Restricted Area; requesting approval for a non-standard noise modeling protocol for the BQM-167 and BQM-34 unmanned sub-scale aerial target (SSAT) vehicles.

Due to the unique characteristics of these vehicles, AEE recognizes that noise modeling using approved FAA or DOD aircraft noise models is not applicable. AEE therefore **approves** the use of the proposed non-standard noise modeling protocol, when as described in the March 15, 2019 memo, is used to derive average annual day DNL from prior L_{max} noise measurements.

Please understand that this approval is limited to this particular Environmental Assessment for consideration of the proposed R-6401 restricted area. Further non-standard AEDT inputs for additional projects at this or any other site will require separate approval.

Sincerely,

Donald Scata
Acting Manager
AEE-100/Noise Division

cc: Elizabeth Healy, Laura Dell'Olio AJV-W250

Location	distance (ft)	Lmax (dB)	Notes
Source	400	119.5	measured at West Tower (Tyndall AFB)
Closest Residences	23760	50.8	extrapolated using formula 1
Equestrian Park	25344	48.0	extrapolated using formula 1

Formula 1: L2 = L1-20 * LOG (D1/D2) - A
Where:
L1 = Level at position Distance 1 (D1)
L2 = Level at Distance 2 (D2)
A = Excess Atmospheric Absorption

Excess Atmospheric absorption (dB per 1000 feet)	1.4	Note: value for median month at Hill AFB
Atmospheric absorption to closest residence	33.3	
Atmospheric absorption to equestrian park	35.5	

Formula 2: SEL = 10 * LOG (T * 10^(L2/10))

Location	distance (ft)	SEL	Notes
Source	400	126	Calculated using formula 2
Closest Residences	23760	57.7	Calculated using formula 2
Equestrian Park	25344	55.0	Calculated using formula 2

Formula 3: DNL = SEL + 10 * LOG(Nday + 10*Nnight) – 49.4
Note: DNL was calculated for month in which every week incl 4 flying days with six launch events per day.

Location	distance (ft)	DNL	Notes
Source	400	85	Calculated using formula 3
Closest Residences	23760	16	Calculated using formula 3
Equestrian Park	25344	13	Calculated using formula 3

Appendix I
USAF CATEX Documents

Environmental Assessment for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft, Wendover, Utah

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Draft *September 2019*

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol RCS: **24091**

INSTRUCTIONS: *Section I to be completed by Proponent, Section II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).*

SECTION I - PROPONENT INFORMATION

1. TO (*Environmental Planning Function*)	2. FROM (*Proponent organization and functional address symbo*	2a. TELEPHONE NO
75 CES/CEIEA	**ACC UTTR (Michael Shane)**	**586-2551**

3. TITLE OF PROPOSED ACTION
WSEP Launch site

4. PURPOSE AND NEED FOR ACTION (*Identify decision to be made and need date*)
See Page 2

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (*Provide sufficient details for evaluation of the total action.*)
See Page 2

6. PROPONENT APPROVAL (*Name and Grade*)	6a. SIGNATURE	6b. DATE
Michael Shane	**Michael Shane**	**01-Aug-2014**

SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY. *(Check appropriate box and describe potential environmental effects, including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown*	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (*Noise, accident potential, encroachment, etc.*)	☐	☒	☐	☐
8. AIR QUALITY (*Emissions, attainment status, state implementation plan, etc.*)	☐	☒	☐	☐
9. WATER RESOURCES (*Quality, quantity, source, etc.*)	☐	☒	☐	☐
10. SAFETY AND OCCUPATIONAL HEALTH (*Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.*)	☐	☒	☐	☐
11. HAZARDOUS MATERIALS/WASTE (*Use/storage/generation, solid waste, etc.*)	☐	☒	☐	☐
12. BIOLOGICAL RESOURCES (*Wetlands/floodplains, threatened or endangered species, etc.*)	☐	☒	☐	☐
13. CULTURAL RESOURCES (*Native American burial sites, archeological, historical, etc.*)	☐	☒	☐	☐
14. GEOLOGY AND SOILS (*Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.*)	☐	☒	☐	☐
15. SOCIOECONOMIC (*Employment/population projections, school and local fiscal impacts, etc.*)	☐	☒	☐	☐
16. OTHER (*Potential impacts not addressed above.*)	☐	☒	☐	☐

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17. ☒ PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) (see below for list of CATEXs); OR
☐ PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.

18. REMARKS
32 CFR 989 CATEX A2.3.13 Installing or modifying airfield operational equipment (such as runway visual range equipment, visual glide path systems, and remote transmitter or receiver facilities) on airfield property and usually accessible only to maintenance personnel.

32 CFR 989 CATEX A2.3.14 Installing on previously developed land, equipment that does not substantially alter land use (i.e., land

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (*Name and Grade*)	19a. SIGNATURE	19b. DATE
Samuel Johnson	**//S-SIGNED 9-29-14// Johnson, Samuel**	**29-Sep-2014**

AF IMT 813, 19990901, V1 THIS FORM CONSOLIDATES AF FORM 813 and 814. PREVIOUS EDITIONS OF BOTH FORMS ARE OBSOLETE. Page 1 of 3

AF IMT 813, SEP 99, CONTINUATION SHEET

4. PURPOSE AND NEED FOR ACTION (*Identify decision to be made and need date*)
4.1 Objective:
To locate a new drone launch site south of the Wendover Airfield
4.2 Need Back:
15-AUG-14
4.3 Who Wants the Project:
The UTTR has been asked by the 98th Weapons evaluation Group to work this project
4.4 Why is the action required:
The UTTR has been approached by a customer to develop a new drone launch pad south of Wendover UT. The site would allow for multiple drone launches from the west side of the range for use during Combat Archer exercises performed on the UTTR. The current launch site is on Dugway Proving Grounds and its location creates issues with launch and recovery processes. The new facility would allow for more efficient and safer operations.

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (*Provide sufficient details for evaluation of the total action.*)
5.1 What is the proposed Action:
To build a new drone launch facility for use on the UTTR.
5.2 Where is the proposed work to be done:
South of Wendover airfield
5.3 How will the proposed work be done:
See attached document
5.4 Alternatives
Alternative A - No Action:
N/A
Alternative B - Other Locations Considered:
N/A
Alternative C - Other Alternatives:
Option 1: No Action:

The no-action alternative would be to not allow these operations on the UTTR. Since the UTTR is capable of testing multiple weapons systems and programs. Not allowing this operation would prevent WSEP from providing full evaluation capabilities. The no-action alternative would lead to a limited evaluation capabilities and severely effect range operations if a new facility is not allowed at this location.

Option 2: Select another facility or another location on the UTTR.

Other locations fly drones however none have the capabilities, landscape and infrastructure of the UTTR, for this reason other facilities or locations were not evaluated. Other locations on the UTTR were evaluated however due to the cost to bring in the required infrastructure and facilities and the effect that this operation would have on other operations on the range this option was not further evaluated.

Option 3: Preferred Action:

The preferred action alternative would be to approve the planned test at the location identified. The current selected location south of Wendover on the UTTR has been selected based on the proximity to the UTTR and existing infrastructure in the area to allow for safe operations and better utilization of the UTTR.

V1 Page 2 of 3

Electronic 813 Comments:

Remarks:

Comments:	Provided By:	Assigned:	Provided:
75 CEG/CEIEA-HW-Hazardous Waste	Karl Nieman		05-Aug-2014
No haz waste concerns. Waste management protocols for excess fuel or other maintenance wastes associated with the facility will have to be established.			
75 CEG/CEU-Range Support Division	Roger Montoya		04-Aug-2014
No Concerns			
75 CEG/CEIE-CR-Cultural Resources	Anya Kitterman		13-Aug-2014
Cultural Resources - potential to impact an eligible site and requires a small amount of additional CR survey. Coordinate with Cultural Resources to complete Section 106.			
75 CEG/CEIEA-NR-Natural Resources	Russ Lawrence		04-Aug-2014
No Natural Resource Concerns			
75 CEG/CEIEA-AQ-Air Quality	Glenn Palmer		04-Aug-2014
No air quality issues			
AFCEC/CZOM-UTTR-Range Restoration	Dennis Weder		08-Aug-2014
This area has been surface cleared by the MMRP, but there is potential for subsurface UXO. Otherwise no concerns.			
75 CEG/CEIE-ST-Storage Tanks	Mark Roginske		05-Aug-2014
No water quality or tank compliance concerns			
OO-ALC/JACE-Legal-JACE	Joseph Linford		26-Sep-2014
See attached legal review.			
75 CEG/CEIEA-HM-Hazardous Materials	Michelle Cottle		04-Aug-2014
No concerns with Hazmat, but if there are any hazardous materials used, please make sure that they are properly tracked in EESOH-MIS.			
75 CEG/CEIEA-AC-Air Conformity	Allyson Morrison		04-Aug-2014
No conformity concerns			
75 CEG/CEIEA-Environmental Management	Samuel Johnson		29-Sep-2014
No comments available			

MEMORANDUM FOR RECORD

WSEP LAUNCH SITE INFORMATION

The following data is to fill section 5 of the #813 titled WSEP launch site Wendover UT

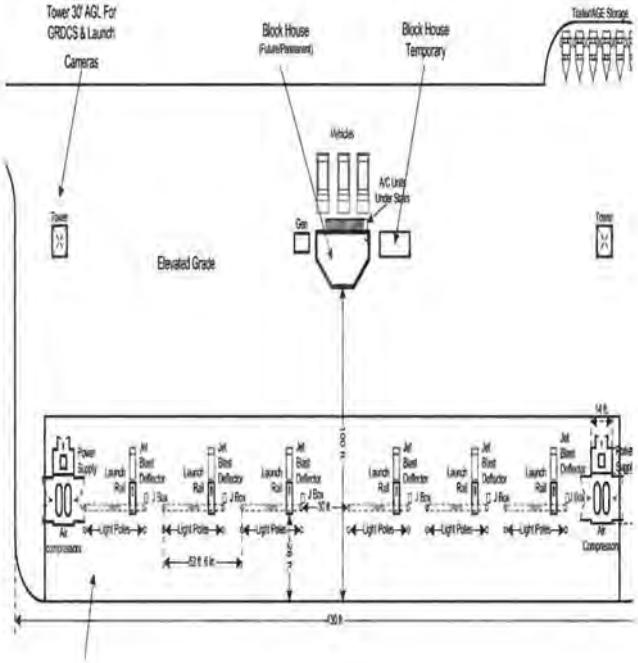
The proposed plan is to widen the existing road that goes south of the Wendover Airport past the Historic launch pads. The current road is sufficient for a single vehicle the road will be widened to approximately 25ft to allow for larger vehicles to pass. There will be 2 structures built approx.7 miles south of the launch pads the first will be a maintenance facility on a gravel pad that will be approximately 500' x 500'. At this location maintenance will be performed to prepare drones for launch, there will be 2 600 gallon fuel tanks for used fuel that will have secondary containment. There will be 1 60kw generator at this location to run electrical power for the equipment. The second pad will be approximately 3000' SE of the pad at a location shown on the map, this will be the launch rails. The Launch rails will be constructed facing in a southerly direction to allow for launch of the drones over DOD land. The pad will be 500' x 500' and will be packed gravel a road from the existing road to the launch pad will be constructed using packed gravel and will be approximately 16ft wide and 2-3ft in depth. There will be a 350 x 50ft concrete pad pored for the launch rails. There will be 2 60 KW and 1 100 KW generators to provide power for launch operations. Power (Blue line) will be run from the Airport underground at a future time to reduce the need for generators on site. Fiber (Yellow line) will be run underground from the east side of Wendover Field to the launch and maintenance areas. The Fiber will come from an existing DOD facility and will allow for real time secure communication capabilities. The exact path for both is still to be determined however general areas are shown on the attached map. An existing munitions bunker will be used to store RATO bottles, this is a historic facility and coordination will take place with base archeologist prior to use. At this time the only modification that is required is grounding rods to be installed inside the bay to allow for proper grounding of the equipment no other modifications will occur without coordination. A drone recover area will be established approximately ½ mile south west of the launch rails. No construction will occur in this location however impacts will happen in this area.

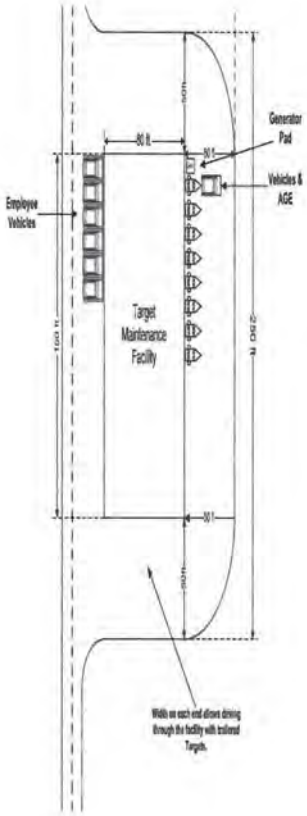
MEMORANDUM FOR RECORD

WSEP LAUNCH SITE INFORMATION

The following data is to fill section 5 of the #813 titled WSEP launch site Wendover UT

The proposed plan is to widen the existing road that goes south of the Wendover Airport past the Historic launch pads. The current road is sufficient for a single vehicle the road will be widened to approximately 25ft to allow for larger vehicles to pass. There will be 2 structures built approx.7 miles south of the launch pads the first will be a maintenance facility on a gravel pad that will be approximately 500' x 500'. At this location maintenance will be performed to prepare drones for launch, there will be 2 600 gallon fuel tanks for used fuel that will have secondary containment. There will be 1 60kw generator at this location to run electrical power for the equipment. The second pad will be approximately 3000' SE of the pad at a location shown on the map, this will be the launch rails. The Launch rails will be constructed facing in a southerly direction to allow for launch of the drones over DOD land. The pad will be 500' x 500' and will be packed gravel a road from the existing road to the launch pad will be constructed using packed gravel and will be approximately 16ft wide and 2-3ft in depth. There will be a 350 x 50ft concrete pad pored for the launch rails. There will be 2 60 KW and 1 100 KW generators to provide power for launch operations. Power (Blue line) will be run from the Airport underground at a future time to reduce the need for generators on site. Fiber (Yellow line) will be run underground from the east side of Wendover Field to the launch and maintenance areas. The Fiber will come from an existing DOD facility and will allow for real time secure communication capabilities. The exact path for both is still to be determined however general areas are shown on the attached map. An existing munitions bunker will be used to store RATO bottles, this is a historic facility and coordination will take place with base archeologist prior to use. At this time the only modification that is required is grounding rods to be installed inside the bay to allow for proper grounding of the equipment no other modifications will occur without coordination. A drone recover area will be established approximately ½ mile south west of the launch rails. No construction will occur in this location however impacts will happen in this area.





DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 75TH AIR BASE WING (AFMC)
HILL AIR FORCE BASE UTAH

26 September 2014

MEMORANDUM FOR 75 CEG/CEIEA

FROM: 75 ABW/JACE

SUBJECT: Legal Review, 813 no. 24091, Wendover drone launch site

1. This 813 and application of CATEXs A2.3.13 and A2.3.14 are legally sufficient, IAW 40 C.F.R. 1508.4, 32 C.F.R. 989.13 and Appendix B to Part 989, provided the requirements and concerns of all other reviewers are met. Specifically, cultural resources concerns have yet to be met.

2. **Recommendation**: I recommend application of CATEXs A2.3.13 and A2.3.14 to the proposed action.

//Signed 26 Sep 2014//
JOSEPH G. LINFORD, DAFC
Environmental Attorney

FOR OFFICIAL USE ONLY – NOT FOR PUBLIC RELEASE. This document contains information EXEMPT FROM MANDATORY DISCLOSURE under the Freedom of Information Act (FOIA) (5 USC 552(b)). This is a draft review document which includes pre-decisional information to which Exemption 5, the deliberative process privilege, applies. This document may also contain attorney work-product or information protected under the attorney-client privilege, both of which are protected from disclosure under FOIA.

813 REVIEW – WORK REQUEST #24091
WSEP LAUNCH SITE - UTTR
CULTURAL RESOURCES REVIEW

The Utah Test and Training Range (UTTR) houses numerous cultural and archaeological sites. The current proposed action potentially places the road expansion within a National Register eligible site (42To2749). Therefore, the work may constitute an **ADVERSE EFFECT** to historic resources. The Utah State Historic Preservation Office (SHPO) has specific guidelines and requirements on mitigating adverse effects to historic sites. Additionally, there is a small area that has not been surveyed for cultural resources. Due to the size this could be undertaken in-house. This is necessary to fulfill Section 106 requirements.

Please coordinate with cultural resources management with additional information to determine effect and complete the Section 106 review. It is **NOT RECOMMENDED** the proposed project proceed until full survey has been completed and mitigation measures, if necessary, have been coordinated with the SHPO. Please contact Anya Kitterman (586-2464) to discuss the project or if there are any questions.

24 October 2013 Charlene Brown

Utah Division of **State History**

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Julie Fisher
Executive Director
Department of Heritage & Arts

Brad Westwood
Director

November 24, 2014

Joseph A. Martone, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base, Utah 84056-5137

RE: Drone Facility at the UTTR

For future correspondence, please reference Case No. 14-1656

Dear Dr. Martone:

The Utah State Historic Preservation Office received your request for our comment on the above-referenced undertaking on November 21, 2014.

We concur with your determination of effect for this undertaking.

This letter serves as our comment on the determinations you have made, within the consultation process specified in §36CFR800.4. If you have questions, please contact me at 801-245-7263 or Lori Hunsaker at 801-245-7241 *lhunsaker@utah.gov*.

Sincerely,

Chris Merritt, Ph.D.
Deputy State Historic Preservation Officer
Archaeology
cmerritt@utah.gov

Utah Department of Heritage & Arts 300 S. Rio Grande Street • Salt Lake City, Utah 84101 • (801) 245-7225 • facsimile (801) 355-0587 • history.utah.gov

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Standard Operating Procedure

UNANTICIPATED DISCOVERY OF ARCHAEOLOGICAL DEPOSITS

APPLICABLE LAWS AND REGULATIONS

- National Historic Preservation Act
- National Environmental Policy Act
- Native American Graves Protection and Repatriation Act
- AFI 32-7065 (June 2004), *Cultural Resources Management Program*

OVERVIEW

All undertakings that disturb the ground surface have the potential to discover buried and previously unknown archaeological deposits. The accidental discoveries of archaeological deposits during an undertaking can include but are not limited to:

- Undiscovered/undocumented structural and engineering features; and
- Undiscovered/undocumented archaeological resources such as foundation remains, burials, artifacts, or other evidence of human occupation.

POLICY

When cultural resources are discovered during the construction of any undertaking or ground-disturbing activities, Hill AFB shall:

- Evaluate such deposits for NRHP eligibility.
- Treat the site as potentially eligible and avoid the site insofar as possible until an NRHP eligibility determination is made.
- Make reasonable efforts to minimize harm to the property until the Section 106 process is completed.
- **The BHPO will ensure that the provisions of NAGPRA are implemented first if any unanticipated discovery includes human remains, funerary objects, or American Indian sacred objects (see SOP #6).**

PROCEDURE

Step 1: Work shall cease in the area of the discovery (Figure 5-5). Work may continue in other areas.

- The property is to be treated as eligible and avoided until an eligibility determination is made. Hill AFB will continue to make reasonable efforts to avoid or minimize harm to the property until the Section 106 process is completed.

Further construction activities in the vicinity of the site will be suspended until an agreed-upon testing strategy has been carried out and sufficient data have been gathered to allow a determination of eligibility. The size of the area in which work should be stopped shall be determined in consultation with the **BHPO**.

Step 2: Immediately following the discovery, the **Project Manager** shall notify the installation **BHPO**.

Step 3: The **BHPO** or a professional archaeologist shall make a field evaluation of the context of the deposit and its probable age and significance, record the findings in writing, and document with appropriate photographs and drawings.

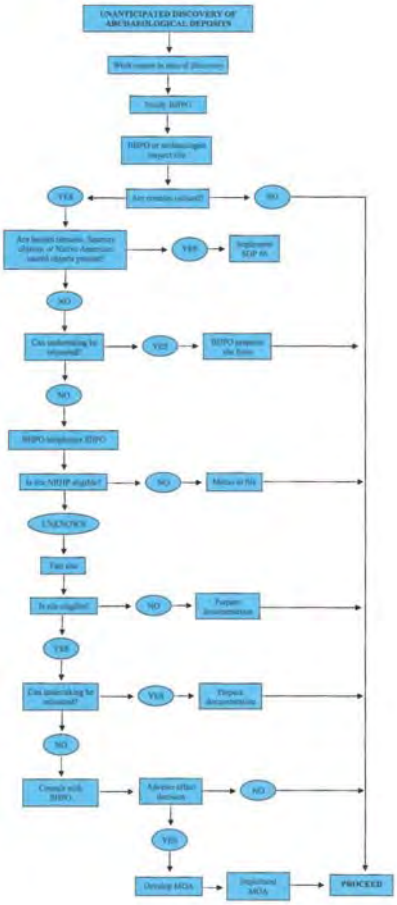
- If disturbance of the deposits is minimal and the excavation can be relocated to avoid the site, the **BHPO** will file appropriate site forms in a routine manner.
- If the excavation cannot be relocated, the **BHPO** shall notify the office of the **SHPO** to report the discovery and to initiate an expedited consultation.

The Section 106 review process is initiated at this point.

- If the deposits are determined to be ineligible for inclusion in the NRHP, then Hill AFB **BHPO** will prepare a memorandum for record and the construction may proceed.
- If the existing information is inadequate for an NRHP eligibility determination, Hill AFB **BHPO** shall develop an emergency testing plan in coordination with the SHPO.

Step 4: Hill AFB shall have qualified personnel conduct test excavations of the deposits to determine NRHP eligibility.

- Hill AFB BHPO, in consultation with the SHPO, will determine appropriate methodology for NRHP eligibility determination.
- If the SHPO and Hill AFB agree that the deposits are ineligible for inclusion in the NRHP, then work on the undertaking may proceed.
- If the deposits appear to be eligible, or Hill AFB and the SHPO cannot agree on the question of eligibility, then Hill AFB shall implement alternative actions, depending on the urgency of the proposed action.
  - Hill AFB may relocate the project to avoid the adverse effect.
  - Hill AFB may request the Keeper of the National Register to provide a determination.
  - Hill AFB may proceed with a data recovery plan under a MOA developed in coordination with the SHPO and possibly the ACHP and interested parties.
  - **Hill AFB may request comments from the ACHP and may develop and implement actions that take into account the effects of the undertaking on the property to the extent feasible and the comments of the SHPO, ACHP, and interested parties. Interim comments must be provided to Hill AFB within 48 hours; final comments must be provided within 30 days.**



From: KITTERMAN, ANYA D GS-12 USAF AFMC 75 CEG/CEIE
To: JOHNSON, SAMUEL A GS-12 USAF AFMC 75 CEG/CEIEA
Cc: SHANE, MICHAEL P GS-11 USAF ACC UTTR/DOO
Subject: WSEP Launch Pad; 813 24051
Date: Thursday, September 11, 2014 8:45:22 AM

Good morning,

This project is currently being coordinated with the Cultural Resource Program in order to complete Section 106. It is understood by the proponent that further work and SHPO consultation must be completed prior to any of the proposed work being completed. As coordination has been started and is ongoing, cultural resources feels the 813 can proceed forward. Thank you.

Anya Kitterman
Archaeologist/Cultural Resource Manager
75th CEG/CEIE
Hill Air Force Base
7290 Weiner St.
Bldg 383
Hill AFB, UT 84056-5003
(801) 586-2464
anya.kitterman@us.af.mil

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Ms. Lori Hunsaker
Deputy State Historic Preservation Officer
300 Rio Grande
Salt Lake City Utah 84101

Dear Ms. Hunsaker,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile layer will be laid and follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future (Attachment 2, Details of Geotextile Layer). An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. This is in order to ground the building. A recovery area will be established near the maintenance facility and launch site, though have no new construction itself.

The proposed area of work on the UTTR has been surveyed according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation (Attachment 1). The survey (U-12-Ut-0371m) was completed in 2012. Two known eligible archaeological sites are near the area of potential effect (APE). Site 42TO2749 has been avoided and will not be impacted by this project. Site42TO708, the Deep Creek Railroad, will have minimal impact and follow the stipulations listed below.

On October 27th, 2014, Chris Merritt from the SHPO visited in order to discuss options to minimize impacts. The following approaches were discussed:

- The road bed will be maintained at its current width but will be repaired and re-graded as needed. This will be done with gravel and materials similar to what are already in place.
- The two access routes for the proposed pads will utilize a non-permanent geotextile base where the proposed work encounters the slope and former railroad grade. There will be no alteration to the current grade in order that the grade could return to its original condition should the site be disbanded in the future.
- The culvert C-29, C-30, and C-31 will be upgraded with the condition that the exterior view remains the same and utilizes historic materials as much as feasible A qualified archaeologist or architectural historian will be on site during the deconstruction of C-29, and if modifications are necessary, C-31 (Attachment 3, Details on Culverts to be Upgraded). This will allow for the original design to be recorded during any deconstruction. No modern construction will be visible. C-31 will contain a central interior beam in order to maintain the design. The rocks to the base of the culvert will be retained, though neither the historic beams nor rocks will need to be load bearing.
- If possible, historic materials will be stored for future maintenance of the culverts.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 4).

Archaeological surveys, including Utah State Historic Site Forms have been completed for this area and are on file in your office.

In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Details of Geotextile Layer
3. Details of Culverts to be Upgraded
4. Unanticipated Discovery Protocol

Distribution List:
Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
Duckwater Shoshone Tribe
Eastern Shoshone Tribe
Ely Shoshone Tribe
Hopi Tribe
Navajo Nation
Northern Arapaho Tribe
Northwestern Band of the Shoshone Nation
Paiute Indian Tribe of Utah
Pueblo of Zuni
San Juan Southern Paiute Tribe
Shoshone-Bannock Tribes of the Fort Hall Reservation
Shoshone-Paiute Tribes of the Duck Valley Reservation
Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone Indians
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Chairman Willie A. Sharp, Jr.
Blackfeet Tribal Business Council
P.O. Box 850
Browning, MT 59417

Dear Chairman Sharp,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

The proposed area of work on the UTTR has been surveyed according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The survey (U-12-UI-0371m) was completed in 2012. Two known eligible historic archaeological sites are near the area of potential effect (APE). Site 42TO2749 has been avoided and will not be impacted by this project. Site42TO708, the Deep Creek Railroad and will have minimal impact.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 2).

Archaeological surveys, including Utah State Historic Site Forms have been completed for this area and are on file in your office.

In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc:
John Murray, Tribal Historic Preservation Officer, Blackfeet Tribe

Distribution List:
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Ute Mountain Ute Tribe
Wells Band of Western Shoshone

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Madeline Greymountain
Chairperson, Confederated Tribes of the Goshute Indian Reservation
PO Box 6104
Ibapah, UT 84034

Dear Chairperson Greymountain,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

The proposed area of work on the UTTR has been surveyed according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The survey (U-12-UI-0371m) was completed in 2012. Two known eligible historic archaeological sites are near the area of potential effect (APE). Site 42TO2749 has been avoided and will not be impacted by this project. Site42TO708, the Deep Creek Railroad and will have minimal impact.

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direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 2).

Archaeological surveys, including Utah State Historic Site Forms have been completed for this area and are on file in your office.

In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

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Wells Band of Western Shoshone

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Darrin Old Coyote
Chairman, Crow Tribe of Montana
PO Box 159
Crow Agency, MT 59022

Dear Chairman Old Coyote,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with

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Sincerely

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Emerson Bull Chief, Crow Tribe Tribal Historic Preservation Officer

Distribution List:
Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
Duckwater Shoshone Tribe
Eastern Shoshone Tribe
Ely Shoshone Tribe
Hopi Tribe
Navajo Nation
Northern Arapaho Tribe
Northwestern Band of the Shoshone Nation
Paiute Indian Tribe of Utah
Pueblo of Zuni
San Juan Southern Paiute Tribe
Shoshone-Bannock Tribes of the Fort Hall Reservation
Shoshone-Paiute Tribes of the Duck Valley Reservation
Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone Indians
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Virginia Sanchez
Chairwoman, Duckwater Shoshone Tribe
PO Box 140068
Duckwater, NV 89314

Dear Chairwoman Sanchez,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

The proposed area of work on the UTTR has been surveyed according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The survey (U-12-UI-0371m) was completed in 2012. Two known eligible historic archaeological sites are near the area of potential effect (APE). Site 42TO2749 has been avoided and will not be impacted by this project. Site42TO708, the Deep Creek Railroad and will have minimal impact.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with

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Sincerely

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Maurice Churchill, Duckwater Shoshone Tribe, Cultural Resources

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Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Darwin St. Clair Jr.
Chairman, Eastern Shoshone Tribe
PO Box 538
Fort Washakie, WY 82514

Dear Chairman St. Clair,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

The proposed area of work on the UTTR has been surveyed according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The survey (U-12-UI-0371m) was completed in 2012. Two known eligible historic archaeological sites are near the area of potential effect (APE). Site 42TO2749 has been avoided and will not be impacted by this project. Site42TO708, the Deep Creek Railroad and will have minimal impact.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with

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Sincerely

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Wilford Ferris III, Eastern Shoshone Tribal Historic Preservation Officer

Distribution List:
Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Alvin S. Marques
Chairman, Ely Shoshone Tribe
16 Shoshone Circle
Ely, NV 89301

Dear Chairman Marques,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

The proposed area of work on the UTTR has been surveyed according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The survey (U-12-UI-0371m) was completed in 2012. Two known eligible historic archaeological sites are near the area of potential effect (APE). Site 42TO2749 has been avoided and will not be impacted by this project. Site42TO708, the Deep Creek Railroad and will have minimal impact.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with

direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 2).

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In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Cindy Marques, Ely Shoshone Cultural Resources

Distribution List:
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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

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

Dear Chairman Honanie,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Mr. Leigh Kuwanisiwma, Hopi Tribe Director of Cultural Preservation

Distribution List:
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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Ben Shelly
President, Navajo Nation
PO Box 9000
Hwy 264, Tribal Hills Dr.
Window Rock, AZ 86515-9000

Dear President Shelly,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Timothy Begay, Navajo Nation Tribal Historic Preservation Officer

Distribution List:
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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Darrell O'Neal, Sr.
Chairman, Northern Arapaho Tribe
PO Box 396
Fort Washakie, WY 82514

Dear Chairman O'Neal,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
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cc: Corinne Headley, Northern Arapaho Tribal Historic Preservation Officer

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Jason Walker
Chairman, Northwestern Band of the Shoshone Nation
707 North Main Street
Brigham City, UT 84302

Dear Chairman Walker,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
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cc: Patty Timbimboo-Madsen, Northwestern Band of Shoshone Cultural and Natural Resources Manager

Distribution List:
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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Gari Lafferty
Chairperson, Paiute Tribe of Utah
440 North Paiute Drive
Cedar City, UT 84721

Dear Chairperson Lafferty,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

The proposed area of work on the UTTR has been surveyed according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The survey (U-12-UI-0371m) was completed in 2012. Two known eligible historic archaeological sites are near the area of potential effect (APE). Site 42TO2749 has been avoided and will not be impacted by this project. Site42TO708, the Deep Creek Railroad and will have minimal impact.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with

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Sincerely

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Dorena Martineau, Paiute Tribe Cultural Resources Director

Distribution List:
Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
Duckwater Shoshone Tribe
Eastern Shoshone Tribe
Ely Shoshone Tribe
Hopi Tribe
Navajo Nation
Northern Arapaho Tribe
Northwestern Band of the Shoshone Nation
Paiute Indian Tribe of Utah
Pueblo of Zuni
San Juan Southern Paiute Tribe
Shoshone-Bannock Tribes of the Fort Hall Reservation
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Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Arlen P. Quetawki Sr.
Governor, Pueblo of Zuni
PO Box 339
Zuni, NM 87327

Dear Governor Quetawki,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

Michelle L. Cobble

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

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cc: Kurt Dongoske, Zuni Tribal Historic Preservation Officer

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

May Preston
President, San Juan Southern Paiute Tribe
PO Box 1989
Tuba City, AZ 86045

Dear President Preston,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

Michelle L. Cobble

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Nathan Small
Chair, Shoshone-Bannock Tribes of the Fort Hall Reservation
PO Box 306
Fort Hall, ID 83203

Dear Chairman Small,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Carolyn Smith, Shoshone-Bannock Cultural Resources Coordinator

Distribution List:
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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Lindsey Manning
Chairman, Shoshone-Paiute Tribes of the Duck Valley Reservation
PO Box 219
Owyhee, NV 89832

Dear Chairman Manning,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Lori Bear
Chairwoman, Skull Valley Band of Goshute Indians
PO Box 448
Grantsville, UT 84029

Dear Chairwoman Bear,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Davis Gonzales
Chairman, Te-Moak Tribe of Western Shoshone
525 Sunset Street
Elko, NV 89801

Dear Chairman Gonzales,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Chief, Environmental Quality Branch
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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Gordon Howell
Chairman, Ute Indian Tribe
PO Box 190
Fort Duchesne, UT 84026

Dear Chairman Howell,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

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Sincerely

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

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cc: Betsy Chapoose, Ute Indian Tribe Cultural Rights and Protection

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DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Manuel Heart
Chairman, Ute Mountain Ute tribe
PO Box 248
Towaoc, CO 81334-0248

Dear Chairman Heart

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

The proposed area of work on the UTTR has been surveyed according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The survey (U-12-UI-0371m) was completed in 2012. Two known eligible historic archaeological sites are near the area of potential effect (APE). Site 42TO2749 has been avoided and will not be impacted by this project. Site42TO708, the Deep Creek Railroad and will have minimal impact.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with

direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 2).

Archaeological surveys, including Utah State Historic Site Forms have been completed for this area and are on file in your office.

In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Terry Knight, Ute Mountain Ute NAGPRA Specialist

Distribution List:
Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
Duckwater Shoshone Tribe
Eastern Shoshone Tribe
Ely Shoshone Tribe
Hopi Tribe
Navajo Nation
Northern Arapaho Tribe
Northwestern Band of the Shoshone Nation
Paiute Indian Tribe of Utah
Pueblo of Zuni
San Juan Southern Paiute Tribe
Shoshone-Bannock Tribes of the Fort Hall Reservation
Shoshone-Paiute Tribes of the Duck Valley Reservation
Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone Indians
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Michelle Cure
Chairperson, Wells Band of Western Shoshone
PO Box 809
Wells, NV 89835

Dear Chairperson Cure,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

The proposed area of work on the UTTR has been surveyed according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The survey (U-12-UI-0371m) was completed in 2012. Two known eligible historic archaeological sites are near the area of potential effect (APE). Site 42TO2749 has been avoided and will not be impacted by this project. Site42TO708, the Deep Creek Railroad and will have minimal impact.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with

direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 2).

Archaeological surveys, including Utah State Historic Site Forms have been completed for this area and are on file in your office.

In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

Michelle L Cobb

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

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Shoshone-Paiute Tribes of the Duck Valley Reservation
Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone Indians
Ute Indian Tribe
Ute Mountain Ute Tribe

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol RCS:**24976**

INSTRUCTIONS: *Section I to be completed by Proponent; Section II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).*

SECTION I - PROPONENT INFORMATION

1. TO (*Environmental Planning Function*)	2. FROM (*Proponent organization and functional address symbo*	2a. TELEPHONE NO.
75 CEG/CEIEA	**ACC UTTR (Michael Shane)**	**586-2551**

3. TITLE OF PROPOSED ACTION
WSEP Wendover modified Launch Site

4. PURPOSE AND NEED FOR ACTION *(Identify decision to be made and need date)*
See Page 2

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES *(DOPAA) (Provide sufficient details for evaluation of the total action.)*
See Page 2

6. PROPONENT APPROVAL *(Name and Grade)*	6a. SIGNATURE	6b. DATE
Michael Shane	**Michael.Shane**	**11-Feb-2015**

SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY. *(Check appropriate box and describe potential environmental effects Including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown*	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE *(Noise, accident potential, encroachment, etc.)*	☐	☒	☐	☐
8. AIR QUALITY *(Emissions, attainment status, state implementation plan, etc.)*	☐	☒	☐	☐
9. WATER RESOURCES *(Quality, quantity, source, etc.)*	☐	☒	☐	☐
10. SAFETY AND OCCUPATIONAL HEALTH *(Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)*	☐	☒	☐	☐
11. HAZARDOUS MATERIALS/WASTE *(Use/storage/generation, solid waste, etc.)*	☐	☒	☐	☐
12. BIOLOGICAL RESOURCES *(Wetlands/floodplains, threatened or endangered species, etc.)*	☐	☒	☐	☐
13. CULTURAL RESOURCES *(Native American burial sites, archeological, historical, etc.)*	☐	☒	☐	☐
14. GEOLOGY AND SOILS *(Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)*	☐	☒	☐	☐
15. SOCIOECONOMIC *(Employment/population projections, school and local fiscal impacts, etc.)*	☐	☒	☐	☐
16. OTHER *(Potential impacts not addressed above.)*	☐	☒	☐	☐

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17. ☒ PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION *(CATEX)* (see below for list of CATEXs); OR
☐ PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.

18. REMARKS
32 CFR 989 CATEX A2.3.13 Installing or modifying airfield operational equipment (such as runway visual range equipment, visual glide path systems, and remote transmitter or receiver facilities) on airfield property and usually accessible only to maintenance personnel.

32 CFR 989 CATEX A2.3.14 Installing on previously developed land, equipment that does not substantially alter land use (i.e., land

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION *(Name and Grade)*	19a. SIGNATURE	19b. DATE
Samuel Johnson	**//E-SIGNED 2-19-15//** **Johnson, Samuel**	**19-Feb-2015**

AF IMT 813, 19990901, V1 THIS FORM CONSOLIDATES AF FORM 813 and 814. PREVIOUS EDITIONS OF BOTH FORMS ARE OBSOLETE.

AF IMT 813, SEP 99, CONTINUATION SHEET

4. PURPOSE AND NEED FOR ACTION *(Identify decision to be made and need date)*

4.1 Objective:
This is a modification to RCS 24091. The Launch site needed to be relocated 1.5 miles south of the proposed maintenance facility.
4.2 Need Back:
25-FEB-15
4.3 Who Wants the Project:
HQ UTTR in support of the 86th Weapons Evaluation Group
4.4 Why is the action required:
The launch pad needs to be moved south to a larger FAA clearance zone from the Wendover Airfield

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES *(DOPAA) (Provide sufficient details for evaluation of the total action.)*

5.1 What is the proposed Action:
Work will be done as stated in the original 813 with the exception of the widening of the exiting roads, they will stay as is due to thier historical status. The road going east from the maintenance pad will not be constructed due to the new location. The new launch pad will be the same size as original just at a new location. All other functions will be as stated in the original 813
5.2 Where is the proposed work to be done:
South of Wendover Airfield UT
5.3 How will the proposed work be done:
See Original 813
5.4 Alternatives
Alternative A - No Action:
N/A
Alternative B - Other Locations Considered:
N/A
Alternative C - Other Alternatives:
See original 813

Electronic 813 Comments:

Remarks:

Comments:	Provided By:	Assigned:	Provided:
75 CEG/CEIEA-NR-Natural Resources	Russ Lawrence		18-Feb-2015
OK with the modification			
75 CEG/CEIE-CR-Cultural Resources	Anya Kitterman		11-Feb-2015
Cultural Resources - new site area has been resurveyed and there are no concerns. There will be no adverse effects based on new location. All previous stipulations agreed upon with the SHPOs office hold for this project as well. This includes minimizing impacts to culverts and Deep Creek railroad grade.			
75 CEG/CEIEA-Environmental Management	Samuel Johnson		19-Feb-2015
No comments available			

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 75TH AIR BASE WING (AFMC)
HILL AIR FORCE BASE UTAH

26 September 2014

MEMORANDUM FOR 75 CEG/CEIEA

FROM: 75 ABW/JACE

SUBJECT: Legal Review, 813 no. 24091, Wendover drone launch site

1. This 813 and application of CATEXs A2.3.13 and A2.3.14 are legally sufficient, IAW 40 C.F.R. 1508.4, 32 C.F.R. 989.13 and Appendix B to Part 989, provided the requirements and concerns of all other reviewers are met. Specifically, cultural resources concerns have yet to be met.

2. **Recommendation**: I recommend application of CATEXs A2.3.13 and A2.3.14 to the proposed action.

//Signed 26 Sep 2014//
JOSEPH G. LINFORD, DAFC
Environmental Attorney

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REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS — *Report Control Symbol RCS:24091*

INSTRUCTIONS: *Section I to be completed by Proponent; Section II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).*

SECTION I - PROPONENT INFORMATION

1. TO (*Environmental Planning Function*)	2. FROM (*Proponent organization and functional address symbo*	2a. TELEPHONE NO.
75 CEG/CEIEE-EM	388 FW (Michael Shane)	586-2501

3. TITLE OF PROPOSED ACTION
WSEP Launch site

4. PURPOSE AND NEED FOR ACTION (*Identify decision to be made and need date*) — More details on page #2
4.1 Objective:
To locate a new drone launch site south of the Wendover Airfield

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (*DOPAA*) (*Provide sufficient details for evaluation of the total action.*)
5.1 What is the proposed Action:
To build a new drone launch facility for use on the UTTR.

6. PROPONENT APPROVAL (*Name and Grade*)	6a. SIGNATURE	6b. DATE
Michael Shane	Michael.Shane	01-Aug-2014

SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY. (*Check appropriate box and describe potential environmental effects including cumulative effects.*) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (*Noise, accident potential, encroachment, etc.*)		X		
8. AIR QUALITY (*Emissions, attainment status, state implementation plan, etc.*)		X		
9. WATER RESOURCES (*Quality, quantity, source, etc.*)		X		
10. SAFETY AND OCCUPATIONAL HEALTH (*Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.*)		X		
11. HAZARDOUS MATERIALS/WASTE (*Use/storage/generation, solid waste, etc.*)		X		
12. BIOLOGICAL RESOURCES (*Wetlands/floodplains, threatened or endangered species, etc.*)		X		
13. CULTURAL RESOURCES (*Native American burial sites, archeological, historical, etc.*)		X		
14. GEOLOGY AND SOILS (*Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.*)		X		
15. SOCIOECONOMIC (*Employment/population projections, school and local fiscal impacts, etc.*)		X		
16. OTHER (*Potential impacts not addressed above.*)		X		

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17. [X] PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (*CATEX*) (see below for List of CATEXs). OR
[ ] PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX, FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.

18. REMARKS
32 CFR 989 CATEX A2.3.13 Installing or modifying airfield operational equipment (such as runway visual range equipment, visual glide path systems, and remote transmitter or receiver facilities) on airfield property and usually accessible only to maintenance personnel.

32 CFR 989 CATEX A2.3.14 Installing on previously developed land, equipment that does not substantially alter land use (i.e., land

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (*Name and Grade*)	19a. SIGNATURE	19b. DATE
Samuel Johnson	//E-SIGNED 9-29-14// Johnson, Samuel	29-Sep-2014

AF IMT 813, SEP 99, CONTINUATION SHEET

4. PURPOSE AND NEED FOR ACTION (*Identify decision to be made and need date*)
4.1 Objective:
To locate a new drone launch site south of the Wendover Airfield
4.2 Need Back:
15-AUG-14
4.3 Who Wants the Project:
The UTTR has been asked by the 86th Weapons evaluation Group to work this project
4.4 Why is the action required:
The UTTR has been approached by a customer to develop a new drone launch pad south of Wendover UT. The site would allow for multiple drone launches from the west side of the range for use during Combat Archer exercises performed on the UTTR. The current launch site is on Dugway Proving Grounds and its location creates issues with launch and recovery processes. The new facility would allow for more efficient and safer operations.

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (*DOPAA*) (*Provide sufficient details for evaluation of the total action.*)
5.1 What is the proposed Action:
To build a new drone launch facility for use on the UTTR.
5.2 Where is the proposed work to be done:
South of Wendeover airfield
5.3 How will the proposed work be done:
See attached document
5.4 Alternative Considerations:
Option 1: No Action:

The no-action alternative would be to not allow these operations on the UTTR. Since the UTTR is capable of testing multiple weapons systems and programs. Not allowing this operation would prevent WSEP from providing full evaluation capabilities. The no-action alternative would lead to a limited evaluation capabilities and severely effect range operations if a new facility is not allowed at this location.

Option 2: Select another facility or another location on the UTTR.

Other locations fly drones however none have the capabilities, landscape and infrastructure of the UTTR, for this reason other facilities or locations were not evaluated. Other locations on the UTTR were evaluated however due to the cost to bring in the required infrastructure and facilities and the effect that this operation would have on other operations on the range this option was not further evaluated.

Option 3: Preferred Action:

The preferred action alternative would be to approve the planned test at the location identified. The current selected location south of Wendover on the UTTR has been selected based on the proximity to the UTTR and existing infrastructure in the area to allow for safe operations and better utilization of the UTTR.

Electronic 813 Comments:

Remarks:

32 CFR 989 CATEX A2.3.13 Installing or modifying airfield operational equipment (such as runway visual range equipment, visual glide path systems, and remote transmitter or receiver facilities) on airfield property and usually accessible only to maintenance personnel

32 CFR 989 CATEX A2.3.14 Installing on previously developed land, equipment that does not substantially alter land use (i.e., land use of more than one acre). This includes outgrants to private lessees for similar construction

Comments:	Provided By:	Assigned:	Provided:
75 CEG/CENE-HM-Hazardous Materials	Michelle Cottle		04-Aug-2014
No concerns with Hazmat, but if there are any hazardous materials used, please make sure that they are properly tracked in EESOH-MIS			
75 CEG/CENE-AC-Air Conformity	Allyson Morrison		04-Aug-2014
No conformity concerns			
75 CEG/CEM-HW-Hazardous Waste	Karl Nisman		05-Aug-2014
No haz waste concerns. Waste management protocols for excess fuel or other maintenance wastes associated with the facility will have to be established.			
75 CEG/CEU-Range Support Division	Roger Montoya		04-Aug-2014
No Concerns			
75 CEG/CENE-CR-Cultural Resources	Anya Kitterman		13-Aug-2014
Cultural Resources - potential to impact an eligible site and requires a small amount of additional CR survey. Coordinate with Cultural Resources to complete Section 106			
75 CEG/CENE-NR-Natural Resources	Russ Lawrence		04-Aug-2014
No Natural Resource Concerns			
75 CEG/CENE-AQ-Air Quality	Glenn Palmer		04-Aug-2014
No air quality issues			
75 CEG/CENR-UTTR-Range Restoration	Dennis Weber		08-Aug-2014
This area has been surface cleared by the MMRP, but there is potential for subsurface UXO. Otherwise no concerns			
75 CEG/CENE-ST/WQ-Storage Tanks/Water Quality	Mark Roginska		05-Aug-2014
No water quality or tank compliance concerns			
OO-ALC/JACE-Legal-JACE	Joseph Linford		25-Sep-2014
See attached legal review			
75 CEG/CENE-EM-Environmental Management	Samuel Johnson		29-Sep-2014
No comments available			

813 REVIEW – WORK REQUEST #24091
WSEP LAUNCH SITE - UTTR
CULTURAL RESOURCES REVIEW

The Utah Test and Training Range (UTTR) houses numerous cultural and archaeological sites. The current proposed action potentially places the road expansion within a National Register eligible site (42To2749). Therefore, the work may constitute an **ADVERSE EFFECT** to historic resources. The Utah State Historic Preservation Office (SHPO) has specific guidelines and requirements on mitigating adverse effects to historic sites. Additionally, there is a small area that has not been surveyed for cultural resources. Due to the size this could be undertaken in-house. This is necessary to fulfill Section 106 requirements.

Please coordinate with cultural resources management with additional information to determine effect and complete the Section 106 review. It is **NOT RECOMMENDED** the proposed project proceed until full survey has been completed and mitigation measures, if necessary, have been coordinated with the SHPO. Please contact Anya Kitterman (586-2464) to discuss the project or if there are any questions.

24 October 2013 Charlene Brown

Standard Operating Procedure

UNANTICIPATED DISCOVERY OF ARCHAEOLOGICAL DEPOSITS

APPLICABLE LAWS AND REGULATIONS

- National Historic Preservation Act
- National Environmental Policy Act
- Native American Graves Protection and Repatriation Act
- AFI 32–7065 (June 2004), *Cultural Resources Management Program*

OVERVIEW

All undertakings that disturb the ground surface have the potential to discover buried and previously unknown archaeological deposits. The accidental discoveries of archaeological deposits during an undertaking can include but are not limited to:

- Undiscovered/undocumented structural and engineering features; and
- Undiscovered/undocumented archaeological resources such as foundation remains, burials, artifacts, or other evidence of human occupation.

POLICY

When cultural resources are discovered during the construction of any undertaking or ground-disturbing activities, Hill AFB shall:

- Evaluate such deposits for NRHP eligibility.
- Treat the site as potentially eligible and avoid the site insofar as possible until an NRHP eligibility determination is made.
- Make reasonable efforts to minimize harm to the property until the Section 106 process is completed.
- **The BHPO will ensure that the provisions of NAGPRA are implemented first if any unanticipated discovery includes human remains, funerary objects, or American Indian sacred objects (see SOP #6).**

PROCEDURE

Step 1: Work shall cease in the area of the discovery (Figure 5-5). Work may continue in other areas.

- The property is to be treated as eligible and avoided until an eligibility determination is made. Hill AFB will continue to make reasonable efforts to avoid or minimize harm to the property until the Section 106 process is completed.

Further construction activities in the vicinity of the site will be suspended until an agreed-upon testing strategy has been carried out and sufficient data have been gathered to allow a determination of eligibility. The size of the area in which work should be stopped shall be determined in consultation with the **BHPO**.

Step 2: Immediately following the discovery, the **Project Manager** shall notify the installation **BHPO**.

Step 3: The **BHPO** or a professional archaeologist shall make a field evaluation of the context of the deposit and its probable age and significance, record the findings in writing, and document with appropriate photographs and drawings.

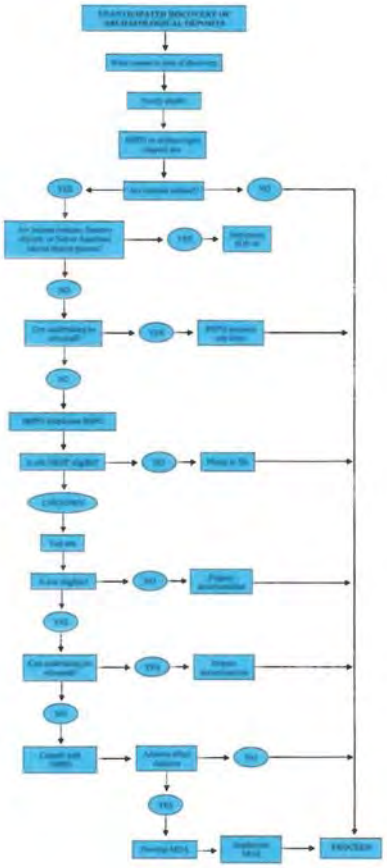
- If disturbance of the deposits is minimal and the excavation can be relocated to avoid the site, the **BHPO** will file appropriate site forms in a routine manner.
- If the excavation cannot be relocated, the **BHPO** shall notify the office of the **SHPO** to report the discovery and to initiate an expedited consultation.

The Section 106 review process is initiated at this point.

- If the deposits are determined to be ineligible for inclusion in the NRHP, then Hill AFB **BHPO** will prepare a memorandum for record and the construction may proceed.
- If the existing information is inadequate for an NRHP eligibility determination, Hill AFB **BHPO** shall develop an emergency testing plan in coordination with the SHPO.

Step 4: Hill AFB shall have qualified personnel conduct test excavations of the deposits to determine NRHP eligibility.

- Hill AFB BHPO, in consultation with the SHPO, will determine appropriate methodology for NRHP eligibility determination.
- If the SHPO and Hill AFB agree that the deposits are ineligible for inclusion in the NRHP, then work on the undertaking may proceed.
- If the deposits appear to be eligible, or Hill AFB and the SHPO cannot agree on the question of eligibility, then Hill AFB shall implement alternative actions, depending on the urgency of the proposed action.
  - Hill AFB may relocate the project to avoid the adverse effect.
  - Hill AFB may request the Keeper of the National Register to provide a determination.
  - Hill AFB may proceed with a data recovery plan under a MOA developed in coordination with the SHPO and possibly the ACHP and interested parties.
  - **Hill AFB may request comments from the ACHP and may develop and implement actions that take into account the effects of the undertaking on the property to the extent feasible and the comments of the SHPO, ACHP, and interested parties. Interim comments must be provided to Hill AFB within 48 hours; final comments must be provided within 30 days.**



REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol
RCS: 25716

INSTRUCTIONS: *Section I to be completed by Proponent; Section II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).*

SECTION I - PROPONENT INFORMATION

1. TO (*Environmental Planning Function*)	2. FROM (*Proponent organization and functional address symbo*	2a. TELEPHONE NO.
75 CEG/CEIEA	ACC UTTR (Michael Shane)	586-2551

3. TITLE OF PROPOSED ACTION
Creation of a Temporary Restricted Airspace over the Wendover area

4. PURPOSE AND NEED FOR ACTION (*Identify decision to be made and need date*)
See Page 2

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (*DOPAA*) (*Provide sufficient details for evaluation of the total action.*)
See Page 2

6. PROPONENT APPROVAL (*Name and Grade*)	6a. SIGNATURE	6b. DATE
Michael Shane	Michael.Shane	02-Jun-2015

SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY. (*Check appropriate box and describe potential environmental effects Including cumulative effects.*) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (*Noise, accident potential, encroachment, etc.*)	☐	☒	☐	☐
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12. BIOLOGICAL RESOURCES (*Wetlands/floodplains, threatened or endangered species, etc.*)	☐	☒	☐	☐
13. CULTURAL RESOURCES (*Native American burial sites, archeological, historical, etc.*)	☐	☒	☐	☐
14. GEOLOGY AND SOILS (*Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.*)	☐	☒	☐	☐
15. SOCIOECONOMIC (*Employment/population projections, school and local fiscal impacts, etc.*)	☐	☒	☐	☐
16. OTHER (*Potential impacts not addressed above.*)	☐	☒	☐	☐

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17. ☒ PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (*CATEX*) (see below for list of CATEXs); OR
☐ PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.

18. REMARKS
32 CFR 989 CATEX A2.3.35 Formal requests to the FAA, or host-nation equivalent agency, to establish or modify special use airspace (for example, restricted areas, warning areas, military operating areas) and military training routes for subsonic operations that have a base altitude of 3,000 feet above ground level or higher. The EPF must document application of this CATEX on AF Form 813, which must accompany the request to the FAA.

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (*Name and Grade*)	19a. SIGNATURE	19b. DATE
Samuel Johnson	//E-SIGNED 5- 4-15// Johnson, Samuel	04-Jun-2015

AF IMT 813, 19990901, V1 THIS FORM CONSOLIDATES AF FORM 813 and 814. PREVIOUS EDITIONS OF BOTH FORMS ARE OBSOLETE.

AF IMT 813, SEP 99, CONTINUATION SHEET

4. PURPOSE AND NEED FOR ACTION (*Identify decision to be made and need date*)

4.1 Objective:
To establish a restricted airspace to allow for the launch of drones from the Wendover Stem area onto the UTTR. This is in conjunction with RCS 24091.
4.2 Need Back:
16-JUN-15
4.3 Who Wants the Project:
This project is being accomplished by the HQ UTTR in support of the 53d Weapons Evaluation Group (WEG), through the 83rd Fighter Weapons Squadron the 82nd Aerial Target Squadron
4.4 Why is the action required:
To provide a controlled airspace avenue to launch drones for training missions on the UTTR from the Wendover Launch area. To also provide a controlled airspace for the recovery of these items.

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (*DOPAA*) (*Provide sufficient details for evaluation of the total action.*)

5.1 What is the proposed Action:
Create a small Temporary Restricted Area. Federal Aviation Administration Order JO 7400.2K, para 23-1-6, a. states, "Temporary restricted areas may be designated when necessary to accommodate hazardous activities associated with military exercises, test programs, etc." The type of operations the proponent will be conducting is precisely the reason the provision in JO 7400.2K was created. This action will connect the projected site with R-6405 and R-6406A
5.2 Where is the proposed work to be done:
Airspace South of Wendover UT
5.3 How will the proposed work be done:
This is an airspace action so work will be done with the FAA to get approval
5.4 Alternatives
Alternative A - No Action:
Under this alternative, HQ UTTR would be forced to launch the test aircraft at another location located within the UTTR. This is not optimal because the continued operation at the current launch site severely reduces training capabilities on the UTTR.
Alternative B - Other Locations Considered:
The UTTR has conducted a search for other airspace that is within 125 miles of home station, but due to the unique flight profile and characteristics of the unmanned aircraft this is not a feasible option. The proposed airspace will adjoin well established Restricted Airspace
Alternative C - Other Alternatives:
Other locations were evaluated however the site that was selected provides the safest and most useful site.

Electronic 813 Comments:

Remarks:

Comments:	Provided By:	Assigned:	Provided:
75 CEG/CEIE-CR-Cultural Resources	Anya Kitterman		03-Jun-2015
Cultural Resources - As this is only dealing with airspace there will be no potential to impact cultural resources. No Adverse Effect.			
AFCEC/CZOM-UTTR-Range Restoration	Scott Stoddard		02-Jun-2015
See attached EMR Comment			
75 CEG/CENPP-Community Planner/AICUZ (Site Approv	Krista Ligman		02-Jun-2015
No concerns, but marked unknown AICUZ effects due to unknown accident potential.			
75 CEG/CEU-Range Support Division	Hal Sagers		02-Jun-2015
No Concerns			
75 CEG/CEIEA-AC-Air Conformity	Megan Evans		03-Jun-2015
No conformity concerns			
75 CEG/CEIEA-AQ-Air Quality	Glenn Palmer		02-Jun-2015
no air quality issue			
75 CEG/CEIEA-NR-Natural Resources	Russ Lawrence		04-Jun-2015
No NR Concerns			
75 CEG/CEIEA-Environmental Management	Samuel Johnson		04-Jun-2015
No comments available			

ENVIRONMENTAL MANAGEMENT DIVISION, RESTORATION BRANCH (EMR)

AF Form 813 Review
Requestor: Michael Shane
Work Request: 25716 – UTTR – Temporary restricted air space over Wendover stem

EMR Concerns:

Restoration must maintain access to our sites in the stem area (as with all our sites at the UTTR).

There are known and unknown surface and subsurface explosives and ordinance contamination in the vicinity of this site. However, any excavation in an area of industrial activity presents the potential to encounter contamination. In the event that explosives or ordinance contamination is encountered OR if unusual odors or soil discoloration are observed during any excavation or trenching necessary to complete this project and/or if any monitoring points are encountered, please contact the Environmental Restoration POC, Ms. Elizabeth Tevault, 777-3804.

Excavations that result in the need for soil disposal will either dispose of clean soil at a permitted landfill or use as fill for another on-base project. If excavated soil is to be taken to a permitted landfill a tipping receipt must be provided to the project proponent. Please note, that each landfill may have its own requirements for certification on the material they receive; therefore, prior to excavated soil leaving HAFB it is advisable to understand and comply with those requirements.

Environmental Restoration Reviewer: Scott Stoddard (775-6893)

Reviewed on: 10/26/2016

ACC 15-XXX

388 FW/HQ UTTR, HILL AFB, USA

Creation of Temporary Restricted Airspace

Proponent's Names:
Col Lance K. Landrum, 388th Fighter Wing Commander
Col Paul R. Delmonte, HQ Utah Test & Training Range Commander
Matthew P. Bolduc, HQ Utah Test & Training Range Airspace Manager

HQ UTTR
6066 Cedar Lane, Bldg 1274 Suite 6B
Hill AFB, UT 84056-5812
Comm (801) 777-9384
DSN 777-9384

Updated on: 28 May 2015

Proposed Structure (Future Design – R-6403).

Type Boundary	Designation	Altitudes
Proposed Boundary line. (Black Solid)	R-6403.	**Proposed:** SFC-5000' AGL.

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Attachment 1 – Proposed Boundaries

TEST/TRAINING SPACE NEEDS STATEMENT

HQ UTTR

1. Overview.

1.1 Concept /Purpose. This T/TSNS addresses the requirement to establish airspace sufficient to accommodate the launch and recovery of unmanned, rocket launched, jet propelled, parachute recovered, aircraft into and out of adjoining restricted airspace (R-6405). These aircraft will be used as targets for air-to-air missile testing. The land which lies underneath the proposed airspace is owned by the Air Force. The expected utilization of the airspace and launch facility would be four periods annually, not to exceed one week per period.

1.2 Existing Structure (Current Map).

Type Boundary	Designation	Altitudes
Current Boundary line N/A.	Airspace doesn't exist now but will adjoin at the north tip of R-6405.	N/A.

1.3 Proposed Structure (Future Design – R-6403).

Type Boundary	Designation	Altitudes
Proposed Boundary line. (Black Solid)	R-6403.	**Proposed:** SFC-5000' AGL.

2. Operational Requirements/Justification

2.1 Unit and Mission. The 53d Weapons Evaluation Group (WEG), through the 83rd Fighter Weapons Squadron the 82nd Aerial Target Squadron and other support assets conducts the Air Force's air-to-air Weapon System Evaluation Program (WSEP), known as Combat Archer. It also supports Weapons Instructor Course (WIC) air-to-air formal training syllabi. For the last few years they have launched the BQM-167 aerial target; an unmanned, rocket-launched, jet powered aircraft; from a location inside the South UTTR restricted airspace. That site is operated by the US Army. This location has limited the operational flexibility and capacity to provide aerial targets for WIC syllabi events, Operational/Developmental Test events and additional WSEP periods. This location provides the most versatile location, providing WSEP and the UTTR with numerous variables for test and training.

Its location provides needed support functions close at hand and also provides a larger safety area for launch and recovery. The expected utilization of the airspace and launch facility would be four periods annually, not to exceed one week per period.

3. Concept/Proposed Actions.

3.1 Create a small Temporary Restricted Area. Federal Aviation Administration Order JO 7400.2K, para 23-1-6, a. states, "Temporary restricted areas may be designated when necessary to accommodate hazardous activities associated with military exercises, test programs, etc." The type of operations the proponent will be conducting is precisely the reason the provision in JO 7400.2K was created.

4. Alternatives.

4.1. No Action Alternative.
Under this alternative, HQ UTTR would be forced to launch the test aircraft at another location located within the UTTR. This is not optimal because the continued operation at the current launch site severely reduces training capabilities on the UTTR.

4.2. Use of Other Airspace.
The UTTR has conducted a search for other airspace that is within 125 miles of home station, but due to the unique flight profile and characteristics of the unmanned aircraft this is not a feasible option. As depicted, the proposed airspace will adjoin well established Restricted Airspace.

5. Aeronautical Coordination.

A formal coordination meeting was held with the FAA on March 18, 2015, between Salt Lake ARTCC (Wayne Vandegraaff, Robert Davis), (Dennis Bee FAA ATREP), other local FAA representatives, and UTTR representatives. Salt Lake ARTCC recommended that the airspace be given a unique naming nomenclature, and that the Utah/Nevada boarder be used as the western boundary of the airspace.

6. Competing Interest Potential.

The conceptualized action and alternatives may impact the following:

6.1. Recreational Areas: (Parks – federal, state, and local). There are no anticipated concerns for recreational areas under the proposed airspace, the land under the projected airspace is privately owned. An agreement will be put into place with the land owner for this operation. However, upon HQ AF approval of this T/TSNS, the follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.2. Native American Reservations, Lands, or areas of special interest. There are no anticipated concerns for Native American Reservations, lands, or areas of special interest under the proposed airspace as this resource area is already owned by the Air Force. Proper consultation will be taken prior to implementing this agreement to ensure there are no concerns. However, upon HQ AF approval of this T/TSNS, the follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.3. Grazing and/or farming. There are no anticipated concerns for grazing and farming areas under the proposed airspace, the land under the projected airspace is privately owned. An agreement will be put into place with the land owner for this operation. However, upon HQ AF approval of this T/TSNS, the follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.4. Endangered species. There are no additional anticipated concerns for any endangered or threatened species under the proposed airspace, the area has been evaluated by the base Natural Resources office and there are no species of concern located under the projected airspace. However, upon HQ AF approval of this T/TSNS, the

follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.5. Wildlife refuges. There are no additional anticipated concerns for the wildlife refuge areas under the proposed R-6403, the land under the projected airspace is privately owned. An agreement will be put into place with the land owner for this operation. However, upon HQ AF approval of this T/TSNS, the follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.6. Hunting and fishing. There are no additional anticipated concerns for the hunting and fishing areas under the proposed R-6403, the land under the projected airspace is privately owned. An agreement will be put into place with the land owner for this operation. However, upon HQ AF approval of this T/TSNS, the follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.7. Archaeological sites. There are no additional anticipated concerns for the archaeological sites under the proposed R-6403, there are areas of historical significance in the area however the land under this airspace is privately owned and our actions will have no adverse effect on anything on the ground. However, upon HQ AF approval of this T/TSNS, the follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.8. Population centers, communities, previously identified or potential noise sensitive areas. There are no additional anticipated concerns for the Population centers, communities, and previously identified potentially sensitive noise areas under the proposed R-6403, the launch site is approximately 4.5 miles south of the nearest populated site. The drones produce a loud noise during take-off for a limited time only. However, upon HQ AF approval of this T/TSNS, the follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.9. Ongoing litigation that may be impacted. Per coordination with the wing legal office, there have been none identified for either concept.

6.10. Other training airspace actions that may be impacted by this initiative. Approval of this initiative will only assist in the resource utilization of the UTTR by allowing required testing to be conducted in a more efficient manner. No other training airspace actions are in discussion.

6.11. Regional Actions by other MAJCOM or Military Services. After briefing this concept to the Airspace Manager of the Nevada Test and Training Range in March 2015, there are no other duplicative actions ongoing, nor any other current airspace that will meet these requirements.

6.12. Consultation with other state/federal agencies. As mentioned previously, various components of this concept have been briefed to FAA Air Traffic Control Management personnel. There are no additional anticipated concerns for consultations with other state/federal agencies under the proposed R-6403. However, upon HQ AF approval of this T/TSNS, the follow on Environmental Impact Analysis Process (EIAP) will determine if the proposed action might cause any significant impacts to this resource area.

6.13. Other Aviation interest groups and agencies such as: Aircraft Owners and Pilots Association (AOPA), National Business Aircraft Association (NBAA), Air Transport Association (ATA), State Department of Transportation and any local airport commission or Fixed Base Operators (FBO). After informal discussions with local transportation officials, there will be little impact to the general aviation community. The wing MACA program identified two FBOs whom could potentially be impacted and the wing has contacted them, this has been briefed at all MACA visits in this area and will be briefed in future visits.

6.14. Other interested or affected parties. None identified.

7. Questions or Concerns: Matt Bolduc, Chief of Airspace Management; DSN 777-9384, matthew.bolduc.1@us.af.mil

Attachment 1

Proposed Boundaries

1. The vertical and lateral boundaries of the R-6403 airspace are defined as listed below:

The R-6403 airspace is defined as the overlying airspace of the Wendover Airfield and vertically starts at the surface and extends up to, and including 5,000 feet AGL "IN CONTROLLED AIRSPACE ONLY." The area is defined laterally beginning at 40°40'15.94"N/114°02'37.89"W to 40°40'15.94"N/114°00'33.09"W to 40°39'18.74"N/113°59'58.94"W to 40°36'30.23"N/114°02'37.29"W to the point of beginning.

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol RCS:**25776**

INSTRUCTIONS: *Section I to be completed by Proponent; Section II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).*

SECTION I - PROPONENT INFORMATION

1. TO (*Environmental Planning Function*)	2. FROM (*Proponent organization and functional address symbo*	2a. TELEPHONE NO.
76 CEG/CEIEA	**ACC UTTR (Michael Shane)**	**586-2651**

3. TITLE OF PROPOSED ACTION
WSEP Launch power & fiber upgrades

4. PURPOSE AND NEED FOR ACTION *(Identify decision to be made and need date)*
See Page 2

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES *(DOPAA) (Provide sufficient details for evaluation of the total action.)*
See Page 2

6. PROPONENT APPROVAL *(Name and Grade)*	6a. SIGNATURE	6b. DATE
Michael Shane	**Michael.Shane**	**12-Jun-2015**

SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY. *(Check appropriate box and describe potential environmental effects. Including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown*	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE *(Noise, accident potential, encroachment, etc.)*	☐	☒	☐	☐
8. AIR QUALITY *(Emissions, attainment status, state implementation plan, etc.)*	☐	☒	☐	☐
9. WATER RESOURCES *(Quality, quantity, source, etc.)*	☐	☒	☐	☐
10. SAFETY AND OCCUPATIONAL HEALTH *(Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)*	☐	☒	☐	☐
11. HAZARDOUS MATERIALS/WASTE *(Use/storage/generation, solid waste, etc.)*	☐	☒	☐	☐
12. BIOLOGICAL RESOURCES *(Wetlands/floodplains, threatened or endangered species, etc.)*	☐	☒	☐	☐
13. CULTURAL RESOURCES *(Native American burial sites, archeological, historical, etc.)*	☐	☒	☐	☐
14. GEOLOGY AND SOILS *(Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)*	☐	☒	☐	☐
15. SOCIOECONOMIC *(Employment/population projections, school and local fiscal impacts, etc.)*	☐	☒	☐	☐
16. OTHER *(Potential impacts not addressed above.)*	☐	☒	☐	☐

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17. ☒ PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION *(CATEX)* (see below for list of CATEXs); OR
☐ PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX, FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.

18. REMARKS
32 CFR 989 CATEX A2.3.12 Installing, operating, modifying, and routinely repairing and replacing utility and communications systems, data processing cable, and similar electronic equipment that use existing rights of way, easements, distribution systems, or facilities.

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION *(Name and Grade)*	19a. SIGNATURE	19b. DATE
Samuel Johnson	**//E-SIGNED 7- 7-15// Johnson, Samuel**	**07-Jul-2015**

AF IMT 813, 19990901, V1 THIS FORM CONSOLIDATES AF FORM 813 and 814. PREVIOUS EDITIONS OF BOTH FORMS ARE OBSOLETE. Page 1 of 3

AF IMT 813, SEP 99, CONTINUATION SHEET

4. PURPOSE AND NEED FOR ACTION *(Identify decision to be made and need date)*

4.1 Objective:
To establish commercial power to the Wendover launch sites
4.2 Need Back:
26-JUN-15
4.3 Who Wants the Project:
The UTTR has been asked by the 86ht Weapons Evaluation Group to work this project
4.4 Why is the action required:
To establish commercial power to the WSEP launch sites to reduce the use of Generators on site. Commercial power will provide a more constant power source to the sites.

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES *(DOPAA) (Provide sufficient details for evaluation of the total action.)*

5.1 What is the proposed Action:
The proposed action is to plow both power and fiber on the east side of the existing road leading from Wendover property to the DOD site.
5.2 Where is the proposed work to be done:
Wendover Stern area
5.3 How will the proposed work be done:
Equipment will be used to plow both a power and fiber line approximately 48" into the ground within 25' of the existing road. The plowing operations will leave a path approximately 16" wide and the soil will fill into the area after the line is installed
5.4 Alternatives
Alternative A - No Action:
The no action alternative will require the use of generators on site to run operations and will require for tactical fiber lines to be run over the ground which leads to security issues.
Alternative B - Other Locations Considered:
Other routes were considered in the area however due to land ownership and availability of the commercial power these were considered to not meet requirements.
Alternative C - Other Alternatives:
The selected alternative limits the soil disturbance by keeping the lines next to an existing road where soil disturbance has already taken place and also provides a path that will ensure the security of the lines.

V1 Page 2 of 3

Electronic 813 Comments:

Remarks:

Comments:	Provided By:	Assigned:	Provided:
AFCEC/CZOM-UTTR-Range Restoration	Scott Stoddard		15-Jun-2015
See attached EMR comment			
75 CEG/CEIEA-AC-Air Conformity	Megan Evans		16-Jun-2015
No conformity concerns			
75 CEG/CEIE-CR-Cultural Resources	Anya Kitterman		18-Jun-2015
Cultural Resources - No Adverse Effect. The proposed project has previously been surveyed. The two historic properties will be avoided. The work will remain completely within previously disturbed areas. A letter of no adverse effect will be forwarded to the SHPO office. Potential for subsurface deposits, see unanticipated discovery protocol and full comments below.			
75 CEG/CEIEA-AQ-Air Quality	Glenn Palmer		15-Jun-2015
no air quality issues			
75 CEG/CEIEA-NR-Natural Resources	Russ Lawrence		06-Jul-2015
No Natural resource Concerns due to it being located adjacent to the access road.			
75 CEG/CEIEA-Environmental Management	Samuel Johnson		07-Jul-2015
No comments available			

Page 3 of 3

ENVIRONMENTAL MANAGEMENT DIVISION, RESTORATION BRANCH (EMR)

AF Form 813 Review
Requestor: Michael Shane
Work Request: 25756 – UTTR – Vegetation Control

EMR Concerns:

Surface clearance of explosives has been completed. However there are unknown subsurface explosives and ordinance contamination in the vicinity of this site. Any excavation in an area of industrial activity presents the potential to encounter contamination. In the event that explosives or ordinance contamination is encountered OR if unusual odors or soil discoloration are observed during any excavation or trenching necessary to complete this project and/or if any monitoring points are encountered, please contact the Environmental Restoration POC, Ms. Elizabeth Tevault, 777-3804.

Excavations that result in the need for soil disposal will either dispose of clean soil at a permitted landfill or use as fill for another on-base project. If excavated soil is to be taken to a permitted landfill a tipping receipt must be provided to the project proponent. Please note, that each landfill may have its own requirements for certification on the material they receive; therefore, prior to excavated soil leaving HAFB it is advisable to understand and comply with those requirements.

Environmental Restoration Reviewer: Scott Stoddard (775-6893)

Reviewed on: 10/26/2016

813 REVIEW – WORK REQUEST #25776
FIBER UPGRADE PROJECT – WSEP LAUNCH PAD SITE
SUTTR
CULTURAL RESOURCES REVIEW

The Utah Test and Training Range (UTTR) houses numerous cultural and archaeological sites. The proposed work falls completely within existing road lines and previously disturbed areas. The site has been surveyed in 1995 (U-95-WC-558m) and in 2012 (U-12-UI-0371m). The only known historic properties in the area are eligible historic sites 42TO2749 and 42TO0708, which the project avoids. This project will remain completely within the existing disturbance and will not impact the historic properties. Therefore, the project will have no adverse effect.

A no adverse effect letter will be forwarded to the SHPO office for concurrence. Section 106 will be complete when this concurrence is received. It is recommended the project proceed with the understanding that an archaeological monitor will be present for all ground disturbing activities. Please contact Anya Kitterman (586-2464) to discuss the project or if there are any questions.

18 June 2015 Anya Kitterman

Standard Operating Procedure

UNANTICIPATED DISCOVERY OF ARCHAEOLOGICAL DEPOSITS

APPLICABLE LAWS AND REGULATIONS

- National Historic Preservation Act
- National Environmental Policy Act
- Native American Graves Protection and Repatriation Act
- AFI 32–7065 (June 2004). *Cultural Resources Management Program*

OVERVIEW

All undertakings that disturb the ground surface have the potential to discover buried and previously unknown archaeological deposits. The accidental discoveries of archaeological deposits during an undertaking can include but are not limited to:

- Undiscovered/undocumented structural and engineering features; and
- Undiscovered/undocumented archaeological resources such as foundation remains, burials, artifacts, or other evidence of human occupation.

POLICY

When cultural resources are discovered during the construction of any undertaking or ground-disturbing activities, Hill AFB shall:

- Evaluate such deposits for NRHP eligibility.
- Treat the site as potentially eligible and avoid the site insofar as possible until an NRHP eligibility determination is made.
- Make reasonable efforts to minimize harm to the property until the Section 106 process is completed.
- **The BHPO will ensure that the provisions of NAGPRA are implemented first if any unanticipated discovery includes human remains, funerary objects, or American Indian sacred objects (see SOP #6).**

PROCEDURE

Step 1: Work shall cease in the area of the discovery (Figure 5-5). Work may continue in other areas.

- The property is to be treated as eligible and avoided until an eligibility determination is made. Hill AFB will continue to make reasonable efforts to avoid or minimize harm to

Further construction activities in the vicinity of the site will be suspended until an agreed-upon testing strategy has been carried out and sufficient data have been gathered to allow a determination of eligibility. The size of the area in which work should be stopped shall be determined in consultation with the **BHPO**.

the property until the Section 106 process is completed.

Step 2: Immediately following the discovery, the **Project Manager** shall notify the installation **BHPO**.

Step 3: The **BHPO** or a professional archaeologist shall make a field evaluation of the context of the deposit and its probable age and significance, record the findings in writing, and document with appropriate photographs and drawings.

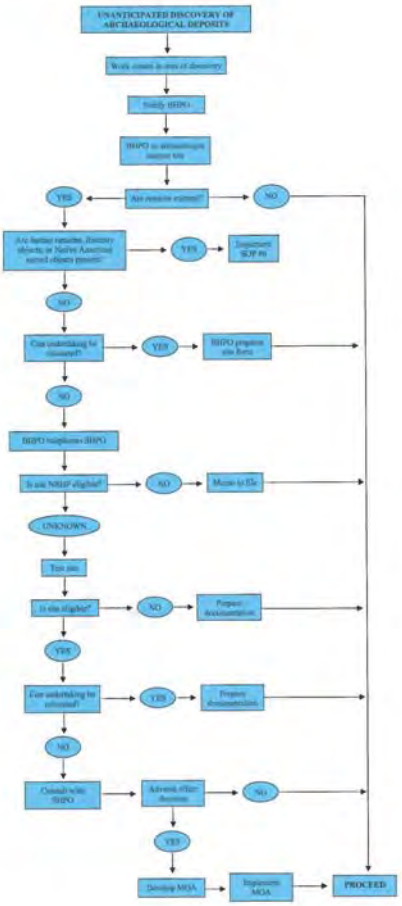
- If disturbance of the deposits is minimal and the excavation can be relocated to avoid the site, the **BHPO** will file appropriate site forms in a routine manner.
- If the excavation cannot be relocated, the **BHPO** shall notify the office of the **SHPO** to report the discovery and to initiate an expedited consultation.

The Section 106 review process is initiated at this point.

- If the deposits are determined to be ineligible for inclusion in the NRHP, then Hill AFB **BHPO** will prepare a memorandum for record and the construction may proceed.
- If the existing information is inadequate for an NRHP eligibility determination, Hill AFB **BHPO** shall develop an emergency testing plan in coordination with the SHPO.

Step 4: Hill AFB shall have qualified personnel conduct test excavations of the deposits to determine NRHP eligibility.

- Hill AFB BHPO, in consultation with the SHPO, will determine appropriate methodology for NRHP eligibility determination.
- If the SHPO and Hill AFB agree that the deposits are ineligible for inclusion in the NRHP, then work on the undertaking may proceed.
- If the deposits appear to be eligible, or Hill AFB and the SHPO cannot agree on the question of eligibility, then Hill AFB shall implement alternative actions, depending on the urgency of the proposed action.
  - Hill AFB may relocate the project to avoid the adverse effect.
  - Hill AFB may request the Keeper of the National Register to provide a determination.
  - Hill AFB may proceed with a data recovery plan under a MOA developed in coordination with the SHPO and possibly the ACHP and interested parties.
  - **Hill AFB may request comments from the ACHP and may develop and implement actions that take into account the effects of the undertaking on the property to the extent feasible and the comments of the SHPO, ACHP, and interested parties. Interim comments must be provided to Hill AFB within 48 hours; final comments must be provided within 30 days.**



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Opinion

Suicide - Are there answers?

Dr. Glenn Mollette

Billionaire financier Jeffrey Epstein, recently hanged himself in prison. With a lifetime of prison ahead of him he chose suicide over going through another trial, more accusations and a lifetime behind bars.

When comedian Robin Williams killed himself, we were shocked. Williams had been dealing with depression for many years and his mental illness overcame him.

Millions were stunned when television personality Anthony Bourdain was found dead after reportedly hanging himself in France. So many of us it seemed he had the perfect life. He traveled, ate the best food and was rich and famous.

Suicide happens to people at every level. Pastor Jarrid Wilson, a California church leader, author and mental health advocate, died by suicide. At the age of 30 he had a great ministry, was well loved and had a precious family. All of his knowledge and personal tools of the Christian faith did not help him to overcome his depression and mental state.

In 2017 there were 47,173 recorded suicides, up from 42,773 in 2014. The U.S. suicide rate increased 24% between 1999 and 2014, from 10.5 to 13.0 suicides per 100,000 people, which was the highest rate in 28 years according to the National Center for Health Statistics.

Why do people commit suicide? My first wife tried it. After being on a respirator for three days the first words she said to me after being taken off life support were, "why didn't you let me die?" Karen had severe Multiple Sclerosis. She was totally debilitated and could not do anything for herself, except think. As a prisoner in her own body she believed that suicide was her hope of escape. Sadly, two years later she died in a nursing home which was a place she had hoped to escape.

For most, suicide is the hope of escaping what seems to be impossible. There are many reasons why some people kill themselves. Sometimes they think it's their way of having the final word in a failed relationship. Sometimes it's their way of saying, "I told you that things were bad in my life." However, almost always suicide results from mental illness. Some people think and talk about it for a long time and finally go through with it. For some people they commit suicide at a dark moment in their lives when it appears the only way out is death.

What is the answer? People must stay connected to a few real meaningful relationships in life. Suicide victims feel alone. People need people they can safely be real with without harsh condemnation for everything they do. This is why some churches and ministers often fail in relationship building. Phony surface friendships aren't the answer. Next, help such as counseling and reasonable medication are often crucial. Talking to someone who has been trained and is able to help you is important. Hope is imperative. It's hard to imagine that media personalities such as Robin Williams and Anthony Bourdain felt hopeless but to them it was on another scale. One person's mental state of hopelessness is not the same for another. This is why people need help in cutting through the fog of their minds to make sense of their mess and to see a light at the end of the tunnel of their desperation. Prayer, meditation, spiritual direction, counseling, medication, group support, work, activity, hobbies, going to school and plans are all tools in the fight against mental illness and suicide.

Be attentive to the people in your life. Give love, understanding, hope and be helpful. Care enough to talk, listen and be a friend.

Glenn Mollette published more than 15 books.

Lawmakers Put Costs Ahead of Patients in Medicare Overhaul

The Senate Finance Committee just advanced a sweeping Medicare overhaul.

Unfortunately, the bill does little to help America's sickest patients; it jeopardizes physicians' ability to provide timely, quality care to tens of millions of Americans. Congress would be wise to reject it.

The proposal impacts Medicare "Part B," which covers doctor's visits, outpatient procedures, and most medicines administered by injection or IV drip. Currently, roughly 50 million seniors and 10 million Americans with disabilities benefit from Part B.

Currently, physicians and hospitals purchase Part B drugs directly and then bill Medicare for reimbursement. In addition to the drug's cost, Medicare gives providers a small financial markup to cover overhead costs.

The Senate Finance Committee bill fundamentally alters the reimbursement process – and not for the better.

Right now, Medicare doesn't consider manufacturer discounts to physicians – known as "co-pay coupons" – when calculating provider reimbursement rates. This allows doctors and hospitals to receive more compensation for administering Part B treatments, thus encouraging them to participate in the program.

But the new bill would allow Medicare to factor these discounts into its reimbursement system. And somehow Medicare officials acknowledge that doctors pay less for Part B treatments, they will receive less reimbursement money.

In other words, the change would function as a de facto reimbursement cut to providers and hospitals that help treat patients with lots of advanced medicines.

Reimbursement cuts would have grave consequences for both physicians and patients. Many practices and clinics already have razor-thin margins. Cutting reimbursements further would push some operations to the edge of insolvency, forcing them to turn away patients or close their doors entirely.

During previous Medicare reimbursements cuts in 2013, for instance, approximately 80 percent of oncologists said the cuts affected their ability to deliver quality care. Fifty percent reported sending patients elsewhere for treatment.

Cancer patients can't afford any more setbacks. According to the Community Oncology Alliance, more than 420 community oncology practic-

continued page 3

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Two Dead But No Arrests In Elko

Angel Park on the west side of Elko was chosen as the scene of a late-night robbery attempt because it has no security cameras and it has "an easy escape route," according to documents filed in a criminal case against one of the alleged robbers. *(Photo courtesy Google Earth)*

Two men have been shot to death in Elko County this year but no one has been charged with either of the homicides.

One case was determined to be justifiable homicide by Elko District Attorney Tyler Ingram, and the other is still being reviewed by the DA.

Cory J. Robb, 33, was killed outside a Wells residence late on the night of April 29. A deputy was called at approximately 11:32 a.m. on a report of a man screaming outside a residence. Prior to their arrival at the scene, the deputy received information that indicated the man had been shot by the homeowner.

The deputy found Robb outside the residence, lying on his side. Emergency Medical Services personnel responded to the scene where Robb was later pronounced a dead.

The homeowner was not identified by the sheriff's office, which turned the case over to the district attorney.

"I determined that the shooting was justified, so no charges were filed," Ingram told the Elko Daily Free Press this week.

Elko County Jail records show that Robb had been arrested multiple times in recent years on charges including battery, battery on a protected person, and battery resulting in substantial bodily harm.

continued page 3

Great Basin National Park

Bonneville Cutthroat Trout Reintroduced to Snake Creek

BCT may be released into Snake Creek in the future.

Fishing for BCT in Snake Creek is allowed as long as all State of Nevada fishing regulations are followed. You may legally fish for and keep BCT but catch and release fishing while the population is recovering is preferred. By releasing the BCT that you catch, you will allow the population to grow faster and produce better fishing opportunities for all anglers to enjoy.

Reminder: It is illegal in the State of Nevada to transport a live fish from any body of water to without the approval and/or supervision of the Department of Wildlife. Please do not move fish.

PUBLIC NOTICE

Public Comment Opportunity
Sept. 19-Oct. 19, 2019

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Public comments will be accepted through Oct. 19, 2019. Comments and questions about the Draft EA or the comment process can be directed to:

Michael Shane
UTTR/RSE
6066 Cedar Lane, Bldg. 1274
Hill AFB, UT 84056-5003
(801) 586-2551
Michael.shane.2@us.af.mil

THE CLASSIFIEDS

Request For Proposal

The Rural Nevada Development Corporation (RNDC) is soliciting Request for Proposals (RFP) from licensed contractors to perform rehabilitation measures on homes throughout the rural counties of Nevada that are designated by RNDC's Housing Rehabilitation program. Bids will be received at the RNDC office located at 1320 E. Aultman, Ely, NV 89301 until 3:30 p.m. September 30, 2019. To request an RFP or for any other questions, please call Doreen @ 775 289-8519 (leave a message if undelivered). (NV-CAN19/22/19)

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Published in the High Desert ADVOCATE September 19, 2019

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Michael.shane.2@us.af.mil

Published in the High Desert ADVOCATE September 19, 2019

PUBLIC NOTICE

Lifeline Assistance – Who qualifies?
Low-income telephone assistance is available to qualifying low-income Beehive Telephone customers through the "Lifeline" and "Link-up" federal telephone assistance programs.

Lifeline provides qualified customers with a monthly reduction on their telephone bill.

Link-up assists in paying for the installation of basic telephone service by reducing connection charges by 50% or $30, whichever is less.

Beehive Telephone customers who participate in at least one of the following programs are eligible for telephone assistance: Medicaid, Food Stamps, Supplemental Security Income (SSI), Federal Housing Assistance, Nevada Energy Assistance Program (EAP), Temporary Assistance to Needy Families Program (TANF), National School Lunch Program (NSL).

Beehive Telephone customers who do not participate in one of the above programs are eligible if their income is at or below 135% of the Federal Poverty Guidelines. For more information please call 1-800-629-9993.

Published in the High Desert ADVOCATE September 12th and 19th, 2019.

PUBLIC NOTICE

NOTICE

The West Wendover Recreation District will be accepting names for a vacated board member position. The position will run until December 31, 2020. Interested parties must be a registered voter and resident of West Wendover and should provide written notice (in the form of a letter) to be delivered to the West Wendover Recreation District, 950 West Florence Way, or to P.O. Box 5010, Wendover, NV, 89883, before 5 p.m. on October 18, 2019, and be in attendance at the regular meeting on October 10, 2019, at 6:00 p.m., at the West Wendover Library, Pilot Peak Meeting Room. The primary responsibility of the District is to administer the obligations of the golf course and recreation facilities bond debt. The major financial obligations of the District include the operation and maintenance of the Tuana Vista Golf Course, the swimming pool, the equestrian park, horse corral rental facility, Scobie Park, the ball fields, and the multi-purpose field. Please direct any questions concerning the vacancy to Janey Richardson at 664-3289.

Published in the High Desert ADVOCATE September 12th, 19th, 26th and October 3rd, 2019.

CHURCHES DIRECTORY / COMMUNITY DIRECTORY

The Church of Jesus Christ of Latter-Day Saints (Mormon)
299 2nd Street
Sacrament Meeting: Sunday 10:00 a.m.
Spanish Sacrament Service - Sunday 5:00 p.m.

MISSION SAN FELIPE DE NERI (Catholic)
Corner Aria Way & Camper
(435) 889-2305
Masses Offered in Spanish. Sunday 12:00 p.m. **Masses Offered in English:**
Saturday 7:30 p.m. & Sunday 7:30 a.m.

W. WENDOVER BAPTIST CHURCH 6th N. Alpine St.
Bible Study
Sun. School 10:00 a.m.
Adult Bible Study 10:00 a.m.
Service: 11:00 a.m.
1st Sun of the month: Communion Service & "Hour" Sunday
Bible Study 6:00 p.m.
Wed. Mass in Prayer 8:00 a.m.

WENDOVER FELLOWSHIP CHURCH 1485 Camper
Services Sunday Mornings at 11:30 a.m. at the Wendover Elementary School Gym

The WEST WENDOVER CHRISTIAN CENTER
Sunday Worship 10:30 a.m.
Wed. Wind. 7:00 pm
702-926-3176

NEW LIFE MINISTRY
Sunday Worship 9:45 - 11:00 a.m.
610 Pilot Avenue, Wendover
Bible Study
Wed. 7:30 to 9 pm
Youth Group Friday
SPANISH SERVICE MISSION Sunday Worship 1:00 p.m.
Nueva Vida
Pilot & Camper, Wendover Ut
Services
Dom.: 11 am to 7 pm
Adoration: 7 pm to 9 pm
Teléfono: 801-647-9798

THE LIVING WATER
Harvest Pentecostal Church
702-932-7922
Sunday
Parable: Pueblo Agaite At the old Wendover Air Base
Worship 11:00
Service (Hard Start Beginning)

SUPERSTITION GROUP ELKS
In your area in Counties of Tooele, Utah, Juab, Millard, Beaver, Iron, Washington, Kane, Uintah & Weber
Call 801-972-7233

Dugway Basin Council:
Boy Scouts
Richard Shill Dugway Community Center
Main Lordsburg, Cub Scout Lordsburg, CSC / Call Billy Office
Dugway Cub Pack, p. 2 (at Billy / Pabello, Tooele)

West Wendover Pilsen
AA
NA Meeting Schedule
10:00 a.m - 3:00 p.m.

AlcoHolics Thrift Store
Hours:
Monday - Friday
10:00 a.m - 6:00 p.m.
Saturday - Sunday
10:00 a.m - 3:00 p.m.

Wendover Community Ministries
Emergency 311
Monday - Friday 7:00 a.m. - 5:00 p.m.
525 Wells Avenue / 883-2269

Country Catrons
Square Dance Dance Lessons
Tuesday Nights
10 a.m-3 pm
Contact Jerry Lane
Wendover, UT 84083
435-579-3826

W.Wendover Rotary Meetings: Mon 5:00 pm, Tues 12:00 pm, Wed 12:00 pm, Thurs 12:00 pm

W.Wendover Kiwanis Meetings: Mon 6:00 pm, Tues 12:00 pm, Wed 12:00 pm, Thurs 11:00 pm, Fri 11:00 AM

Wendover Historical Museum
700 East Aspen Way

Wendover Pilsen Lions Club
Meeting
1st Tuesday
Pilot Peak Meeting Room
6:00 PM

Wendover Youth Center
Mon 1:00 PM 7:00
Tues 12:00 PM 6:00
Wed 12:00 PM 6:00
Thurs 11:00 AM 5:00
Fri 11:00 AM 5:00

Wendover Historical Museum
700 East Aspen Way

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Help Wanted Truck Drivers
ATTENTION DRIVERS - $3 RECENT PAY INCREASE. $$ 4 CPM Rate for Every Driver +
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Help Wanted Truck Drivers
MILES MEAN MONEY! 3000+ miles per week. Competitive pay. Late model equipment. Paid weekly. Direct deposit. Big East Coast. Paid on practical miles. Call 800-645-3748. (NV-CAN19/22/19)

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HIRING ONE TON AND 3/4 TON Pickup trucks to deliver RV's in Indiana.
On Bonus, 4 Terminals & 8 Backhaul locations. Call 866-764-1601 or www.forestriver-transport.com (NV-CAN19/22/19)

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Wanted
GOT AN OLDER CAR, BOAT OR RV? Do the humane thing. Donate it to Veterans Vehicles. Call 1-800-653-0973 (NVCAN19/22/19)

Miscellaneous
HEAR ON YOUR TV, CARS AND HEAR anywhere, anytime, TV Ears Original were originally $129.95 - NOW WITH THIS SPECIAL OFFER are only $39.95 with code MCB220. Call 1-855-551-6377. (NVCAN19/22/19)

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One year Subscription to the e-mail edition is ~~$80.00~~ $50.00 to the High Desert ADVOCATE, P.O. Box 2805, West Wendover, NV 89883
Call us at 775.664.3415

PAGE 4 THE WENDOVER TIMES, SEPTEMBER 19-25, 2019

Black bear relocated from State Street in Orem

A black bear that wandered onto State Street in Orem caused quite a stir — as well as traffic delays — Wednesday morning.

According to Faith Heaton Jolley, spokeswoman for the Utah Division of Wildlife Resources, police and DWR officials used vehicle sirens to get the 2-year-old male chocolate-colored black bear up a tree at about 6 a.m.

Jolley said biologists believe the bear may have come from the mountains east of the city.

Division personnel tranquilized the bear and got it out of the tree. The bear was then relocated to the Wasatch Mountains.

There have been numerous bear sightings — and two attacks — throughout Utah this summer. The first attack occurred in June when a boy received minor scratches when a bear entered a campsite in Hobble Creek Canyon in Utah County. That bear was tracked and killed. Then in August a bear bit a 15-year-old boy while he was camping at the Dewey Bridge campground near Moab. The boy, who is from Colorado, was injured on his right cheek and ear. That bear was also tracked and killed.

Then, in late August, a mother bear and her two cubs were removed from a tree in the front yard of a home in Cattle Valley, Grand County.

Incidents of bears rummaging through Utah campgrounds are also up this year the number of incidents in July was more than twice what it was the previous year, the Division of Wildlife Resources said.

Biologists with the DWR urge campers not to leave food out, and to clean up their campsites when they leave.

Emergency and Utah DWR personnel carry a tranquilized 2-year-old male black bear after it was removed from a tree in Orem on Wednesday, Sept. 18. (Photos by UCNR)

WENDOVER NUGGET HOTEL & CASINO
RED GARTER
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NOW HIRING
Wendover Nugget gaming:
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Red Garter gaming:
Slot Mechanic, Cage Cashier
Red Garter non gaming:
Food & Beverage Manager, Dishwasher, Hostess/Cashier, Houseman, Busser, Line Cook, Food Server
Applications and more info available at Nugget HR.
Open Wed thru Fri, 8am -4pm.

Agency could keep Three Mile Island nuclear debris in Idaho

BOISE, Idaho (AP) - The partially melted reactor core from the worst nuclear accident in U.S. history could remain in Idaho for another 20 years if regulators finalize a license extension sought by the U.S. Energy Department, officials said Monday.

The core from Three Mile Island in Pennsylvania partially melted in 1979, an event that changed the way Americans view nuclear technology.

The U.S. Nuclear Regulatory Commission has determined there would be no significant impact from extending the license to store the core at the 890-square-mile site that includes Idaho National Laboratory.

"No significant radiological or non-radiological impacts are expected from continued normal operations," the commission said about its finding.

The agency would also have to complete a safety evaluation report before issuing the license. Commission spokesman David McIntyre said that will likely happen in the next several days.

Holly Harris, executive director of the Idaho-based nuclear watchdog group Snake River Alliance, wasn't immediately available to comment.

The Energy Department site sits atop the Eastern Snake Plain Aquifer, a Lake Erie-size underground body of water that supplies cities and farms in the region with water.

The new license would be good through 2039, four years past a deadline the Energy Department initially set with Idaho to remove the radioactive waste.

State and federal officials say the waste could still be shipped out of Idaho ahead of the 2035 deadline and would not affect the 1995 agreement that contains penalties for missed deadlines.

Idaho is already fining the Energy Department for missing a deadline involving radioactive liquid waste stored at the site.

It's not clear where the Three Mile Island waste could be moved, as the U.S. Energy Department continues to search for a designated repository.

The U.S. Energy Information Administration says there's some 77,000 tons of spent nuclear fuel stored at commercial nuclear sites around the country because there's no place else to put it.

The Department of Energy said no additional material would be added to the waste storage site in Idaho.

The previous license expired in March. It said the maximum amount of Three Mile Island debris that could be stored at the Idaho site was 183,000 pounds of damaged nuclear fuel assemblies and 308,000 pounds of material removed from the reactor vessel.

Court battles between Idaho and the federal government continued with the 1995 agreement requiring the Energy Department to clean up the Idaho site as well as prevent the area from becoming the nation's nuclear waste dump.

Exelon Generation, the company that owns the remaining nuclear power plant at Three Mile Island, has said it will shut down the facility by the end of its license.

The company blamed economic challenges and what it said are market flaws that fail to recognize the value of nuclear plants.

Florida woman gets prison for $1.6 million family curse

MIAMI (AP) - A South Florida woman who claimed to be a psychic fortune teller has been sentenced to three years and four months in prison for taking $1.6 million from a Texas woman to remove a curse from her family.

Court records show that 28-year-old Sherry Tina Uwanawich was sentenced last week in Miami. She previously pleaded guilty to wire fraud. She must also pay restitution.

Investigators say Uwanawich met the victim in Houston, Texas, in 2007. Uwanawich gained the woman's trust and convinced her that a curse had been placed on her and her family. Uwanawich claimed she needed large sums of money for crystals and cleansing and performances that would lift the curse.

The scheme ended in 2014 when Uwanawich admitted to the victim there had been no curse.

State Parks will be free on Nevada Public Lands Day on Sat. Sept. 28

Nevada residents and visitors are invited to celebrate Nevada Public Lands Day on Saturday, September 28 with a "fee-free" day at Nevada's State Parks. Park fees, including entrance, camping (Saturday night) and boating, where applicable, will be waived at state parks throughout Nevada.

Nevada Public Lands Day encourages Nevadans to celebrate and enjoy exciting and affordable recreation opportunities right in their own backyards. "Nevada's state parks offer an exciting lineup of outdoor opportunities," said State Parks Administrator Bob Mergell. "For example, visitors can discover the rich history of the Ward Charcoal Ovens, tour a genuine ghost town at Berlin-Ichthyosaur or spend a relaxing afternoon fishing at Spring Valley."

Time for college-bound seniors to fill out the FASFA

High school seniors planning to attend college or technical school next fall should fill out the Free Application for Federal Student Aid, also called the FAFSA, as soon as possible beginning Oct. 1, according to KHEAA.

The information on the FAFSA determines if students qualify for federal grants and student loans. It is also required to apply for state grants and scholarships. In addition, many colleges use the information to award their own grants and scholarships.

The FAFSA asks for information about income, assets and expenses. A formula set by Congress determines eligibility for federal and state aid. If the student is considered a dependent under federal guidelines, both the student and parents must provide financial information. Nearly all students going directly to college from high school are considered dependent.

Some student aid programs have limited money and provide funds on a first-come, first-served basis, so it is important to submit the FAFSA as soon as possible.

Even if they don't think they'll qualify for financial aid, students should submit the FAFSA. They may be surprised because student aid rules change all the time.

KHEAA is a public, non-profit agency established in 1966 to improve students' access to college. It provides information about financial aid and financial literacy at no cost to students and parents.

KHEAA also helps colleges manage their student loan default rates and verify information submitted on the FAFSA. For more information about those services, visit www.kheaa.com.

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(801) 586-2551
Michael.shane.2@us.af.mil

THE SCREAM BOX

I keep noticing the running water down the street, only to find there is a sprinkler system at the beginning of it that has totally soaked a grassy area. Now maybe it's just worthy of a scream box, but let's look at it another way. Water costs money and extra water may not always be available. We all know that. But during the last twenty years I've seen plenty of 400-foot streams running down the side of the road because of sprinkler overkill, not to mention the wet sidewalks and driveways. Any way my point is "the first person to figure out how to fix this, gets to be rich."

R.W. - Wendover

If you have something to Scream about, you can put it in the Scream Box at the Wendover Times, or you can send it to us at the address below. Please, no name if you request, but you must include your name when you send in your "Screams." It's your chance to enjoy your Freedom of Speech. We may change some of those four letter words, but the message will rem ain the same. The voices of the Scream Box are not necessarily the opinion of the Wendover Times. Remember, the Scream Box is for entertainment purposes only. THE SCREAM BOX IS FREE!!!

Public Comment Opportunity

https://www.standard.net/news/military/air-force-looking-to-use-hill-afb-s-west-desert/article_18573491-4564-5224-8841-48853443a22f.html

Air Force looking to use Hill AFB's west desert training range to test drones

By MITCH SHAW Standard-Examiner Sep 21, 2019

This Standard-Examiner file photo shows the Utah Test and Training Range.
Standard-Examiner

HILL AIR FORCE BASE — The Air Force wants to start flying drones at the Utah Test and Training Range.

The Department of Defense is now accepting public comment on a draft environmental assessment related to a plan to test unmanned aircraft at the west desert testing range.

The Air Force wants to establish a restricted area of airspace at the UTTR to operate the drones and to set-up facilities that will allow them to launch, control, recover and maintain the unmanned aircraft.

According to Hill's Public Affairs office, the aircraft (which are called Sub-scale Aerial Targets by the military) are used to provide realistic live-fire training for Air Force pilots. Current operations using unmanned aircraft are done on nearby Dugway Proving Ground but under the new proposal, the Air Force would move the operations to the UTTR near Wendover, Utah.

"Our mission requirements integrating unmanned aircraft have increased substantially over the last few years, as have the Army's," said Col. Daniel Gable, commander of Headquarters UTTR. "This new area of restricted airspace, adjacent to our current restricted airspace, will give us more operational flexibility and capability and allow us to meet the increasing demand we have for testing and training using unmanned aircraft."

The draft environmental assessment was completed to collect data, conduct research and analyze potential environmental and socioeconomic consequences related to the plan. The Air Force considered other alternatives for the location of the on-ground site, which are enumerated in the Draft EA. The agency the assessment has found the drones proposal won't have significant impacts on the human environment or any of the environmental resources in the area.

But Gable said officials want to hear from the public on the plan before making a final decision.

The Draft EA is available at https://bit.ly/2mslqK1. A printed copy is also available for review at the West Wendover Branch Library, 590 Camper Drive, West Wendover, Nevada, or by contacting Michael Shane at (801) 586-2551 or michael.shane.2@us.af.mil.

Comments on the plan will be accepted through midnight Oct. 19.

UT lawmakers approve changes to medical cannabis law

By MORGAN SMITH
Associated Press

SALT LAKE CITY (AP) – Utah legislators approved changes to the state's medical marijuana law, an issue that has faced fierce criticism from people on both sides of the debate.

The Utah Senate and House of Representatives voted unanimously Monday evening during a special session to send the proposal to Republican Gov. Gary Herbert's desk.

The measure would replace plans for an unusual state-run dispensary system with 14 privately run pharmacies and adopt protections for patients who are concerned they could be prosecuted for drug crimes, among other changes.

Utah backtracked from the state-run dispensary after county attorneys expressed concern that such a system would put public employees at risk of being prosecuted under federal drug laws.

Republican Senate Majority Leader Evan Vickers, who drafted the law, said his team is "doing everything we can" to improve patient access and have product ready by next March.

Some lawmakers said they still have heartburn over certain aspects of the bill, sharing reservations about product distribution and a looming fear of federal prosecution.

Democratic Sen. Derek Kitchen said he's concerned patients in rural parts of the state may have to pay more

to access marijuana.

Before the House vote, Republican Rep. Keven Stratton suggested Utah seek a federal waiver to protect the state program from prosecution under federal drug laws.

Marijuana is banned at the federal level, though a congressional amendment blocks the Justice Department from interfering with states' medical marijuana programs.

The measure dictated that the courts may not treat a medical marijuana patient differently than someone who uses any other prescribed, controlled substance.

Another change prohibited the state from issuing cultivation and pharmacy licenses to legislators.

"A lot of money flows through this industry, some back to legislators," Vickers said. "We don't want legislators to have undue influence in an industry they want to have ownership in."

Debates in the chamber reflected ongoing tensions over amendments regarding distribution and prosecution of drug crimes.

During a tense public hearing last week, members of the conservative group Utah Eagle Forum lamented the loss of the state-run dispensary system, while some medical marijuana advocates raised concern that there wouldn't be enough private dispensaries to meet growing patient demand.

An earlier version of the law imagined 12 privately run dispensaries instead of the state-run system.

In the same meeting, a proposal outlining patient protections caused an emotional back-and-forth between conservative attorneys who argued parents couldn't take care of children while using marijuana and patients who said the drug makes them better caretakers and helps them manage their pain.

Utah residents voted to legalize medical marijuana via ballot measure in November.

The revised law became effective in December after a compromise that secured the support of The Church of Jesus Christ of Latter-day Saints and some marijuana advocates.

However, the deal drew backlash from other advocates as it banned many marijuana edibles, placed additional restrictions on growing cannabis and made fewer medical conditions eligible for treatment with pot.

Other changes addressed issues with land ordinances for cultivation facilities and marijuana research at in-state universities.

Marijuana advocates said they are optimistic about the changes adopted.

"There's a light at the end of the tunnel, we see legislators working together, and they're willing to work out a plan for patients," Desiree Hennessy, director of the Utah Patients Coalition, said.

Republican Rep. Brad Daw acknowledged the measure as a good first step but expects additional changes to the program in January.

"I have close friends who, for them, cannabis is the only option, it relieves the kind of pain they have ... we have every right and responsibility to work toward a law that allows medical cannabis to patients who need it," he said. "Is this bill perfect? Of course not. Is this done? No, it's not."

CONSIDERATIONS

by lynette parker

Knowing and Caring

"Educating the mind without educating the heart is no education at all."
--Aristotle

Is there an honor role for those who treat others with kindness? I think we know the answer to that! Or, have you ever seen a bumper sticker that touts,

"My child is thoughtful and compassionate"?

We know that the human mind needs to understand its surroundings and be gaining knowledge. Our minds are constantly attempting to make connections to make sense of all that it experiences. This is how the brain works. But should it stop there? If what we know becomes highly respected while forgetting the impact of this knowledge on friends, family, and ultimately humanity, a dangerous imbalance can occur.

History and present-day happenings teach us that human minds have invented multiple destructive devices. While these are accomplishments in one sense, the resulting devastation seems to negate the advance. Atomic energy can be used to warm a home or destroy it. In a world that desires an increase in justice, our concern for 'neighbor' could keep discoveries in check.

Who do you know that keeps his mind and heart aligned?

Air Force accepting public comments on environmental assessment

HILL AIR FORCE BASE, Utah – The Air Force will begin accepting public comments Sept. 19 on a draft environmental assessment completed for a proposal to establish a restricted area of airspace (designated R-6401) to operate unmanned aircraft and to set-up facilities on a site on the Air Force's Utah Test and Training Range (UTTR) to launch, control, recover and maintain the unmanned aircraft.

The unmanned aircraft, called Sub-scale Aerial Targets, are used to provide realistic live-fire training for Air Force pilots. Current operations using unmanned aircraft are done on nearby Dugway Proving Ground; with this proposal, the Air Force would move its unmanned aircraft operations to the UTTR near Wendover, Utah.

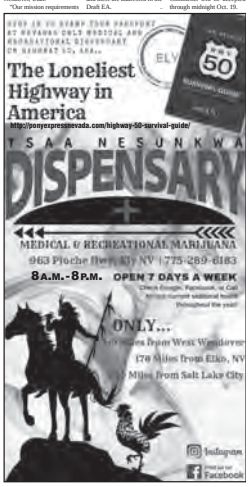
"Our mission requirements integrating unmanned aircraft have increased substantially over the last few years, as have the Army's," said Col. Daniel Gable, commander of Headquarters UTTR. "This new area of restricted airspace, adjacent to our current restricted airspace, will give us more operational flexibility and capability and allow us to meet the increasing demand we have for testing and training using unmanned aircraft."

The environmental assessment was completed to collect data, conduct research and analyze potential environmental and socioeconomic consequences associated with the proposed new airspace and the setup of the UTTR site. The Air Force considered other alternatives for the location of the on-ground site and these are addressed in the Draft EA.

The Air Force has determined that the proposed project would not have significant impacts on the human environment or any of the environmental resources described in the document.

"We welcome and encourage public review and comment on the draft EA," Gable said. "The Air Force will make a final decision about the project after considering all inputs from the public."

The Draft EA is available at: www.hill.af.mil/Portals/58/documents/Environmental/EA/Wendover/Air-space.pdf. A printed copy is also available for review at the West Wendover Branch Library, 590 Camper Drive, West Wendover, Nevada, or by contacting Michael Shane at (801) 586-2551 or michael.shane.2@us.af.mil. Comments will be accepted through midnight Oct. 19.



Comments on the Previous Draft EA

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From: xcflying[redacted]<xcflying[redacted]>
Sent: Monday, September 23, 2019 12:24 PM
To:[redacted]CIV USAF ACC UTTR/RSE <[redacted]@us.af.mil>
Subject: [Non-DoD Source] Comments on Environmental Assessment for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft,

[redacted] I hope you are correct person to be sending comments to regarding the new proposed restricted area R-6401.

Overall I have no problem(s) with this new, small, restricted area but I wanted to point out that airspaces around the existing MOA's and restricted areas are utilized by the sailplanes (gliders) flying out of Ely, NV, Parowan, UT and Nephi, UT during cross country flights.

When flying sailplanes we do not follow normal Civilian Aviation routes, as described in Section 3 and specifically section 3.1.1.2, of the proposal. Rather we follow the best lift routes. It is not uncommon for us flying through the UTTR MOA's and if allowed even through restricted areas after contacting Clover Control. During our flying the altitudes we utilize depend on the soaring condition but do not exceed 18,000 MSL. Furthermore, sailplanes are exempt from having transponders though many do have them and many are also installing ADS-B in and out technologies.

We also have 1 to 2 organized events each year at the Nephi UT airport, U14, with more than 60 gliders attending and enjoying the world class soaring within the Great Basin. When these events occur we are in contact Clover Control before the event and also on a daily basis letting them know of routes and approximate times sailplanes may be around or utilizing an MOA. The relationship we have with Clover Control has been ongoing for more than 5 years and I feel is very helpful and constructive for all parties.

Thank you for your time and attention.

Respectfully submitted,

Ron[redacted]
Huntsville, UT

From: Ben Stireman <benstireman@utah.gov>
Sent: Friday, September 27, 2019 8:34 AM
To: SHANE, MICHAEL P CIV USAF ACC UTTR/RSE <michael.shane.2@us.af.mil>
Cc: Chris Fausett <chrisfausett@utah.gov>
Subject: [Non-DoD Source] Re: Draft EA for Restricted Area (R-6401)

Good morning Michael,

I appreciate the chance to comment on the Draft EA for establishing the restricted area near Wendover. I have reviewed the draft and don't foresee any issues. I do have a questions related to the operation. It states that an LOA has been established with SITLA and Intrepid for the purpose of overflight, incident response, and recovery operations. I am fairly new at SITLA, but don't recall seeing an LOA. Can you confirm whether that has been completed? If so, can you send me a copy of the LOA?

Thank you,

Ben Stireman
Resource Specialist
Utah Trust Lands Administration
675 East 500 South, Suite 500
Salt Lake City, UT 84102

Office: 801.538.5164
Cell: 385.499.6243

From: smline.tooelecounty@gmail.com <smilne.tooelecounty@gmail.com>
Sent: Wednesday, October 2, 2019 8:46 AM
To: SHANE, MICHAEL P CIV USAF ACC UTTR/RSE <michael.shane.2@us.af.mil>
Cc: Lisa Dunn <ldunn@tooeleco.org>; Jeremiah Riley <jeremiah@premiselaw.com>
Subject: [Non-DoD Source] Re: Draft Environmental Assessment for Restricted Area of UAS at Wendover Airport

Mr. Shane:

I'll be the first to admit that federal documents can often confuse me with all of the legal lingo used, but I think I've accurately caught the gist of the attached document and its implications to revenue potential at the Wendover Airport, owned by Tooele County. But I've been wrong before and want to make sure I actually do before responding formally to the NEPA/Draft EA.

Is my interpretation correct that the document states it is UTTR's stance that unmanned aerial systems (UAS) operating in adjoining airspace/property (such as the Wendover Airport and the Bonneville Salt Flats) would *NOT* inhibit UTTR/Hill AFB functions? This document (and the corresponding link therein) actually "increase[s] operational flexibility and capability" for our economic development potential on the airport and tourism filming on the Flats, correct?

Thanks for any confirmation/clarification.

Shawn Milne
Tooele County Commissioner

Adventure awaits in Tooele County!

County Commission Office
47 South Main Street
Suite 300
Tooele UT 84074

435.243.7313
SMilne.TooeleCounty@gmail.com

From: Tim[redacted]
Sent: Sunday, October 6, 2019 4:00 PM
To: SHANE, MICHAEL P CIV USAF ACC UTTR/RSE <michael.shane.2@us.af.mil>
Subject: [Non-DoD Source] Porposed Airspace R-6401

I am writing to formally object to the proposed Airspace R-6401. The location of this proposed airspace will directly interfere with the VFR corridor between Nevada and northern Utah. After reviewing the proposal materials this appears to be an unnecessary airspace grab that could be accommodated by including these flight activities in the existing R-6405 and R-6406 or one of the other millions of acres already controlled by the US government in the area. There is no clear demonstrated need to require additional airspace beyond what is already allocated to the USAF.

The proposed restricted area would interfere with the smooth transition of aircraft flying from the southwest through the VRF corridor to the Salt Lake area. It will required flying additional miles to stay clear of the area and add an area that is not geometrically compatible with the rest of the restricted areas in the region. The proposed area juts out into the VFR corridor on both the east and west approaches.

Sincerely,

[redacted]

October 17, 2019

RE: DRAFT ENVIRONMENTAL ASSESSMENT FOR ESTABLISHING RESTRICTED AREA (R-6401) AND OPERATION UNMANNED AIRCRAFT, WENDOVER, UTAH

The Wendover Airport Director in Wendover, Utah has reviewed the Draft Environmental Assessment for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft, Wendover, Utah document dated September 2019.

The Wendover Airport recognizes the proposed new Restricted airspace located approximately 2 miles south of the southern Wendover Airport physical property boundary is in direct conflict with existing Wendover Airport operations. Specifically, any flights arriving on the instrument arrival procedure RNAV (GPS) RWY 26 authorized to perform the missed approach maneuver to the south would conflict with the new R-6401 proposed airspace. Flights using the VOR/DME or TACAN RWY 26 instrument arrival procedure would similarly conflict with proposed R-6401 airspace. Additionally, flights departing runway 26 using the Wendover One (RNAV) departure procedure would conflict with the proposed R-6401 airspace. Flights using the published FAA Obstacle Departure Procedures from Runway 26 would also conflict.

Consequently, without specific guarantees, the Wendover Airport does not support establishing Restricted Area (R-6401) for the following reasons.

General Aviation flights operating in and out of the Wendover Airport would be negatively impacted with additional hold times when flying any of the above-mentioned procedures when R-6401 is active. The Wendover Airport relies on the fuel sales from General Aviation traffic. Additional hold times would cause General Aviation flights to choose another airport for fuel stops. This would be devastating to the financial well-being of the airport and consequently the entire community.

The Wendover Airport accommodates daily Commercial aircraft Charter flights using a Boeing 737-400 aircraft. These flights are vital to the economic welfare of the community as they bring in approximately 50,000 tourists to Wendover yearly. These flights would be negatively impacted with additional hold times when flying any of the above-mentioned procedures when R-6401 is active. The exorbitant cost of longer flight times could not be absorbed by the host of these flights and could put the Commercial aircraft flight program and economic welfare of the community in jeopardy.

Wendover Airfield – 345 Airport Apron – Wendover Utah – 84083
PH: 435-665-2308 – Fax: 435-665-0172

The Wendover One Obstacle Departure Procedure does not require any notice or clearance to fly the procedure. This will no longer be the case when R-6401 is active. This would not only cause delays but could also create confusion leading to more violations.

In Clause 2.6 which is the Description of the Proposed Action of the Environmental Assessment for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft it states the "expected" use is 32 days per year, 6 hours per day. However, there is no guarantee that military operations will be limited to the specified expectation. In fact, this will likely change over time and could increase dramatically. Any use, and especially additional use over the expected usage, would create additional hold times for arriving and departing flights. Again, those pilots with a choice, will likely choose another airfield. Those pilots who must use the Wendover Airport will experience delays and the associated costs of higher fuel burns, additional wear and tear on the aircraft and additional manpower.

The Wendover Airport has been a long-time supporter of military operations. However, for the reasons stated, the Wendover Airport must preserve unrestricted access for flights arriving and departing the airport. The Salt Lake City ARTCC made recommendations regarding the proposed R-6401 in a memorandum dated March 13, 2019. In those recommendations the Salt Lake City ARTCC stated "Salt Lake Center still highly recommends all Instrument Procedures and Departure Procedures be re-evaluated…" according to "United States Standard for Terminal Instrument Procedures (TERPS) to ensure all procedures remain clear of and aircraft are capable of staying clear of restricted airspace. If for any reason any of the conditions are not met our original response stands.".

For the Wendover Airport to support the boundaries of the proposed R-6401, we insist on a guarantee that all Instrument Procedures and Departure Procedures are re-designed to ensure unrestricted access. This must be done prior to activating R-6401 and without limiting the scope and availability of Wendover Airport Instrument Procedures and Departure Procedures.

If the condition is met to re-design the published procedures to provide unrestricted access, the Wendover Airport supports the boundaries of the proposed R-6401, provided the Salt Lake City ARTCC's additional recommendations contained in the March 13, 2019 memorandum are also met. Specifically:

1. Salt Lake Center will delegate airspace encompassing ENV, specifically areas X-Ray and Skull Valley, 13,000 and below to Clover.

2. A Letter of Agreement is developed to delegate this airspace to Clover.

3. Clover will work all Wendover IFR arrivals, departures and overflights, VFR traffic, all traffic in area X-Ray, Skull Valley, and R-6401 when open.

4. Clover must be open during all times R-6401 is active.

5. Clover must submit regular working hours and may add to but not subtract from those hours.

6. NOTAM's must be issued for all times R-6401 is in use.

7. Any and all changes to publications are accomplished reflecting the change.

In conclusion, access for flights operating to and from the Wendover Airport cannot be hampered by the boundaries of proposed R-6401 because it would cause financial hardship to the airport, General Aviation traffic, the Commercial aircraft Charter operation, and the community. Therefore, if unrestricted access cannot be guaranteed, the boundaries of proposed R-6401 should be limited to the current northern edge of R-6406A airspace.

Sincerely,

Lisa Dunn
Tooele County Wendover Airport Director

Wendover Airfield – 345 Airport Apron – Wendover Utah – 84083
PH: 435-665-2308 – Fax: 435-665-0172

CITY OF WEST WENDOVER

P.O. Box 2825 • 1111 N. Gene L. Jones Way • West Wendover, NV 89883
Office (775) 664-3081 Fax (775) 664-3720

October 17, 2019

Mr. Michael Shane
UTTR/RSE
6066 Cedar Lane, Bldg. 1274
Hill AFB, UT 84056-5003

Subject: **Public Comment – Draft Environmental Assessment for Establishing Restricted Area (R-6401_ and Operation of Unmanned Aircraft, Wendover, Utah**

Dear. Mr. Shane:

Please accept this letter on behalf of the City of West Wendover in which the city is in complete concurrence with the concerns, comments and recommendations regarding the above matter as provided for in the letter of October 17, 2019 by Tooele County Wendover Airport Director Lisa Dunn, a copy attached hereto.

The proposal as currently outlined will have a negative economic and operational impact as it relates to Wendover Airport which will directly and indirectly affect the City of West Wendover.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Chris J. Melville, C.P.O.
City Manager

October 17, 2019

RE: DRAFT ENVIRONMENTAL ASSESSMENT FOR ESTABLISHING RESTRICTED AREA (R-6401) AND OPERATION UNMANNED AIRCRAFT, WENDOVER, UTAH

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Consequently, without specific guarantees, the Wendover Airport does not support establishing Restricted Area (R-6401) for the following reasons.

General Aviation flights operating in and out of the Wendover Airport would be negatively impacted with additional hold times when flying any of the above-mentioned procedures when R-6401 is active. The Wendover Airport relies on the fuel sales from General Aviation traffic. Additional hold times would cause General Aviation flights to choose another airport for fuel stops. This would be devastating to the financial well-being of the airport and consequently the entire community.

The Wendover Airport accommodates daily Commercial aircraft Charter flights using a Boeing 737-400 aircraft. These flights are vital to the economic welfare of the community as they bring in approximately 50,000 tourists to Wendover yearly. These flights would be negatively impacted with additional hold times when flying any of the above-mentioned procedures when R-6401 is active. The exorbitant cost of longer flight times could not be absorbed by the host of these flights and could put the Commercial aircraft flight program and economic welfare of the community in jeopardy.

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PH: 435-665-2308 – Fax: 435-665-0172

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The Wendover Airport has been a long-time supporter of military operations. However, for the reasons stated, the Wendover Airport must preserve unrestricted access for flights arriving and departing the airport. The Salt Lake City ARTCC made recommendations regarding the proposed R-6401 in a memorandum dated March 13, 2019. In those recommendations the Salt Lake City ARTCC stated "Salt Lake Center still highly recommends all Instrument Procedures and Departure Procedures be re-evaluated…" according to "United States Standard for Terminal Instrument Procedures (TERPS) to ensure all procedures remain clear of and aircraft are capable of staying clear of restricted airspace. If for any reason any of the conditions are not met our original response stands.".

For the Wendover Airport to support the boundaries of the proposed R-6401, we insist on a guarantee that all Instrument Procedures and Departure Procedures are re-designed to ensure unrestricted access. This must be done prior to activating R-6401 and without limiting the scope and availability of Wendover Airport Instrument Procedures and Departure Procedures.

If the condition is met to re-design the published procedures to provide unrestricted access, the Wendover Airport supports the boundaries of the proposed R-6401, provided the Salt Lake City ARTCC's additional recommendations contained in the March 13, 2019 memorandum are also met. Specifically:

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4. Clover must be open during all times R-6401 is active.

5. Clover must submit regular working hours and may add to but not subtract from those hours.

6. NOTAM's must be issued for all times R-6401 is in use.

7. Any and all changes to publications are accomplished reflecting the change.

In conclusion, access for flights operating to and from the Wendover Airport cannot be hampered by the boundaries of proposed R-6401 because it would cause financial hardship to the airport, General Aviation traffic, the Commercial aircraft Charter operation, and the community. Therefore, if unrestricted access cannot be guaranteed, the boundaries of proposed R-6401 should be limited to the current northern edge of R-6406A airspace.

Sincerely,

Lisa Dunn
Tooele County Wendover Airport Director

Wendover Airfield – 345 Airport Apron – Wendover Utah – 84083
PH: 435-665-2308 – Fax: 435-665-0172

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www.aopa.org

October 17, 2019

Mr. Michael Shane
UTTR/RSE
6066 Cedar Lane
Bldg. 1274
Hill AFB, UT 84056-5003

Re: ***Draft Environmental Assessment for Establishing Restricted Area R-6401 and Operation of Unmanned Aircraft, Wendover, UT.***

Dear Mr. Shane,

The Aircraft Owners and Pilots Association (AOPA), the world's largest aviation membership association, submits the following comments in response to the draft Environmental Assessment (EA) prepared for the establishment of Restricted Area R-6401 and the operation of Unmanned Aircraft (UA) at Wendover, UT. We understand the importance of the UA operation to support the Utah Test and Training Range (UTTR) and the military activities that take place within this established Special Use Airspace (SUA). However, we share the concerns expressed by the Tooele County Wendover Airport Director, Lisa Dunn, in her October 17, 2019, comment letter. Despite the small size of the proposed R-6401, this Restricted Area would have a significant adverse economic impact on the Wendover Airport (ENV). For that reason, we disagree with several assertions made in the draft EA that note the impact on civil aviation would be minimal. We believe the proponent and the FAA must first mitigate the adverse aeronautical impacts to ENV and its users before proceeding with establishing R-6401.

New permanent airspace must be justified

In an October 31, 2008, memo from the FAA Airspace and Rules Group concerning a "Clarification on Restricted Area Proposals for Unmanned Aircraft Systems (UAS) Operations," it is stated:

> "UAS operations have not been declared to be a hazardous activity; therefore, we will question any requirement for establishing new restricted area(s) for UAS operations. Proposals without hazardous activity (being conducted) will be returned to the appropriate Service Area office so that further discussions can occur with the proponent."

As the draft EA is clear that R-6401 is being established to support UA activity, we question the validity of establishing a Restricted Area versus a less invasive type of airspace like a Controlled Firing Area or an approval from the FAA such as a Certificate of Authorization. We do not agree that the employment of Rocket-Assisted Takeoff (RATO) inherently makes this operation hazardous and that RATO is required to be contained within a Restricted Area per JO 7400.2. RATO has been employed by numerous types of aircraft and in numerous types of airspace that are not a Restricted Area. There are numerous ways RATO and UA operations can be accomplished safely without the use of segregated airspace. We question the accuracy of the statement in the draft EA on page 1-3 that states RATO operations "are considered hazardous and must be conducted in RA airspace in accordance with FAA regulations." This statement must be supported by a clear source and statement from the FAA or it should be removed.

Location of new airspace will have negative impact on General Aviation

The location of the proposed Restricted Area, although over primarily a rural area, has a significant impact on the General Aviation and other users of ENV. We do not agree with the statement on page 4-20: "Implementation of the proposed action is not anticipated to result in significant impacts to airspace use or management near Wendover Airport." In fact, the FAA's December 14, 2018, Aeronautical Study and March 13, 2019, memorandum that were included in the draft EA identify numerous impacts to the airport users and the airspace including the unavailability of the instrument approaches at the airport. Rendering an airport inaccessible during certain weather conditions must be acknowledged and mitigated as this airspace would cause a negative economic impact.

The Wendover Airport accounts for numerous jobs and has a positive economic impact on the local community. Taxpayers have invested heavily in this airport via the Airport Improvement Program. A significant investment has also been made in this airport by the local community to ensure it is safe and to stimulate business. Many aircraft are based at this airport and many more transient aircraft visit it on an annual basis. Flights in this area are diverse and include recreation, personal travel, business aviation, flight training, air ambulance, aerial photography, and many other types of operations.

Furthermore, we do not agree with the statement on page 6 of the Test/Training Spaces Needs Statement (TTNS) that "there will be little impact to the general aviation community." This statement is not supported with facts or with clear sources referenced that would allow one to understand why this statement was considered valid. Using this statement as foundational support for the airspace proposal and the draft EA makes this document inaccurate and fundamentally flawed.

Based on first-hand information from the Tooele County Wendover Airport Director and AOPA membership, we contend the draft EA must be revised to accurately identify the significant impact R-6401 would have on ENV, the airport's users, and the surrounding community that relies on the airport.

Conclusion

AOPA recognizes and fully supports the military's need to train as they fight. We appreciate the importance of these UA operations for the airspace proponent and for UTTR; however, we do not agree that a Restricted Area is the only, or the best, solution to facilitating this activity. Additionally, we believe the draft EA is fundamentally flawed in its failings of clearly and fairly identifying the significant impact R-6401 would have on ENV. We support the mitigations proposed by the Tooele County Wendover Airport Director should a Restricted Area be identified by the FAA as the sole acceptable solution.

Thank you for reviewing our comment on this important issue. Please feel free to contact me at 202-509-9515 if you have any questions.

Sincerely,

Rune Duke
Senior Director, Airspace and Air Traffic

Federal Aviation Administration

Memorandum

Date: OCT 22 2019

To: Shawn Kozica, Manager, Operations Support Group, AJV-W2

From: Rodger A. Dean Jr., Manager, Rules and Regulations Group, AJV-P2

Subject: Denial of rulemaking request for Restricted Area R-6401 (Docket Number 18-ANM-13/FAA-2018-0853)

AJV-P2 (formerly AJV-11) received your request for "rule making associated with the proposal to establish restricted area R-6401" on August 21, 2019. This memo is to advise you that HQ is returning the request without action, as there is no hazard associated with the proposal.

JO 7400.2M, "Procedures for Handling Airspace Matters" para 23-1-2 states, "Restricted areas are established when determined necessary to confine or segregate activities considered hazardous to nonparticipating aircraft." The airspace proposal for the United States Air Force (USAF) states the purpose of the request is to accommodate the launch, control, recovery, and maintenance of Unmanned Aircraft Systems (UAS) into and out of adjoining restricted airspace. The FAA does not consider UAS operations hazardous. The FAA along with the UAS industry have moved to integrate UAS operations as opposed to segregating UAS operations.

Additionally, the airspace proposal states the UAS uses rocket-assisted takeoff (RATO) bottles, travels at speeds of 650 mph, and carries munitions such as chaff and flares. The FAA does not consider these operations hazardous.

- The RATO bottles drop off the UAS within half a mile of launch at 500 feet Above Ground Level (AGL), which is over land owned by the military, where the military has control over the surface and can restrict non-participants from entering.

- The Department of Defense (DoD) has been granted a speed authorization which is an attachment to JO 7610.4 "Special Operations" which authorizes aircraft to operate at an indicated speed in excess of 250 knots under certain conditions. Condition G states "If the airspeed required or recommended in the aircraft flight manual to maintain maneuverability is greater than the maximum speed described in CFR, 91.117, the aircraft may be operated at that speed…"

- Chaff and flares are utilized in Military Operations Areas (MOAs) today and are not deemed hazardous.

Lastly, it was suggested that the combination of the aforementioned non-hazardous activities met the equivalent of a hazard. For the purposes of establishing restricted airspace, the FAA does not consider a combination of non-hazardous activities to be a hazard.

If you have any questions on this matter, please contact Kenneth Ready at 202-267-3396.

Alaka

Federal Aviation Administration

Memorandum

Date: OCT 31 2008

To: Mark Ward, Manager, Operations Support Group, Eastern Service Area
Don Smith, Manager, Operations Support Group, Central Service Area
Clark Desing, Manager, Operations Support Group, Western Service Area

From: Edith V. Parish, Manager, System Operations Airspace and Aeronautical Information Management, Airspace and Rules Group

Subject: Clarification on Restricted Area Proposals for Unmanned Aircraft Systems (UAS) Operations

---

At the most recent RTCA Airspace Working Group meeting, there was discussion about UAS operations and special use airspace, specifically restricted areas, which highlighted a need to clarify FAA's policy on this matter.

Restricted areas are established to confine or segregate activities considered hazardous to nonparticipating aircraft as specified in FAAO 7400.2, Procedures for Handling Airspace Matters. We do not support establishing restricted areas for non-hazardous activities. At the same time, we are aware of the guidance contained in FAAO 7610.4, Special Operations, which indicates UAS operations should normally be conducted within restricted areas or warning areas. This guidance is applicable to existing restricted and warning areas, and does not imply support for establishing new areas for a non-hazardous activity.

UAS operations have not been declared to be a hazardous activity; therefore, we will question any requirement for establishing new restricted area(s) for UAS operations. Proposals without hazardous activity (being conducted) will be returned to the appropriate Service Area office so that further discussions can occur with the proponent.

If there are any questions pertaining to this clarification, please contact me at (202) 267-8783.

cc: System Operations Security
Unmanned Aircraft Systems Group

Peppermill
Casinos, Inc.

CORPORATE OFFICES • 90 WEST GROVE ST. • SUITE 600 • RENO, NEVADA 89509-4003

October 17, 2019

Michael Shane
UTTR/RSE
6066 Cedar Lane, Bldg. 1274
Hill AFB, UT 84056-5003
801-586-2551

RE: Public Comment Opportunity Draft EA (Wendover)

Dear Mr. Shane:

Peppermill Casinos, Inc. and its affiliates ("Peppermill") owns and operates three resort hotel casinos in Wendover, Nevada. Peppermill is writing this letter pursuant to the public opportunity allowed in connection with the Draft EA. Peppermill is opposed to the establishment of the Restricted Area of airspace proposed by the Draft EA because we believe it will have a significant negative effect on our operations, employees and the Wendover community.

Peppermill created a flight program fifteen years ago (the "Flight Program"). The Flight Program was created to bring new customers into the Wendover area. The first flight through the Flight Program took place on January 15, 2005. Since that time, the Flight Program has grown significantly and now brings daily flights into Wendover from more than sixty-nine different cities across the United States. The occupancy rate for these flights averages over ninety percent year around. Flights through this program are three-night stay packages with an average of 425 flight customers into the area and at our resorts per day. The number of passengers represented by these flights averages 53,000 passengers per year. There is an extremely significant economic impact from these flights on our resorts as well as on other non-Peppermill businesses and the community of Wendover.

Peppermill has invested millions of dollars and resources in the Flight Program. Additionally, in 2009, Peppermill contributed substantial sums toward the construction of a new terminal at the Wendover Airport. In 2014, Peppermill also contributed sums toward a two-thousand-foot runway extension at the Wendover Airport.

Peppermill is opposed to the establishment of the Restricted Area because it will have a significantly negative impact on our Flight Program and will be detrimental to our resorts, our employees and the community of Wendover and that region.

The proposed Restricted Area will affect the departure and arrival schedule of our flights. That will cause our program to lose its scheduled time slots in the outstations and negatively affect the entire

PHONE (775) 689-8911 • FAX (775) 689-8961

day. It will cause issues with our crew in terms of timing and additional block time costs will make numerous flights in our program cost prohibitive.

All of this will lead to a significant loss of customers and economic activity at our resorts and the Wendover area. Peppermill is the largest non-mining employer in the Wendover area and all of Elko County. The proposed Restricted Area will cost the Wendover community jobs. The Wendover community cannot afford those job losses. In addition, the proposal will affect tax revenue for the State of Nevada and the local governments in the Wendover area. The Flight Program creates a significant amount of room taxes, sales taxes, gaming taxes and other taxes that support schools and public safety programs in the Wendover area. The proposed Restricted Area will have a significant negative impact on schools and other governmental programs.

Sincerely,

William A. Paganetti
President

HISTORIC WENDOVER AIRFIELD

Museum
352 S "A" Street
PO Box 104
Wendover, Utah 84083

Corporate Office
1940 E 10980 S
Sandy, Utah 84092

DATE: October 17, 2019

FROM: James S. Petersen

MEMO RE: Draft Environmental Assessment for establishing restricted area R-6401 and operation of unmanned aircraft, Wendover Utah.

BACKGROUND: I was the Wendover Airfield Director from 2003 through the end of September 2016. As such I was involved from the initial discussions of this proposed project. I am currently involved with Wendover Airfield on a weekly basis as the director of the historic restoration and operation activities. On an ad hoc basis I support airport needs such as a NAVAIDS electronics issues and I am aware of airport activities in general.

From the time that this has been proposed, the restricted area has posed a problem with airspace operations in and out of Wendover Airfield. There are a number of published FAA procedures that conflict with the proposed R-6401, including VOR/DME, TACAN RWY 26, RWY 26 departures and missed approach maneuvers. An aircraft with any kind of a serious mechanical issue needing to use the missed approach procedures **will not have the option** to avoid the restricted area even if it is active.

These issues have been brought up several times during discussions at the airport when I was operating as the director. You will note the FAA's comments in the December 14, 2018 letter regarding a recommendation that the north boundary of R-6401 be no further north than the R-6406A boundary line. This is reiterated in the March 13, 2019 letter. Unfortunately documentation does not appear to be available, but this suggestion was made prior to my departure in Sept of 2016.

It should be noted that the construction of the launch facility, which is on the northern edge of the proposed R-6401, was undertaken and completed much prior to this public comment and discussion of the proposed restricted site. It is obvious why the FAA suggestion of the north boundary is being ignored as the Air Force has already completed both the maintenance and launch pads and structures and the launch pad is north of the R-6404A north boundary.

It is also interesting to note that during our initial discussions back in 2015, the proposed facility was only going to be used for four weeks. From your document on 28 May 2015 it is quoted: "The expected utilization of the airspace and launch facility would be four periods annually, not to exceed one week per period." This has now been increased from 20 days to an 'expected' use of 32 days with the restricted area increasing in active status from 4 weeks to 8 weeks. The airport has little assurance that this won't increase again in the near future or even have a push to become permanent.

I cannot see any reason why the launch facility couldn't have been constructed one mile south which would have met the north boundary request.

Reviewing the document, the authors have placed the recovery area for the SSAT's on the road leading south. The probability area of a SSAT parachuting into the recovery area isn't a dot on the map. We had discussed recovery and the soil conditions is very early meetings and drove out onto the ground. To be safe, the recovery needs to be much further south of the launch facility.

The airfield was losing significant funds when I arrived in 2002/2003. Developing the commercial flight program and upgrading the airport have been the only things that have allowed this airport to stay open and remain viable. Since 2002, the airport has supported around 30+ F-16 emergency landings from UTTR operations and somewhere around 4-6 emergency landings of the new F-35. Having a viable airport has saved the Air Force a significant amount of money. At least two of the F-16 emergencies were 'engine out' landings, which without an airfield could have cost multiple millions of dollars. Anything that jeopardizes the commercial flight program or that causes GA traffic to spend their dollars elsewhere potentially affects the viability of the airfield.

In addition, if the Air Force proceeds with this restricted area they must assume the liability, even though a low probability, that an aircraft performs a missed approach and collides with a launching or recovering SSAT. It appears that the Air Force proceeded with the construction and operational plans without fully recognizing the impact to the Wendover aviation activities. I did not see in the draft as to priority but have heard that it will be 'first come, first served'. This is an untenable position as far as the airport operations are concerned and needs to be addressed before proceeding.

James S. Petersen

Director/President
Historic Wendover Airfield

From: Robert _____1980@gmail.com>
Sent: Thursday, October 17, 2019 3:49 PM
To: SHANE, MICHAEL P CIV USAF ACC UTTR/RSE <michael.shane.2@us.af.mil>
Subject: [Non-DoD Source] Public comment regarding Proposed Restricted Airspace R-6401

To: Michael Shane
UTTR/RSE 6066 Cedar Lane BLDG 1724
Hill AFB, UT 84056-5003

From: Robert _____

West Wendover NV 89883

October 17, 2019

Dear, Mr. Shane,

I am Writing in response to the Public comment Opportunity regarding the Draft EA completed for establishing a Restricted area of airspace designated as R-4601, near Wendover Utah.

As a Pilot operating between KENV and KSLC, the addition of additional restricted airspace in this corridor and surrounding area is concerning. As I progress towards Instrument flight training This airspace can have an additional impact of associated additional fuel burn and rental fees for aircraft unable to use the instrument approaches at KENV, Additionally adding the proposed R-6401 area adds additional restricted airspace in an area already constrained with several MOAs and restricted areas. Many pilots have a misunderstanding of how restricted airspace works and treat it as prohibited airspace (as evidenced in the attachment SAFE training aids MOAs .pdf) Additional airspace restrictions may inpact the community as some general aviation pilots may elect to fly elsewhere to either avoid the hassle, or additional costs.

Additionally while pilots rely on see and avoid, as well as communications on CTAF, the additional unmanned aircraft operations in this area can lead to additional collision hazards to pilots, for example as there is no set time criteria for when the airspace is active, a Pilot may review NOTAMS prior to deaprting for KENV however for longer stage flights (4 hour flight) in theory could be caught off guard during an instrument approach and inadvertantly violate the restricted airspace and to the potential for a collision with UAVs. The SSAT launches would occur between 0700 and 2200 which also coincides with General aviation, traffic, and often student pilot traffic engaged in cross-country flights.

In reviewing the Environmental impact study as a general aviation pilot, I strongly urge the Airforce to consider using one of the alternative sites already residing in the boundaries of existing airspace R-6404A, R 6507 or R-6402B

Kind Regards,

Robert _____

West Wendover NV 89883
661-236-9548

SAFE TRAINING AID

TEACHING MOAS AND RESTRICTED AREAS

This training aid is provided courtesy of the Society of Aviation and Flight Educators, Inc. (SAFE) and Larry Bothe, and contains the following documents:

1. "Teaching MOAs and Restricted Areas" by Larry Bothe, MCFI and DPE, December 01, 2010
2. Response from FAA Office of Chief Counsel by Rebecca B. MacPherson, November 23, 2010

Background: Among many other benefits, SAFE provides its members with exclusive access to an online Library of reference materials, many of which have been authored by top educators in the aviation industry. Articles submitted for consideration undergo peer review by the SAFE Library Editorial Review Committee (LERC). While reviewing the "Teaching MOAs and Restricted Areas" article, questions were raised concerning Restricted Areas. Specifically, the LERC wanted to verify whether or not a clearance was indeed required to fly through a Restricted Area when that area was not in use, since Part 73 makes reference to "permission" in defining restricted areas.

The LERC researched the central question, including interviewing flight instructors, the FAA (at OSH), and ATC (at OSH). The research yielded conflicting understandings, so the LERC decided to seek guidance directly from the FAA's Office of Chief Counsel. After a four-month process, the LERC received an official interpretation:

> A clearance is not required to operate VFR through a restricted area when the controlling or using agency, as applicable, has made a determination that the restricted area is "cold". [Cold = not active]

The determination by the Office of Chief Counsel was deemed sufficiently important to warrant dissemination of this information beyond SAFE's members-only Library to insure access to the broader general aviation community. Consequently, this training aid was put together for aviation educators and pilots. The information is to be used for educational purposes only. Permission for any other use must be coordinated directly with the authors of the documents assembled herein.

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Teaching MOAs and Restricted Areas

By Larry Bothe, MCFI, DPE, updated 12/01/2010

I find that many Private Pilot applicants and not a few already-certificated pilots are confused between Restricted Areas and MOAs and how they behave.

An MOA (Military Operations Area) is an airspace where there may be a higher than normal concentration of military aircraft flying around. The difference between an MOA and a Restricted Area is that in an MOA the military aircraft are just flying around practicing formation flight, intercepts, and the like, but they are NOT shooting guns or dropping bombs. In contrast, a Restricted Area often encompasses a gunnery range and/or a bombing practice area. Dangerous stuff goes on in a Restricted Area. That's why you don't need to call anybody to fly through an MOA, but you have to call about a Restricted Area (see below). According to the Airman's Information Manual, in order to fly through an MOA you are supposed to be "extra vigilant", but you don't have to call anybody to determine if it is active or not.

As a side note, if you don't think there are military aircraft flying around in the same airspace where you and I fly every day then you haven't studied a sectional chart lately. Take a look at all those gray lines with the designation VR--- or IR--- marked on them. Those are Military Training Routes, and they are all over the place. Trust me, the gray lines are only an approximation of where military aircraft might be; they are NOT necessarily right on the gray lines when they do their training exercises.

A Restricted Area is just that; access into the area is restricted (but not prohibited). That means that in order to enter a Restricted Area (like R-3401-A just west of Columbus, IN) you have to make sure it is not in use. You do that by calling the controlling agency, as shown on the frequency tab of the sectional chart, and asking if the restricted area in question is in use or not. Controller jargon for this is "hot" (in use), or "cold" (not in use). According to the FAA's Office of Chief Counsel (*further detail found in a note below*), "**A clearance is not required to operate VFR through a restricted area when the controlling or using agency, as applicable, has made a determination that the restricted area is 'cold'.**" So, if the restricted area is "cold" you can fly through it; if it's "hot" then go around. It's as simple as that. The controlling agency (in the case of R-3401-A, Indianapolis Center on frequency 119.55) does not give you specific permission or a clearance to enter the restricted airspace. They just tell you if it's hot or cold; then you act accordingly.

Up until very recently, the last year or so, sectional charts were not forthcoming in terms of the information needed to contact a controlling agency about a Restricted Area. For example, the frequency tab on the sectional used to tell you that for R-3401-A the controlling agency was "ZID cntr", with a double asterisk (**). If you were very observant and had exceptionally good near vision you could find the footnote in tiny print and discover that ZID was in fact Indianapolis. The fact that "cntr" is an abbreviation for "Center" was never revealed on the chart. Neither was the apparently (then) secret frequency, 119.55. IFR pilots know all this stuff, but the poor VFR-only Private Pilot was truly left in the dark. It was as if the FAA did not want the common pilot to be able to fly through a restricted area.

In 2005 the FAA became enlightened in this regard and began printing the name of the controlling agency in plain English, and provided the call frequency. It was like a

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miracle; it is now so much easier to teach, do, or examine. One only wonders why the information wasn't made directly available years ago. (Now, if the FAA would only print approach control frequencies next to Class B airspace on sectional charts, like they already do for Class C, life would be good.)

In my experience, as an FAA Designated Pilot Examiner testing Private Pilot applicants, I have come to the conclusion that most flight instructors are not teaching MOAs and Restricted Areas with the proper perspective. While most applicants can tell me technically about how MOAs and Restricted Areas behave, the tone of their voice conveys the conclusion that as a practical matter they would never, ever, think about calling to see if a Restricted Area is hot. They will always go around, as if the Restricted Area was actually a Prohibited Area. This is a very wasteful attitude as most Restricted Areas are, in fact, in use for only a few hours each day. The rest of the time you can fly right through if you would only take 15 seconds or so to make the call to the controlling agency. Now that names and frequencies are available on sectional charts, calling is a piece of cake.

In addition to the name of the controlling agency and the frequency, sectional charts also provide information as to when Restricted Areas may be in use. When you see the time of use printed on the chart as "continuous" that doesn't mean the airspace will be in use continuously during the times indicated. What it really means is that it COULD be in use during those hours. Odds are that it will NOT be in use when you call. Flying an extra half-hour out of your way in order to avoid a 15-second radio call is really wasteful. When I'm instructing, I have my student plan a dual cross-country flight that on a direct route would take them through a Restricted Area. While in flight I have them call the controlling agency to find out if the airspace is in use. Sometimes it is; sometimes not. In either case the student has learned how easy it is to call and find out. Center is not just for heavy iron.

For whatever reason, probably because they weren't properly trained either, many flight instructors convey to their primary students that calling to see if a Restricted Area is "hot" is a waste of time. You are going to get told to stay out. Since in the real world the opposite is true, those same instructors need to rethink how they teach this particular bit of information. With the advent of $4.00+ AvGas and concurrently rising rental rates, flying through Restricted Areas that are not in use is becoming an increasingly attractive alternative. Call and ask.

Larry Bothe is an FAA Designated Pilot Examiner, FAASTeam Representative and Gold Seal Instructor in the Indianapolis, IN FSDO area. He is also a Master Certified Flight Instructor as designated by Master Instructors, LLC and has over 6500 hours in more than 70 types of aircraft. He may be contacted at LBothe@comcast.net.

[NOTE: As part of the SAFE Library Editorial Review Committee (LERC) review of this article, questions were raised regarding VFR flight through restricted areas – about whether or not a clearance or some form of "permission" was required. The question was raised in a review of part 73 which, in several points, makes mention of "permission" but does not refer to "clearance" in relation to certain designated airspace – including restricted. Conversations with representatives of different parts of the FAA were carried out at OSH, and conflicting answers were received from those conversations. As a result, a letter was directed to the Office of the Chief Counsel for the FAA and the answer is in this article. Paraphrasing from the rest of the opinion letter, while a restricted area is designated on the chart, it is only actually a restricted area when it is designated as being in use – or "hot". So, if it is not in use, it is not restricted, and clearance is not needed to fly into or through it. Keep in mind, however, that "published" hours are only a suggestion of when it might be in use, the final determination must come from the using or controlling agency – usually through a call to the controlling ATC facility. – SAFE LERC]

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

Office of the Chief Counsel

800 Independence Ave., S.W.
Washington, D.C. 20591

NOV 23 2010

Alan C. Davis
2212 E. 129th Ave.
Thornton, CO 80241-1920

Dear Mr. Davis:

This responds to your letter of July 7, 2010, requesting guidance concerning airspace that is described and designated in 14 CFR Part 73 as a restricted area. You provided excerpts from email strings and comments as background material. We are answering the three specific questions you asked about a "cold" restricted area and VFR flight. We believe that when you refer to a "cold" restricted area you mean that the restricted area is not designated as a restricted area during the time, and between the designated altitudes, when you wish to operate VFR.

Subpart B of Part 73 designates restricted areas and prescribes limitations on the operation of aircraft within them. Section 73.13 states:

> 73.13 Restrictions.
>
> No person may operate an aircraft within a restricted area between the designated altitudes and during the time of designation, unless he has the advance permission of
>
> (a) The using agency described in §73.15; or
>
> (b) The controlling agency described in §73.17.

Question 1. Is a clearance required to fly VFR through a "cold" restricted area?

Answer 1. A clearance is not required to operate VFR through a restricted area when the controlling or using agency, as applicable, has made a determination that the restricted area is "cold".

Question 2. If a clearance is required to fly VFR through a "cold" restricted area, who would provide it?

Since the answer to question 1 was no, an answer to question 2 is not necessary.

Question 3. Is the statement by ATC that the restricted area is "cold," in fact, a tacit clearance/permission/authorization to fly through that airspace?

To answer your question we assume that ATC is the controlling or using agency, as appropriate for the restricted area, and that ATC has communicated to the VFR operator that the restricted area is "cold". In those circumstances, the VFR operator may legally enter and transit the restricted area. However, the ATC communication is not an air traffic control clearance, permission, or authorization to operate VFR in the airspace. See, §73.13 and 14 CFR §91.133.

This response was prepared by Cecile O'Connor, an attorney in the Regulations Division, and has been coordinated with the Airspace, Regulations and ATC Procedures Group, AJV-11. We hope this response is helpful to you. If you have additional questions regarding this matter, please contact us at (202) 267-3073.

Sincerely,

Rebecca B. MacPherson
Assistant Chief Counsel for Regulations, AGC-200

swiftair

2710 E Old Tower Rd
Phoenix, AZ 85034

202 Centreport Dr, Ste 400
Greensboro, NC 27409

PER EMAIL TRANSMISSION

October 19, 2019

Mr.. Michael Shane
UTTR/RSE
6066 Cedar Lane, Bldg. 1274
Hill AFB, UT 84056-5003

RE: Public Comment Regarding Restricted Area (R-6401)

Dear Mr. Shane,

We are writing you regarding Draft Environmental Assessment (Draft EA) for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft, Wendover, Utah document dated September 2019.

Swift Air is a supplemental Air Carrier certified under 14 CFR 121 regulations. We operate a fleet of thirty-one (31) Boeing 737 aircraft on behalf of clients in the America's and Europe. Since February 13, 2017, Swift Air has been operating a Charter Program on behalf of Peppermill Casinos Inc., a Wendover, UT based entity operating 3 local casinos. Our program consists of daily flights in and out of the Wendover Airport (KENV) using a Boeing 737-400 aircraft. Yearly, we transport approximately 55,000 tourists to Wendover. We are the only commercial airline providing services to and from the Wendover Airport.

We have completed an assessment of the Draft EA. Based on this assessment, we have concluded the following:

1. The proposed new Restricted airspace located approximately 2 miles south of the southern Wendover Airport physical property boundary is in direct conflict with existing Wendover Airport operations. Specifically, any flights arriving on the instrument arrival procedure RNAV (GPS) RWY 26 authorized to perform the missed approach maneuver to the south would conflict with the new R-6401 proposed airspace.
2. Flights using the VOR/DME or TACAN RWY 26 instrument arrival procedure would similarly conflict with proposed R-6401 airspace.
3. Flights departing runway 26 using the Wendover One (RNAV) departure procedure would conflict with the proposed R-6401 airspace.

For Swift Air to support the boundaries of the proposed R-6401, we insist on a guarantee that all Instrument Procedures and Departure Procedures are re-designed to ensure unrestricted access. This must be done prior to activating R-6401 and without limiting the scope and availability of Wendover Airport Instrument Procedures and Departure Procedures.

Consequently, without specific guarantees that this newly proposed Restricted Area will not impede our current daily operation, Swift Air does not support establishing Restricted Area (R-6401) for the following reasons.

1. Peppermill's Charter Program is essential for the local community. Our daily operations typically consist of a departure between 10:00AM and 11:00AM and a subsequent arrival in the afternoon. During peak seasons we operate multiple flights per day. These flights are scheduled 90 days in advance and punctuality is what makes this program commercially unique. Any disruptions in our schedule can and has resulted in:
   a) Possible crew duty issues what can result in flight cancellations. Under 14 CFR 121, we are bound by strict flight and duty limits. Whenever we encounter excessive delays, longer crew duty is impacted where legally we can no longer operate the flight as it no longer can be operating within the legal duty limit.
   b) Each day we serve two destinations. Our morning departure from Wendover drops passengers at our first destination. From there, we ferry to a second destination where we pickup our inbound passengers destined for Wendover. This program requires a lot of advanced coordination. ATC and airport slots and landing rights, coordinating ground handlers, fuelers and TSA screening are prearranged 30-60 days in advance. Many of our

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Greensboro, NC 27409

destinations are secondary airports where resources are sparse, or where resources are shared among other airlines. Whenever we face delays, the cascading effect can and has caused conflicts where resources are no longer available, when arriving outside the prearranged hours.

c) Any airborne delays, and the cost of longer flight times, could not be absorbed by either Swift Air or Peppermill Casinos and could put our commercial flight program and economic welfare of the community in jeopardy.

d) In Clause 2.6 which is the Description of the Proposed Action of the Environmental Assessment for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft it states the "expected" use is 32 days per year, 6 hours per day. However, there is no guarantee that military operations will be limited to the specified expectation. In fact, this will likely change over time and could increase dramatically. Any use, and especially additional use over the expected usage, would create additional hold times for arriving and departing flights.

The Salt Lake City ARTCC made recommendations regarding the proposed R-6401 in a memorandum dated March 13, 2019. In those recommendations the Salt Lake City ARTCC stated "Salt Lake Center still highly recommends all Instrument Procedures and Departure Procedures be re-evaluated…" according to "United States Standard for Terminal Instrument Procedures (TERPS) to ensure all procedures remain clear of and aircraft are capable of staying clear of restricted airspace. If for any reason any of the conditions are not met our original response stands.".

If the condition is met to re-design the published procedures to provide unrestricted access, Swift Air supports the boundaries of the proposed R-6401, provided the Salt Lake City ARTCC's additional recommendations contained in the March 13, 2019 memorandum are also met. Specifically:

1. Salt Lake Center will delegate airspace encompassing ENV, specifically areas X-Ray and Skull Valley, 13,000 and below to Clover.
2. A Letter of Agreement is developed to delegate this airspace to Clover.
3. Clover will work all Wendover IFR arrivals, departures and overflights, VFR traffic, all traffic in area X-Ray, Skull Valley, and R-6401 when open.
4. Clover must be open during all times R-6401 is active.
5. Clover must submit regular working hours and may add to but not subtract from those hours.
6. NOTAM's must be issued for all times R-6401 is in use.
7. Any and all changes to publications are accomplished reflecting the change.

In conclusion, access for flights operating to and from the Wendover Airport cannot be hampered by the boundaries of proposed R-6401 because it would cause financial hardship to Swift Air, Peppermill Casinos, Inc. and the community. Therefore, if unrestricted access cannot be guaranteed, the boundaries of proposed R-6401 should be limited to the current northern edge of R-6406A airspace.

Sincerely,

Boris van Lier

Boris van Lier
Chief Operating Officer
Swift Air, LLC

CC: Steve Kasteler
Jeff Conry

Appendix C

Public Involvement: Scoping Letter, Map, and Responses

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UTAH TEST AND TRAINING RANGE (ACC)
HILL AIR FORCE BASE UTAH

9 July 2020

Michael Shane
UTTR/RSE
6066 Cedar Lane, Bldg. 1274
Hill AFB, UT 84056-5003

Field Supervisor
United States Fish and Wildlife Service
Utah Ecological Services Field Office
2369 West Orton Circle, Suite 50
West Valley City UT 84119

SUBJECT: Scoping Letter for the Preparation of an Environmental Assessment for Sub-Scale Aerial Target Launch, Control, and Recovery at the Utah Test and Training Range

Dear Field Supervisor,

The U.S. Air Force (USAF) is beginning the process to prepare an Environmental Assessment (EA) for the Sub-Scale Aerial Target (SSAT) Launch, Control, and Recovery at the Utah Test and Training Range (UTTR). In 2019, the USAF, in cooperation with the Federal Aviation Administration (FAA), published a Draft EA for the creation of Restricted Area (RA) R-6401 and the launch, control, and recovery of SSATs from the Wendover Site at Wendover, Utah.

During the 30-day Draft EA public comment period, the FAA determined that, due to the evolution and normalization of Unmanned Aircraft (UA) in the national airspace, the creation of new RA is not required for the launch, control, and recovery of SSATs. The FAA indicated that these activities would be possible under a Certificate of Authorization (COA). As a result, the USAF is preparing a separate EA that does not include the creation of RA.

A Memorandum of Agreement (MOA) between the FAA Salt Lake City Air Route Traffic Control Center (ZLC) and UTTR Clover Control allows Clover Control to maintain control of the airspace around Wendover. Clover Control would control all SSAT launch and recovery operations at the Wendover Site and would provide real time deconfliction with all flights into and out of Wendover Airport. In addition, visual observers would be present between launch and entry of the SSATs into the existing RA. To allow for uninterrupted operations at Wendover Airport, all civilian flights into and out of Wendover Airport would receive priority over all SSAT operations. Clover Control would hold all SSAT launches from the Wendover Site during all aircraft departures and landings at Wendover Airport.

The proposed action for this EA includes construction activities at the Wendover Site and the launch, control, and recovery of SSATs from this site (see attached figure). SSAT launches and recoveries would occur during twenty-four (24) 1-week periods per year, Monday through Thursday, 6 hours per day. SSAT sorties (i.e., launches and recoveries) would be conducted during approximately 96 days per year, with up to 12 sorties conducted per day. No SSAT launches would occur after 10:00 P.M.

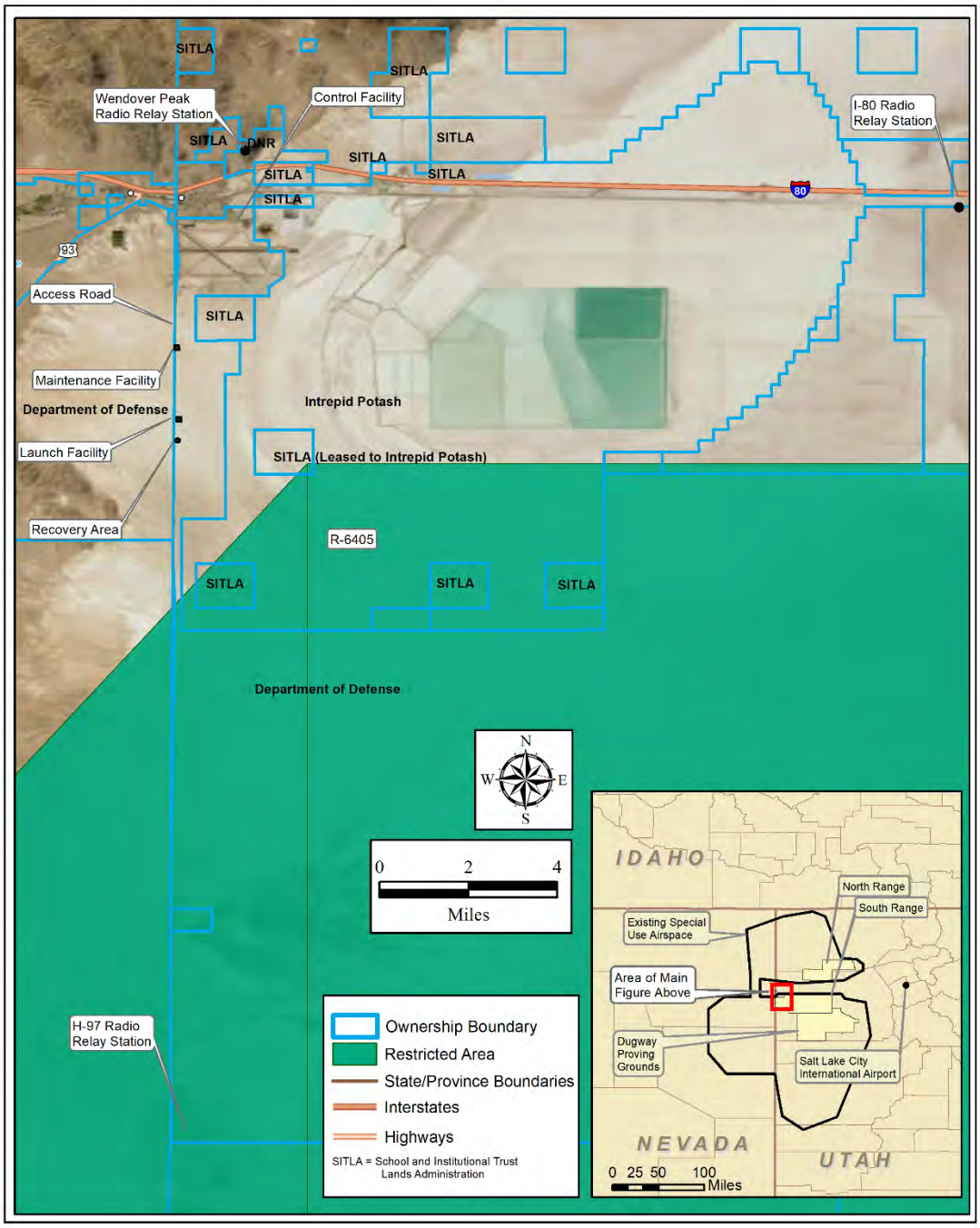
The EA will be prepared in compliance with the Air Force Environmental Impact Assessment Process Regulations at 32 *CFR* 989, and Air Force Instruction (AFI) 32-7061. The EA will describe the potential consequences that could result from the minor construction and the launch, control, and recovery of SSATs from the Wendover Site.

During the next few months we will be collecting and compiling information for preparation of the Draft EA. In order to enhance the EA process, the USAF is requesting scoping comments from individuals, agencies, Native American tribes, and organizations that might be interested in the proposed action. Comments provided to the USAF during this scoping period will be considered during preparation of the Draft EA. The Draft EA will be published and available on the internet and in local libraries for a 30-day public comment period sometime during the Fall of 2020. The USAF looks forward to your participation in the National Environmental Policy Act (NEPA) process for this action. Please provide written comments by August 8, 2020, to Mr. Michael Shane, UTTR/RSE, 6066 Cedar Lane, Bldg. 1274, Hill Air Force Base, Utah, 84056-5003 or Michael.shane.2@us.af.mil. If you need further information or have any questions, please contact Mr. Shane at 801-586-2551. Thank you for your assistance in this matter.

Sincerely,

Michael Shane

MICHAEL SHANE
HQ Utah Test and Training Range
Environmental Manager



Proposed Action for the EA for Sub-Scale Aerial Target (SSAF) Launch, Control, and Recovery at the UTTR

Mailing List for the Scoping Letter for Sub-Scale Aerial Target, Launch, Control, and Recovery at UTTR

Rune	Duke	Aircraft Owners and Pilots Association
Chris	Merrit	State Historic Preservation Office
Lee Ann	Carranza	United States Fish and Wildlife Service
Field Supervisor		United States Fish and Wildlife Service
Ben	Stireman	State of Utah School and Institutional Trust Lands Administration
Matt	Preston	Bureau of Land Management
Eric	York	Intrepid Potash-Wendover LLC
Mike	Crawford	City of Wendover
Daniel	Corona	City of West Wendover
Shawn	Milne	Tooele County
Harry	Barnes	Blackfeet Tribe
Rupert	Steel	Confederated Tribes of the Goshute Indian Reservation
Alvin	Not Afraid	Crow Tribe of Montana
Rodney	Mike	Duckwater Shoshone Tribe
Clint	Wagon	Eastern Shoshone Tribe
Alvin	Marques	Ely Shoshone Tribe
Timothy	Nuvangyaoma	Hopi Tribe
Russel	Begaye	Navajo Nation
Roy B.	Brown	Northern Arapaho Tribe
Darren	Parry	Northwestern Band of the Shoshone Nation
Tami	Borchardt-Slayton	Paiute Tribe of Utah
Val R.	Panteah, Sr	Pueblo of Zuni
Nathan	Small	Shoshone-Bannock Tribes of the Fort Hall Reservation
Ted	Howard	Shoshone-Paiute Tribes of the Duck Valley Reservation
Ron	Gleason	Individual
Mike	Hendron	Utah Soaring Association
Boris	van Lier	Swift Air
Chris	Melville	West Wendover
Timothy	Taylor	Individual
LtCol	Skenfield	Federal Aviation Administration
James	Peterson	Historic Wendover Airfield
Robert	Dennard	Individual
Luke	Duncan	Ute Indian Tribe
Harold	Cuthair	Ute Mountain Ute Tribe
Ron	Trahan	Conf. Salish & Kootenai Tribes of the Flathead Reservation
Carlene	Yellowhair	San Juan Southern Paiute Tribe
Candace	Bear	Skull Valley Band of Goshute Indians
Lydia	Johnson	Te-Moak Tribe of Western Shoshone
Casey	Franco	Wells Band of Western Shoshone
Kim	Shelley	Utah Department of Environmental Quality
Bill	James	Utah Division of Wildlife Resources
Lisa	Dunn	Wendover Airport

Scoping Letter Responses Received

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GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Jill Remington Love
Executive Director
Department of
Heritage & Arts

Utah Division of
State History

Christopher Merritt
State Historic Preservation Officer

Kevin Fayles
Interim Director

July 9, 2020

Michelle Cottle
Environmental Section Chief
Hill Air Force Base Archaeology
7290 Weiner St, Building 383
Hill AFB, Utah 84056

RE: Notification of EA for Sub-Aerial Target Launch, Control and Recovery

For future correspondence, please reference Case No. 20-2410

Dear Ms. Cottle,

The Utah State Historic Preservation Office received your request for our comment on the notification of an Environmental Assessment (EA) for Sub-Aerial Target Launch, Control, and Recovery on July 8, 2020.

We appreciate the opportunity to provide comments on the preliminary information provided for the above-reference EA. It appears that construction activities and recovery of the SSATs may have the potential to cause effects to archaeological and/or architectural resources. We will await more detailed information on the specific impacts to historic properties these actions may have in order provide a more robust comment on this undertaking and its effects.

We look forward to further consultation with you on this EA and the Section 106 process outlined in §36CFR800.4. If you have questions, please contact me at 801-245-7246 or by email at sagardy@utah.gov.

Sincerely,

Savanna Agardy
Compliance Archaeologist

From: Ginn, Allison L <aginn@blm.gov>
Sent: Thursday, July 16, 2020 5:22 PM
To: SHANE, MICHAEL P CIV USAF ACC UTTR/RSE <michael.shane.2@us.af.mil>
Subject: [Non-DoD Source] Re: Request for Scoping from DoD for an EA for the Sub Scale Aerial

Michael-

The BLM has not identified any preliminary concerns. Thank you for including us in your outreach.

Regards,

Allison Ginn
Acting Field Manager
Salt Lake Field Office
2370 Decker Lake Boulevard
West Valley City, UT 84119
801-977-4355

From: Marks, Todd R <tmarks@blm.gov>
Sent: Monday, July 13, 2020 2:13 PM
To: Ginn, Allison L <aginn@blm.gov>
Subject: RE: Request for Scoping from DoD for an EA for the Sub Scale Aerial

Were you wanting me to engage any specialists on this? I agree with your observation that there is little nexus here, and I am fine with saying no concerns.

I'm sure Intrepid may have some concerns…

FYI, this is what a SSAT is:

-Todd

From: Ginn, Allison L <aginn@blm.gov>
Sent: Thursday, July 9, 2020 2:38 PM
To: Wallin, Geoffrey A <gwallin@blm.gov>; Marks, Todd R <tmarks@blm.gov>; Graham, Stephanie E <segraham@blm.gov>; Davis, Jordan R <jordandavis@blm.gov>; Schuller, Pamela N <pschulle@blm.gov>
Cc: Oliver, Kevin E <koliver@blm.gov>; Duncan, Trent A <tduncan@blm.gov>; Jones, Alan V <avjones@blm.gov>
Subject: Request for Scoping from DoD for an EA for the Sub Scale Aerial

All-

Please see attached request for scoping comments from DoD on a project for sub-scale aerial target launches at the UTTR on DoD lands, primarily for your awareness. There is very little BLM-managed surface or subsurface near the area on the provided map, and my hunch is that we have limited nexus to this project. Here is a snap of GIS with our surface (colors) and subsurface (vertical line) for that area.

If you do have any known concerns about the project, please let me know. If there are no noted concerns, I do not think a formal response will be warranted at this time, but I would like to acknowledge that we reviewed the project.

Regards,

Allison Ginn
Acting Field Manager
Salt Lake Field Office

-----Original Message-----
From: Richard M. Begay <r.begay@navajo-nsn.gov>
Sent: Wednesday, July 8, 2020 3:53 PM
To: KITTERMAN, ANYA D NH-03 USAF AFMC 75 CEG/CEIE <anya.kitterman@us.af.mil>; Michael.shane.2@us.af.mil.
Cc: Daues, Tom V. [US-US] <THOMAS.V.DAUES@leidos.com>; Timothy Begay <tbegay@navajo-nsn.gov>; Olsen John <olsenjohn@navajo-nsn.gov>
Subject: EXTERNAL: RE: Tribal Notification - Preparation of an Environmental Assessment for Sub-Scale Aerial Target Launch, Control, and Recovery at the UTTR

Good afternoon,
I reviewed the letter and map for the proposed Draft EA for the Sub-Scale Aerial Target Launch, Control and Recovery at the Utah Test and Training Range, and have no concerns or questions. Please proceed without further consultation with the Navajo Nation.

Richard M. Begay, THPO
Navajo Nation

-----Original Message-----
From: KITTERMAN, ANYA D NH-03 USAF AFMC 75 CEG/CEIE <anya.kitterman@us.af.mil>
Sent: Wednesday, July 8, 2020 2:45 PM
To: Richard M. Begay <r.begay@navajo-nsn.gov>; Tamara Billie <tbillie@navajo-nsn.gov>; Jonathan Nez <jonathannez@navajo-nsn.gov>; Olsen John <olsenjohn@navajo-nsn.gov>
Cc: Daues, Tom V. <THOMAS.V.DAUES@leidos.com>
Subject: Tribal Notification - Preparation of an Environmental Assessment for Sub-Scale Aerial Target Launch, Control, and Recovery at the UTTR

WARNING: External email. Please verify sender before opening attachments or clicking on links.

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Appendix D

Cultural Resources Correspondence

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UTAH TEST AND TRAINING RANGE (ACC)
HILL AIR FORCE BASE UTAH

07 July 2020

Michelle Cottle
Chief, Environmental Quality Branch
75 CEG/CEIE
7290 Weiner St, Building 383
Hill AFB, UT 84056

Dr. Chris Merritt
Chris Hansen
State Historic Preservation Office
300 Rio Grande
Salt Lake City, Utah 84101

SUBJECT: Notification Letter for the Preparation of an Environmental Assessment for Sub-Scale Aerial Target Launch, Control, and Recovery at the Utah Test and Training Range

Dear Dr. Merritt and Mr. Hansen

The U.S. Air Force (USAF) is beginning the process to prepare an Environmental Assessment (EA) for the Sub-Scale Aerial Target (SSAT) Launch, Control, and Recovery at the Utah Test and Training Range (UTTR). In 2019, the USAF, in cooperation with the Federal Aviation Administration (FAA), published a Draft EA for the creation of Restricted Area (RA) R-6401 and the launch, control, and recovery of SSATs from the Wendover Site at Wendover, Utah.

During the 30-day Draft EA public comment period, the FAA determined that, due to the evolution and normalization of Unmanned Aircraft (UA) in the national airspace, the creation of new RA is not required for the launch, control, and recovery of SSATs. The FAA indicated that these activities would be possible under a Certificate of Authorization (COA). As a result, the USAF is preparing a separate EA that does not include the creation of RA.

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The proposed action for this EA includes construction activities at the Wendover Site and the launch, control, and recovery of SSATs from this site (see attached figure). SSAT launches and

recoveries would occur during twenty-four (24) 1-week periods per year, Monday through Thursday, 6 hours per day. SSAT sorties (i.e., launches and recoveries) would be conducted during approximately 96 days per year, with up to 12 sorties conducted per day. No SSAT launches would occur after 10:00 P.M.

The EA will be prepared in compliance with the Air Force Environmental Impact Assessment Process Regulations at 32 *CFR* 989, and Air Force Instruction (AFI) 32-7061. The EA will describe the potential consequences that could result from the minor construction and the launch, control, and recovery of SSATs from the Wendover Site.

During the next few months we will be collecting and compiling information for preparation of the Draft EA. In order to enhance the EA process, the USAF is requesting consultation and comments from the State Historic Preservation Office and all consulting tribes that might be interested in the proposed action. Comments provided to the USAF during this period will be considered during preparation of the Draft EA. The Draft EA will be published and available on the internet and in local libraries for a 30-day public comment period sometime during the Fall of 2020. The USAF looks forward to your participation in the National Environmental Policy Act (NEPA) process for this action. Please provide written comments by August 8, 2020, to Mr. Michael Shane, UTTR/RSE, 6066 Cedar Lane, Bldg. 1274, Hill Air Force Base, Utah, 84056-5003 or Michael.shane.2@us.af.mil. If you need further information or have any questions, please contact Mr. Shane at 801-586-2551 or Ms. Anya Kitterman at 801-586-2464. Thank you for your assistance in this matter.

Sincerely

Michelle Cottle
Chief, Environmental Branch
75th Civil Engineer Group

DISTRIBUTION LIST

Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
Duckwater Shoshone Tribe
Eastern Shoshone Tribe
Ely Shoshone Tribe
Hopi Tribe
Navajo Nation
Northern Arapaho Tribe
Northwestern Band of Shoshone Nation
Paiute Indian Tribe of Utah
Pueblo of Zuni
San Juan Southern Paiute Tribe

Shoshone-Bannock Tribes of the Fort Hall Reservation
Shoshone-Paiute Tribes of the Duck Valley Reservation
Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone
Utah State Historic Preservation Office

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Jill Remington Love
Executive Director
Department of
Heritage & Arts

Utah Division of
State History

Christopher Merritt
State Historic Preservation Officer

Kevin Fayles
Interim Director

July 9, 2020

Michelle Cottle
Environmental Section Chief
Hill Air Force Base Archaeology
7290 Weiner St, Building 383
Hill AFB, Utah 84056

RE: Notification of EA for Sub-Aerial Target Launch, Control and Recovery

For future correspondence, please reference Case No. 20-2410

Dear Ms. Cottle,

The Utah State Historic Preservation Office received your request for our comment on the notification of an Environmental Assessment (EA) for Sub-Aerial Target Launch, Control, and Recovery on July 8, 2020.

We appreciate the opportunity to provide comments on the preliminary information provided for the above-reference EA. It appears that construction activities and recovery of the SSATs may have the potential to cause effects to archaeological and/or architectural resources. We will await more detailed information on the specific impacts to historic properties these actions may have in order provide a more robust comment on this undertaking and its effects.

We look forward to further consultation with you on this EA and the Section 106 process outlined in §36CFR800.4. If you have questions, please contact me at 801-245-7246 or by email at sagardy@utah.gov.

Sincerely,

Savanna Agardy
Compliance Archaeologist

DEPARTMENT OF THE AIR FORCE
75th CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

20 August 2018

MEMORANDUM FOR DR. CHRIS MERRITT, PH.D,
DEPUTY STATE HISTORIC PRESERVATION OFFICER
300 RIO GRANDE
SALT LAKE CITY UTAH 84101

FROM: Ms. Michelle Cottle
Chief, Environmental Quality Branch
75 CEG/CEIE
7290 Weiner St., Bldg. 383
Hill Air Force Base Utah 84056-5003

SUBJECT: Environmental Assessment for Establishing Restricted Area (R-6401) and Operation of Unmanned Aircraft at Wendover, Utah (Case Nos. 14-1492, 15-1065, 14-1656)

1. The U.S. Air Force is preparing an Environmental Assessment (EA) for establishing restricted area (R-6401) and operation of unmanned aircraft at Wendover, Utah in compliance with the NEPA (42 *United States Code [USC]* 4331 et seq.), the regulations of the President's Council on Environmental Quality (CEQ) that implement NEPA procedures (40 *Code of Federal Regulations [CFR]* 1500-1508), the Air Force Environmental Impact Assessment Process Regulations at 32 *CFR* 989, and Air Force Instruction (AFI) 32-7061. This EA will evaluate the effects of the proposed action near Wendover, Utah.

2. The USAF is providing information for your review and concurrence in accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 Code of Federal Regulations (CFR) §800. A Draft Description of Proposed Action and Alternatives (DOPAA), which has been prepared to support the EA is provided as Attachment 1. This information is provided to satisfy requirements listed under 36 CFR §800.11(d)(3)(e). The USAF requests concurrence with the APE as shown on the attached figure (Attachment 2) and with a finding of no adverse impacts to historic properties.

3. This action is a continuation of the WSEP Fiberline project (Case No. 14-1492 and Case No. 15-1065) and the drone launch facility (Case No. 14-1656). After the initial consultation on the above referenced cases, the USAF has determined that an EA is required for this project.

4. Previously completed studies identified two cultural resources (JB-2 Launch Site and the Deep Creek Railroad) within the APE of the project. All work conducted on the historic Deep Creek Railroad has previously been consulted on with your office concluding in a determination of No Adverse Effect. Additional minor construction for launch support facilities would occur on existing gravel pads that were previously evaluated for impacts to cultural resources (Case No. 14-1656). Therefore, implementation of the proposed construction activities would have no adverse effects on the Deep Creek Railroad.

After initial consultation, it was found that additional work would be required on a bunker which is a part of the Wendover Airfield (42TO855). Refurbishing of the historic WWII-era munitions bunker (Building 51) would be required as part of the Proposed Action. The door of the bunker requires improvements to restore its original purpose for secure storage of munitions. The refurbishment would maintain the historical look of the door by using in-kind paint colors and replacing broken pieces of the doors locking system. Improvements to the door are in keeping with the original mission of the facility and of Wendover Airfield. A fence currently exists but does not meet current safety standards for munitions

storage so would be extended to a wider boundary. Additionally, a concrete pad would be installed in front of the bunker. These are both located within previously disturbed areas and would not impact the historic character of the building or airfield. USAF has determined that the refurbishment of the munitions door and other construction will have no adverse effects on the bunker or airfield.

5. The USAF is continuing the process of consulting with Federally-Recognized American Indian Tribes concerning this undertaking. (Attachment 3). It is considered unlikely that traditional resources will be identified within the APE; however, should traditional resources be identified within the APE, an amended consultation letter will be sent to your office.

6. Based on the evidence and data provided above, the USAF determines that the present undertaking will have no adverse affect on any historic properties that are eligible or potentially eligible for listing on the NRHP and we respectfully seek your concurrence with our determination of "no adverse affect to historic properties". The USAF will continue to consult on any changes to the project and the EA as it progresses forward.

7. Please review the enclosed material and provide your comments to Ms. Anya Kitterman, 75 CEG/CEIE, 7290 Weiner St., Building 383, Hill Air Force Base, Utah, 84056-5003, (801) 586-2464, anya.kitterman@us.af.mil. Thank you for your assistance in this matter.

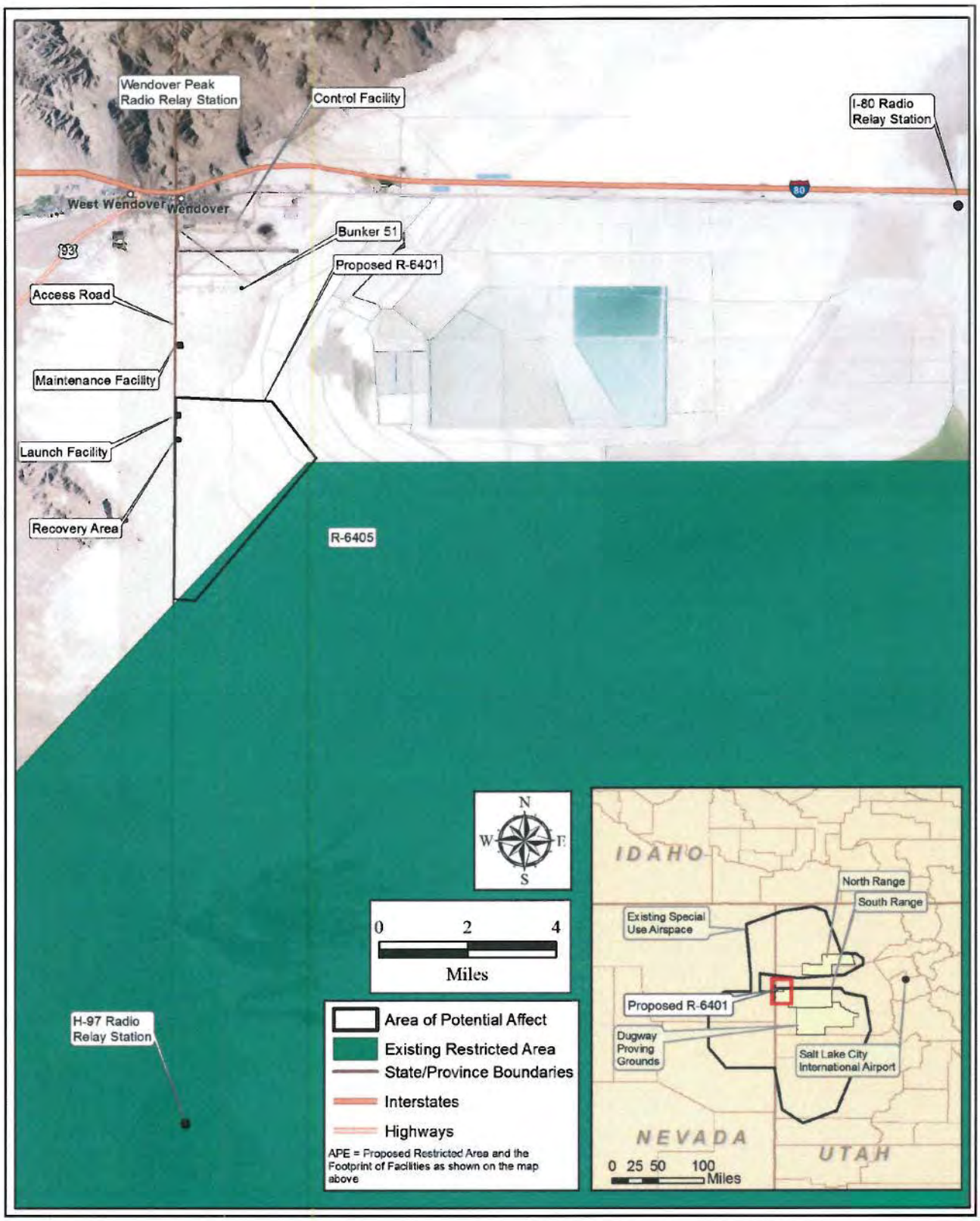
Sincerely,

MICHELLE COTTLE
Chief, Environmental Branch
75th Civil Engineer Group

3 Attachments:
Attachment 1. Description of the Proposed Action and Alternatives (DOPAA)
Attachment 2. Area of Potential Effect
Attachment 3. List of Federally-Recognized American Indian Tribes

ATTACHMENT 1. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

ATTACHMENT 2. AREA OF POTENTIAL AFFECT



Area of Potential Affect

ATTACHMENT 3. LIST OF FEDERALLY-RECOGNIZED AMERICAN INDIAN TRIBES CONTACTED CONCERNING THIS UNDERTAKING

LIST OF FEDERALLY-RECOGNIZED AMERICAN INDIAN TRIBES CONTACTED CONCERNING THIS UNDERTAKING

- Northern Arapaho Tribe
- Blackfeet Tribe
- Confederated Tribes of the Goshute Indian Reservation
- Confederated Salish & Kootenai Tribes of the Flathead Reservation (Deferred to local tribes)
- Crow Tribe
- Duckwater Shoshone Tribe
- Eastern Shoshone Tribe
- Ely Shoshone Tribe
- Hopi Tribe
- Navajo Nation
- Northwestern Band of Shoshone
- Paiute Indian Tribe of Utah
- Pueblo of Zuni
- San Juan Southern Paiute Tribe
- Shoshone-Bannock Tribes of the Fort Hall Reservation
- Shoshone-Paiute Tribes of the Duck Valley Reservation
- Skull Valley Band of Goshute
- Te-Moak Tribe of Western Shoshone
- Ute Indian Tribe
- Ute Mountain Ute
- Wells Band of Western Shoshone

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Jill Remington Love
Executive Director
Department of
Heritage & Arts

Utah Division of
State History

Don Hartley
Director
State Historic Preservation Officer

August 24, 2018

Anya Kitterman
Hill Air Force Base Archaeology
Hill AFB, Utah

RE: Wendover Operating Space EA Notification

For future correspondence, please reference Case No. 18-1894

Dear Ms. Kitterman:

The Utah State Historic Preservation Office received your request for our comment on the above-referenced undertaking on August 21, 2018.

Based on the information provided to our office, we concur with your determinations of eligibility and finding of no adverse effect for this undertaking.

This letter serves as our comment on the determinations you have made within the consultation process specified in §36CFR800.4. If you have questions, please contact me at (801) 245-7239 or by email at clhansen@utah.gov.

Sincerely,

Christopher Hansen
Preservation Planner/Utah SHPO

TRIBAL MAILING LIST FOR ENVIRONMENTAL ASSESSMENT FOR ESTABLISHING RESTRICTED AREA (R-6401) AND OPERATION OF UNMANNED AIRCRAFT, WENDOVER, UTAH

Mr. Harry Barnes
Chairman, Blackfeet Tribe
PO Box 850
Browning, MT 59417

Cc: John Murray, Tribal Historic Preservation Officer, Blackfeet Tribe

Mr. Rupert Steele
Chairman, Confederated Tribes of the Goshute Indian Reservation
HC 61
PO Box 6104
Ibapah, UT 84034

Cc: Zelda Johnny, Cultural Resources Representative, CTGR *(requested e-mail of all correspondence - zelda.johnny@ctgr.us)*

Cc: Phyllis Naranjo, Secretary, CTGR (*requested e-mail of all correspondence -* Phyllis.naranjo@ctgr.us)

Mr. Alvin Not Afraid
Chairman, Crow Tribe of Montana
PO Box 159
Crow Agency, MT 59022

Cc: William Big Day, Tribal Historic Preservation Officer, Crow Tribe of Montana

Ms. Rodney Mike
Chair, Duckwater Shoshone Tribe
PO Box 140068
Duckwater, NV 89314

Cc: Warren Graham, Cultural Resources Manager, Duckwater Shoshone Tribe

Mr. Clint Wagon
Chairman, Eastern Shoshone Tribe
PO Box 538
Fort Washakie, WY 82514

Cc: Wilford Ferris III, Tribal Historic Preservation Officer, Eastern Shoshone Tribe

Mr. Alvin S. Marques
Chairman, Ely Shoshone Tribe
16 Shoshone Circle
Ely, NV 89301

Cc: Cindy Marques, Cultural Resources, Ely Shoshone Tribe

Mr. Timothy Nuvangyaoma
Chairman, Hopi Tribe
PO Box 123
Kykotsmovi, AZ 86039

Cc: Mr. Leigh Kuwanisiwma, Director of Cultural Preservation, Hopi Tribe

Mr. Russell Begaye
President, Navajo Nation
PO Box 9000
Hwy 264, Tribal Hills Dr.
Window Rock, AZ 86515-9000

Cc: Tamara Billie, Acting Tribal Historic Preservation Officer, Navajo Nation

Mr. Roy B. Brown
Chairman, Northern Arapaho Tribe
PO Box 396
Fort Washakie, WY 82514

Cc: Devin Oldman, Tribal Historic Preservation Officer, Northern Arapaho Tribe

Mr. Darren Parry
Chairman, Northwestern Band of the Shoshone Nation
707 North Main Street
Brigham City, UT 84302

Cc: Patty Timbimboo-Madsen, Cultural and Natural Resources Manager, Northwestern Band of the Shoshone Nation

Ms. Tami Borchardt-Slayton
Chairwoman, Paiute Tribe of Utah
440 North Paiute Drive
Cedar City, UT 84721

Cc: Dorena Martineau, Cultural Resources Director, Paiute Indian Tribe of Utah

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

Cc: Kurt Dongoske, Tribal Historic Preservation Officer, Pueblo of Zuni

Mr. Nathan Small
Chairman, Shoshone-Bannock Tribes of the Fort Hall Reservation
PO Box 306
Fort Hall, ID 83203

Cc: Carolyn Smith, Cultural Resources Coordinator, Shoshone-Bannock Tribes of the Fort Hall Reservation

Mr. Ted Howard
Chairman, Shoshone-Paiute Tribes of the Duck Valley Reservation
PO Box 219
Owyhee, NV 89832

Mr. Luke Duncan
Chairman, Ute Indian Tribe
PO Box 190
Fort Duchesne, UT 84026

Cc: Betsy Chapoose, Cultural Rights and Protection, Ute Indian Tribe

Mr. Harold Cuthair
Chairman, Ute Mountain Ute Tribe
PO Box 248
Towaoc, CO 81334-0248

Cc: Terry Knight, Tribal Historic Preservation Officer, Ute Mountain Ute Tribe
Cc: Nichol Shurack, Cultural Resources Director, Ute Mountain Ute Tribe

Mr. Ron Trahan
Chairman, Conf. Salish & Kootenai Tribes of the Flathead Reservation
PO Box 278
Pablo, MT 59855

Cc: Kyle Felsman, Tribal Historic Preservation Officer, Salish & Kootenai Tribes

NO THPOs

Ms. Carlene Yellowhair
President, San Juan Southern Paiute Tribe
PO Box 1989
Tuba City, AZ 86045

Ms. Candace Bear *(requested e-mail of all correspondence - candaceb@svgoshutes.com) -* ***don't send certified mail, send as regular mail***

Chairwoman, Skull Valley Band of Goshute Indians
407 Skull Valley Rd.
Skull Valley, UT 84029

Ms. Lydia Johnson
Chairwoman, Te-Moak Tribe of Western Shoshone
525 Sunset Street
Elko, NV 89801

Mr. Casey Franco
Chairman, Wells Band of Western Shoshone
PO Box 809
Wells, NV 89835

Cc: Steven Brady, Vice-Chair, Wells Band of Western Shoshone
Cc: Heather Martinez, Tribal Administrator, Wells Band of Western Shoshone

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

24 August 2018

Allen Fry
Chief, Installation Management Division
75 CEG/CEI
5713 Lahm Lane, Bldg 593N
Hill AFB, UT 84056-5137

ROY BROWN, CHAIRMAN
ARAPAHO BUSINESS COUNCIL
PO BOX 396
FORT WASHAKIE WY 82514

Dear Chairman Brown,

The U.S. Air Force is preparing an Environmental Assessment (EA) for establishing a restricted area (R-6401) and operation of unmanned aircraft at Wendover, Utah in compliance with the NEPA (42 *United States Code [USC]* 4331 et seq.), the regulations of the President's Council on Environmental Quality (CEQ) that implement NEPA procedures (40 *Code of Federal Regulations [CFR]* 1500-1508), the Air Force Environmental Impact Assessment Process Regulations at 32 *CFR* 989, and Air Force Instruction (AFI) 32-7061. This EA will evaluate the effects of the proposed action near Wendover, Utah.

The USAF is providing information for your review and concurrence in accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 Code of Federal Regulations (CFR) §800 specific to cultural resource impacts. A Draft Description of Proposed Action and Alternatives (DOPAA), which has been prepared to support the EA is provided as Attachment 1. This information is provided to satisfy requirements listed under 36 CFR §800.11(d)(3)(e). The USAF requests concurrence with the APE as shown on the attached figure (Attachment 2) and with a finding of no adverse impacts to historic properties.

This action is a continuation of the WSEP Fiberline project and the drone launch facility which have undergone previous consultation. After the initial consultation on the above referenced cases, the USAF has determined that an EA is required for this project.

The proposed area of work for this project has been previously inventoried according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The inventories were completed in 1995 (U-95-WC-558m) and 2012 (U-12-UI-0371M). Three known eligible archaeological sites are within close proximity to the proposed Area of Potential Effect (APE). These include the Wendover Airfield (42TO855), the Deep Creek Railroad (42TO708), and the former JB-2 Test Launch Facility (42TO2749). Impacts to the Deep Creek and JB-2 sites were previously consulted on with the SHPO and tribes. No Adverse Effects to the Wendover Airfield site are anticipated and Hill AFB is consulting with the SHPO on that site. Should you or your staff wish to review prior consultations, please contact the Hill AFB Cultural Resources Manager.

The potential for additional archaeological historic properties is low; however if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in

accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 3). The USAF will continue to consult on any changes to the project and the EA as it progresses forward.

In consideration of these facts, we request your concurrence with the determination of "no adverse effect" to cultural resources as specified in accordance 36 CFR §800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, 75 CEG/CEIE, 7290 Weiner St., Building 383, Hill Air Force Base, Utah, 84056-5003, (801) 586-2464, anya.kitterman@us.af.mil.

Sincerely,

Allen W. Fry
Chief, Installation Management Division
Installation Tribal Liaison Officer

3 Attachments:
Attachment 1. Description of the Proposed Action and Alternatives (DOPAA)
Attachment 2. Area of Potential Effect
Attachment 3. Hill AFB Unanticipated Discovery of Archaeological Deposits

Cc: Devin Oldman, Tribal Historic Preservation Officer, Northern Arapaho Tribe

DISTRIBUTION LIST
Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
Duckwater Shoshone Tribe
Eastern Shoshone Tribe
Ely Shoshone Tribe
Hopi Tribe
Navajo Nation
Northern Arapaho Tribe
Northwestern Band of Shoshone Nation
Paiute Indian Tribe of Utah
Pueblo of Zuni
San Juan Southern Paiute Tribe
Shoshone-Bannock Tribes of the Fort Hall Reservation
Shoshone-Paiute Tribes of the Duck Valley Reservation
Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone
Utah State Historic Preservation Office

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

24 August 2018

Allen Fry
Chief, Installation Management Division
75 CEG/CEI
5713 Lahm Lane, Bldg 593N
Hill AFB, UT 84056-5137

TIMOTHY NUVANGYAOMA, CHAIRMAN
HOPI TRIBAL COUNCIL
PO BOX 9000
KYKOTSMOVI AZ 86039

Dear Chairman Nuvangyaoma,

The U.S. Air Force is preparing an Environmental Assessment (EA) for establishing a restricted area (R-6401) and operation of unmanned aircraft at Wendover, Utah in compliance with the NEPA (42 *United States Code [USC]* 4331 et seq.), the regulations of the President's Council on Environmental Quality (CEQ) that implement NEPA procedures (40 *Code of Federal Regulations [CFR]* 1500-1508), the Air Force Environmental Impact Assessment Process Regulations at 32 *CFR* 989, and Air Force Instruction (AFI) 32-7061. This EA will evaluate the effects of the proposed action near Wendover, Utah.

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This action is a continuation of the WSEP Fiberline project and the drone launch facility which have undergone previous consultation. After the initial consultation on the above referenced cases, the USAF has determined that an EA is required for this project.

The proposed area of work for this project has been previously inventoried according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The inventories were completed in 1995 (U-95-WC-558m) and 2012 (U-12-UI-0371M). Three known eligible archaeological sites are within close proximity to the proposed Area of Potential Effect (APE). These include the Wendover Airfield (42TO855), the Deep Creek Railroad (42TO708), and the former JB-2 Test Launch Facility (42TO2749). Impacts to the Deep Creek and JB-2 sites were previously consulted on with the SHPO and tribes. No Adverse Effects to the Wendover Airfield site are anticipated and Hill AFB is consulting with the SHPO on that site. Should you or your staff wish to review prior consultations, please contact the Hill AFB Cultural Resources Manager.

The potential for additional archaeological historic properties is low; however if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in

accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 3). The USAF will continue to consult on any changes to the project and the EA as it progresses forward.

In consideration of these facts, we request your concurrence with the determination of "no adverse effect" to cultural resources as specified in accordance 36 CFR §800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, 75 CEG/CEIE, 7290 Weiner St., Building 383, Hill Air Force Base, Utah, 84056-5003, (801) 586-2464, anya.kitterman@us.af.mil.

Sincerely,

8-29-19

Concur
[signature]
for
Kayiyumptewa

Allen W. Fry
Chief, Installation Management Division
Installation Tribal Liaison Officer

3 Attachments:
Attachment 1. Description of the Proposed Action and Alternatives (DOPAA)
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Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone
Utah State Historic Preservation Office

From: Christopher Merritt <cmerritt@utah.gov>
Sent: Tuesday, October 28, 2014 6:05 PM
To: KITTERMAN, ANYA D GS-12 USAF AFMC 75 CEG/CEIE
Subject: Re: Site Visit for WSEP Launch Pad Project

Follow Up Flag: Follow up
Flag Status: Flagged

HI Anya,
That looks like a solid run down of what we discussed. I might add to #1, that use of similar gravel to what is currently located on the grade is preferred. (I can't see anyone getting red gravels or something, but I thought I should mention that).

Is this a new case then? At the end of the day yesterday I think I erroneously asked you to include the case #, but I was thinking of the Ore Processing consultation. If we need a case number we'll get one checked out.

Thanks for the summary, and the field trip!

On Tue, Oct 28, 2014 at 1:24 PM, KITTERMAN, ANYA D GS-12 USAF AFMC 75 CEG/CEIE <anya.kitterman@us.af.mil> wrote:

Hello,

Here is the follow up email as promised for our site visit yesterday. We are currently looking at a no adverse effect utilizing the criteria below. I will be forwarding a formal letter in the future with details and final plans as well. We realize your response does not constitute formal concurrence but rather advice on how to proceed forward.

1. Road bed
- As long as the road bed is maintained at its current width, repairs and regarding as needed will constitute a no adverse effect.

2. Pad/Maintenance development
-Hill will provide a non-permanent base for the entrance/road to the pad where it meets with the historic Deep Creek Railroad. There will be no alteration to the grading as it stands and everything added will be able to be removed so the grading can be returned to its current condition should the facility be decommissioned.

3. Culverts
-The culverts can be upgraded under the condition that the exterior remains visually the same, reusing historic materials as much as possible.
-An archaeologist/architectural historian will be on site during the construction of C-29 and if necessary, C-31, in order to record the original construction as the work is being undertaken.
-No modern construction will be visible.
-Rocks supports to the base of the culvert will be retained in order to maintain historic design and materials.
-The historic elements/materials do not need to be load bearing, more visual.
-C-31, preference to maintain historic central beam
-If possible, surplus historic material (i.e. beams) should be stored for future maintenance.

I think that is everything, but if there is something I missed, needs clarification or you have a question about, please let me know. Thanks again for coming out and visiting!

Anya Kitterman
Archaeologist/Cultural Resource Manager
75th CEG/CEIE
Hill Air Force Base
7290 Weiner St.
Bldg 383
Hill AFB, UT 84056-5003
(801) 586-2464
anya.kitterman@us.af.mil

--
****
Christopher W. Merritt, Ph.D., RPA
Senior Preservation Specialist
Utah State History
Phone: (801) 245-7263
Email: cmerritt@utah.gov

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Julie Fisher
Executive Director
Department of
Heritage & Arts

Utah Division of
State History

Brad Westwood
Director

November 24, 2014

Joseph A. Martone, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base, Utah 84056-5137

RE: Drone Facility at the UTTR

For future correspondence, please reference Case No. 14-1656

Dear Dr. Martone:

The Utah State Historic Preservation Office received your request for our comment on the above-referenced undertaking on November 21, 2014.

We concur with your determination of effect for this undertaking.

This letter serves as our comment on the determinations you have made, within the consultation process specified in §36CFR800.4. If you have questions, please contact me at 801-245-7263 or Lori Hunsaker at 801-245-7241 *lhunsaker@utah.gov*.

Sincerely,

Chris Merritt, Ph.D.
Deputy State Historic Preservation Officer
Archaeology
cmerritt@utah.gov

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

13 April 2015

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Mr. Chris Merritt, Ph.D.
Deputy State Historic Preservation Officer
300 Rio Grande
Salt Lake City Utah 84101

Dear Mr. Merritt,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) previously contacted you concerning plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). Please see Case No. 14-1656. As previously stated, On October 27th, 2014, Chris Merritt from the SHPO visited in order to discuss options to minimize impacts. The following approaches were discussed:

- The road bed will be maintained at its current width but will be repaired and re-graded as needed. This will be done with gravel and materials similar to what are already in place.
- The two access routes for the proposed pads will utilize a non-permanent geotextile base where the proposed work encounters the slope and former railroad grade. There will be no alteration to the current grade in order that the grade could return to its original condition should the site be disbanded in the future.
- The culvert C-29, C-30, and C-31 will be upgraded with the condition that the exterior view remains the same and utilizes historic materials as much as feasible. A qualified archaeologist or architectural historian will be on site during the deconstruction of C-29, and if modifications are necessary, C-31 (Attachment 3, Details on Culverts to be Upgraded). This will allow for the original design to be recorded during any deconstruction. No modern construction will be visible. C-31 will contain a central interior beam in order to maintain the design. The rocks to the base of the culvert will be retained, though neither the historic beams nor rocks will need to be load bearing.
- If possible, historic materials will be stored for future maintenance of the culverts.

In a letter dated 24 November 2014, SHPO concurred that as long as these stipulations were adhered to the project would have no adverse effect to cultural resources.

Due to further investigation of the site, it has been found that erosion controls on the sides of the culverts would be necessary in order to fully maintain the road and culverts. Hill AFB proposes to create rip-rap walls to each side of the culvert which maintain its current angle and slope. This rip-rap would then be fully covered with native soil and vegetation in order to preserve the historic visual of the culverts. The site would be annually monitored in order to assure the site maintains its historical look and feel. Due to this approach, we uphold that there will be no adverse effect to historic resources.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan.

Archaeological surveys, including Utah State Historic Site Forms have been completed for this area and are on file in your office.

In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

Joseph A. Martone

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Julie Fisher
Executive Director
Department of
Heritage & Arts

Utah Division of
State History

Brad Westwood
Director

April 15, 2015

Ms. Anya Kitterman, Archaeologist
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base, Utah 84056-5137

RE: UTTR New Drone Launch Facility

For future correspondence, please reference Case No. 14-01656

Dear Ms. Kitterman:

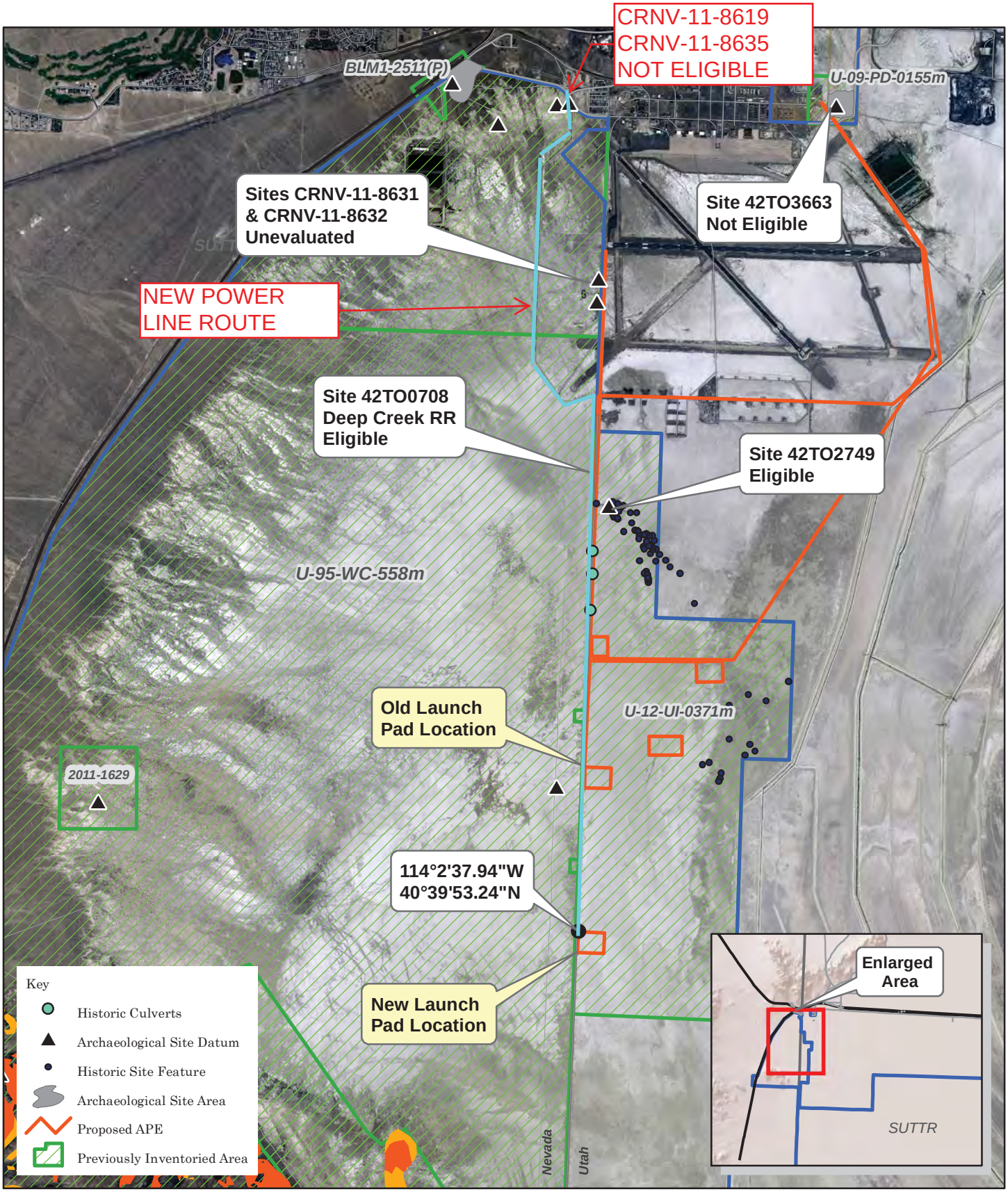
The Utah State Historic Preservation Office received your request for our comment on the above-referenced undertaking on April 14, 2015.

We concur with your determination of effect for this undertaking.

This letter serves as our comment on the determinations you have made, within the consultation process specified in §36CFR800.4. If you have questions, please contact me at 801-245-7263 or Lori Hunsaker at 801-245-7241 *lhunsaker@utah.gov*.

Sincerely,

Chris Merritt, Ph.D.
Deputy State Historic Preservation Officer
Archaeology
cmerritt@utah.gov



CRM Previously Inventoried Areas &
Site Locations
Proposed WSEP Launch Pad
Wendover Parcel - SUTTR

N

1: 46,000

0 0.5 1 2 Miles

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Julie Fisher
Executive Director
Department of
Heritage & Arts

Utah Division of
State History

Brad Westwood
Director

July 1, 2015

Ms. Anya Kitterman
Cultural Resource Program Manager
75 CEG/CEIE
7290 Weiner St., Bldg. 383
Hill Air Force Base, Utah 84056-5003

RE: Commercial Power to the New WSEP Launch Site at Hill Air Force Base

For future correspondence, please reference Case No. 14-1492

Dear Ms. Kitterman:

The Utah State Historic Preservation Office received your request for our comment on the above-referenced undertaking on June 30, 2015.

We concur with your determinations of eligibility and effect for this undertaking.

This letter serves as our comment on the determinations you have made, within the consultation process specified in §36CFR800.4. If you have questions, please contact me at 801-245-7263.

Sincerely,

Chris Merritt, Ph.D.
Deputy State Historic Preservation Officer
Archaeology
cmerritt@utah.gov

From: Christopher Merritt
To: KITTERMAN, ANYA D GS-12 USAF AFMC 75 CEG/CEIE
Subject: Re: Wendover Launch Pad Follow Up
Date: Tuesday, November 10, 2015 4:53:41 PM

Looks great!

On Tue, Nov 10, 2015 at 3:42 PM, KITTERMAN, ANYA D GS-12 USAF AFMC 75 CEG/CEIE <anya.kitterman@us.af.mil> wrote:

> Hello,
>
> Here is the promised follow up email detailing what measures would need to be taken in order to maintain a No Adverse Effect on the railroad grade work. Do let me know if you have any questions or need clarification. Thank you again for taking the time to meet with us today, it is appreciated!
>
> 1. The concrete can be used as a base. The material has been pulled from the construction at the Peppermill Casino, they will be following up with me on any additional sources.
> 2. The concrete will be covered and filled with materials and soils similar to what already exists on the grade.
> 3. The height and width of the grade will remain the same.
> 4. The final cover of the road will be gravel the same or mirroring that which was present on the road prior to work being undertaken.
> 5. The road will be annually inspected to assure it maintains the historic integrity and character of the former railroad. Any necessary maintenance will be undertaken, as needed, to assure this throughout the years.
>
> Basically, the road will look the same as it did prior to any work being done and will maintain the look and feel of the original railroad grade.
>
> Anya Kitterman
> Archaeologist/Cultural Resource Manager
> 75th CEG/CEIE
> Hill Air Force Base
> 7290 Weiner St.
> Bldg 383
> Hill AFB, UT 84056-5003
> (801) 586-2464
> anya.kitterman@us.af.mil

--
****
Christopher W. Merritt, Ph.D., RPA
Deputy SHPO, Antiquities Section Coordinator
Utah Division of State History
Phone: (801) 245-7263

Summary Report Worksheet Consultation

Tribal Contact	Title	Address	Letter sent	Number	Return Receipt	Response
Northern Arapaho Tribe						
Dean Goggles	Chairman	Arapaho Business Council PO Box 396 Fort Washakie, WY 82514		0334.7385	12/29	
Yufna Soldierwolf	THPO			0334.7583	1/4	
Blackfeet Tribe						
Willie A. Sharp, Jr.	Chairman	Blackfeet Tribal Business Council PO Box 850 Browning, MT 59417		0334.7392	12/29	
John Murray	THPO			0334.7590	12/29	
Confederated Tribes of the Goshute Indian Reservation						
Virgil W. Johnson	Chairperson	CTGR PO Box 6104 Ibapah, UT 83034		0334.7422	12/28	
Confederated Salish & Kootenai Tribes of the Flathead Reservation						
Vernon Finley	Chairman	CSKT PO Box 278 Pablo, MT 59855		0334.7651		
Ira L. Matt	THPO			0334.7644	12/26	
Crow Tribe						
Darrin Old Coyote	Chairman	Crow Tribe Council PO Box 159 Crow Agency, MT 59022		0334.7408	12/28	
Emerson Bull Chief	THPO			0334.7606	12/28	
Duckwater Shoshone Tribe						
Adams-Blackeye	Chairwoman	Duckwater Shoshone Tribe PO Box 140068 Duckwater, NV 89314		0334.7576	12/28	
Maurice Churchill	CR Manager			0334.7736	12/28	
Eastern Shoshone Tribe						

Darwin St. Clair, Jr.	Chairman	Eastern Shoshone Tribe PO Box 538 Fort Washakie, WY 82514		0334.7415	12/29	
Wilford Ferris III	Dir of Cultural Preservation			0334.7613	12/28	
Ely Shoshone Tribe						
Alvin S. Marques	Chairman	Ely Shoshone Tribe 16 Shoshone Circle Ely, NV 89301		0334.7477	12/28	
Cindy Marques	CR			0334.7668	12/28	
Hopi Tribe						
Herman Honanie	Chair	Hopi Tribal Council PO Box 123 Kykotsmovi, AZ 86039		0334.7439	12/30	
Mr. Leigh Kuwanwisiwma	Dir of Cultural Preservation			0334.7620	12/28	
Navajo Nation						
Begaye	President	Navajo Nation PO Box 9000 HWY 264, Tribal Hills Drive Window Rock, AZ 86515-9000		0334.7446	12/28	
Ora Marek-Martinez, PhD	THPO			0334.7637	1/5	
Northwestern Band of Shoshone						
Shane Warner	Chairman	Northwestern Band of Shoshone Nation 707 North Main Street Brigham City, UT 84302		0334.7453	12/28	
Patty Timbimboo-Madsen	CR Dir			0334.7705	12/23	
Paiute Indian Tribe of Utah						
Gari Lafferty	Chairperson	PITU 440 North Paiute Drive Cedar City, UT 84721		0334.7460	12/28	
Dorena Martineau	CR Dir			0334.7712	12/28	
Pueblo of Zuni						
Val R. Panteah Sr.	Governor	Pueblo of Zuni PO Box 339 Zuni, NM 87327		0334.7484	12/28	
Kurt Dongoske	THPO			0334.7729	12/29	
San Juan Southern Paiute Tribe						

May Preston	President	SJSPT PO Box 1989 Tuba City, AZ 86045		0334.7569	1/7	
Shoshone-Bannock Tribes of the Fort Hall Reservation						
Nathan Small	Chair	S-B Tribes of Fort Hall Reservation PO Box 306 Fort Hall, ID 83203		0334.7491	12/28	
Carolyn Smith	CR Coordinator			0334.7675	12/28	
Shoshone-Paiute Tribes of the Duck Valley Reservation						
Mr. Lindsey Manning	Chairman	S-P tribes of the Duck Valley Reservation PO Box 219 Owyhee, NV		0334.7507	12/29	
Skull Valley Band of Goshute						
Candace Bear	Chairwoman	Skull Valley Band of Goshute Indians PO Box 448 Grantsville, UT 84029		0334.7514	12/28	
Te-Moak Tribe of Western Shoshone						
Davis Gonzales	Chairman	Te-Moak Tribe of Western Shoshone 525 Sunset Street Elko, NV 89801		0334.7521	12/23	
Ute Indian Tribe						
Gordon Howell	Chairman	Ute Indian Tribe PO Box 190 Fort Duchesne, UT 84026		0334.7538	12/23	
Betsy Chapoose	Cultural Rights & Protection			0334.7682	12/28	
Ute Mountain Ute						
Manuel Heart	Chairman	Ute Mountain Ute Tribe PO Box 248 Towaoc, CO 81334-0248		0334.7545	12/28	
Mr. Terry Knight	NAGPRA Specialist			0334.7699	12/31	
Wells Band of Western Shoshone						
Michelle Cure	Chairperson	Wells Band of Western Shoshone PO Box 809		0334.7552	12/23	

		Wells, NV 89835				
SHPO						
Lori Hunsaker	Deputy SHPO	State Historic Preservation Office 300 Rio Grande Salt Lake City, UT 84101				

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Ms. Lori Hunsaker
Deputy State Historic Preservation Officer
300 Rio Grande
Salt Lake City Utah 84101

Dear Ms. Hunsaker,

EXAMPLE LETTER

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile layer will be laid and follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future (Attachment 2, Details of Geotextile Layer). An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. This is in order to ground the building. A recovery area will be established near the maintenance facility and launch site, though have no new construction itself.

The proposed area of work on the UTTR has been surveyed according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation (Attachment 1). The survey (U-12-UI-0371m) was completed in 2012. Two known eligible archaeological sites are near the area of potential effect (APE). Site 42TO2749 has been avoided and will not be impacted by this project. Site42TO708, the Deep Creek Railroad, will have minimal impact and follow the stipulations listed below.

On October 27th, 2014, Chris Merritt from the SHPO visited in order to discuss options to minimize impacts. The following approaches were discussed:

- The road bed will be maintained at its current width but will be repaired and re-graded as needed. This will be done with gravel and materials similar to what are already in place.
- The two access routes for the proposed pads will utilize a non-permanent geotextile base where the proposed work encounters the slope and former railroad grade. There will be no alteration to the current grade in order that the grade could return to its original condition should the site be disbanded in the future.
- The culvert C-29, C-30, and C-31 will be upgraded with the condition that the exterior view remains the same and utilizes historic materials as much as feasible. A qualified archaeologist or architectural historian will be on site during the deconstruction of C-29, and if modifications are necessary, C-31 (Attachment 3, Details on Culverts to be Upgraded). This will allow for the original design to be recorded during any deconstruction. No modern construction will be visible. C-31 will contain a central interior beam in order to maintain the design. The rocks to the base of the culvert will be retained, though neither the historic beams nor rocks will need to be load bearing.
- If possible, historic materials will be stored for future maintenance of the culverts.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 4).

EXAMPLE LETTER

Archaeological surveys, including Utah State Historic Site Forms have been completed for this area and are on file in your office.

In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

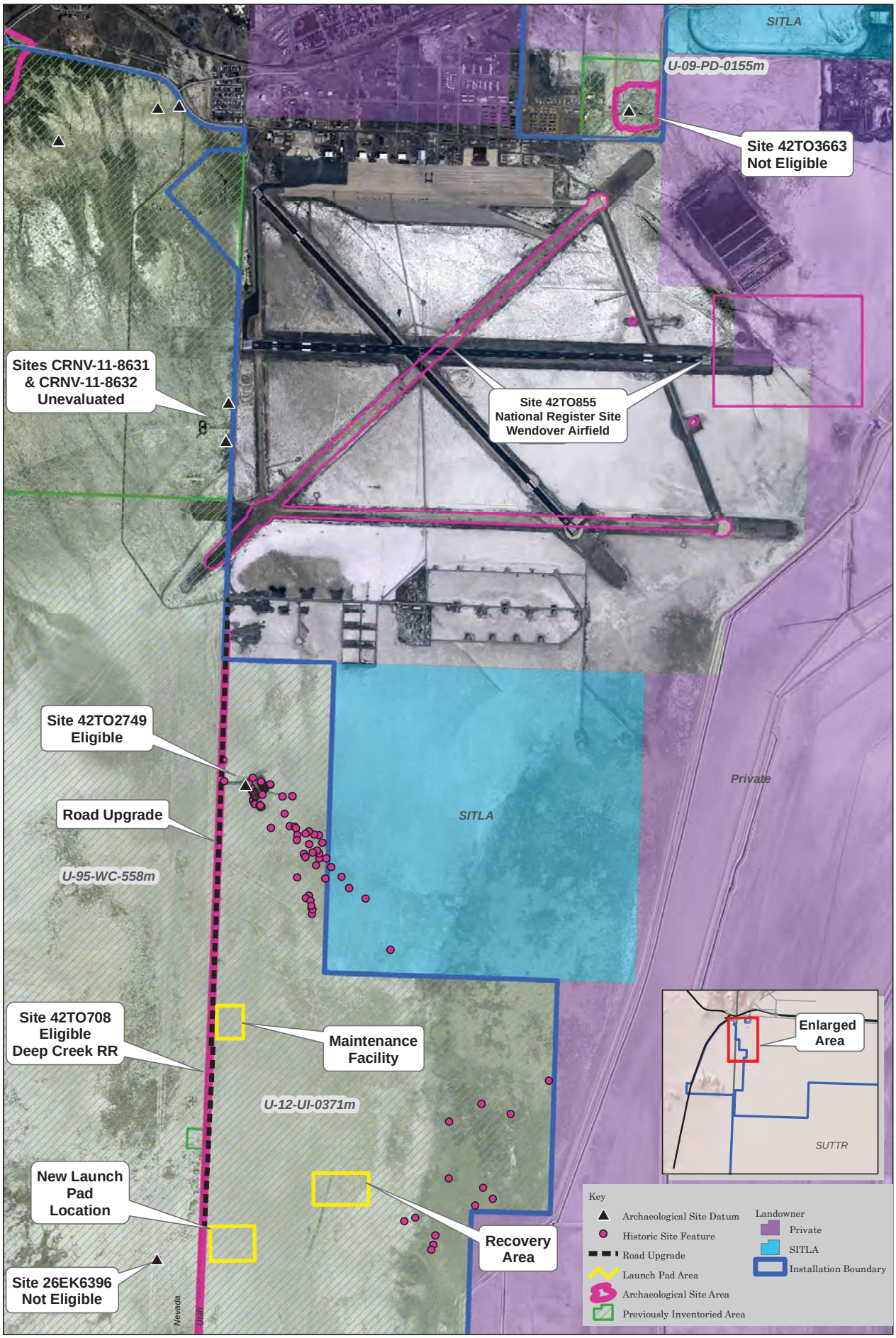
Michelle L Cotte

for JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Map of Proposed Work
2. Details of Geotextile Layer
3. Details of Culverts to be Upgraded
4. Unanticipated Discovery Protocol

Distribution List:
Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
Duckwater Shoshone Tribe
Eastern Shoshone Tribe
Ely Shoshone Tribe
Hopi Tribe
Navajo Nation
Northern Arapaho Tribe
Northwestern Band of the Shoshone Nation
Paiute Indian Tribe of Utah
Pueblo of Zuni
San Juan Southern Paiute Tribe
Shoshone-Bannock Tribes of the Fort Hall Reservation
Shoshone-Paiute Tribes of the Duck Valley Reservation
Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone Indians
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone

EXAMPLE LETTER



CRM Previously Inventoried Areas & Site Locations
Proposed WSEP Launch Pad
Wendover Parcel - SUTTR

1: 18,000

0 0.25 0.5 1 Miles

N

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

CPD

19 November 2014

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CEIE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

RECEIVED
NOV
THE HOPI
OFFICE OF THE CHAIRMAN

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

Dear Chairman Honanie,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) plans to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. See Attachment 1 for map of proposed work. The proposed plan will include repairing the grade of the road which was the former Deep Creek Railroad (42TO708). The proposed work also includes the construction of a maintenance facility on a non-permanent 500' x 500' gravel pad. A second non-permanent 500' x 500' gravel pad will also be constructed for the launch rails south of the maintenance facility. A 350' x 50' concrete pad will be added on this gravel pad for installation of the rails themselves. A geotextile will follow the slope from the pads up to the existing rail line which will facilitate returning the rail line to the original condition should the site be disbanded in the future. An existing munitions bunker will be used to store RATO bottles. The only alteration to this structure would be an approximately 2" diameter pipe installed to the northwest of the structure and protruding approximately six inches above the ground surface. A recovery area will be established, though have no new construction.

The proposed area of work on the UTTR has been surveyed according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The survey (U-12-UI-0371m) was completed in 2012. Two known eligible historic archaeological sites are near the area of potential effect (APE). Site 42TO2749 has been avoided and will not be impacted by this project. Site42TO708, the Deep Creek Railroad and will have minimal impact.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with

direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 2).

Archaeological surveys, including Utah State Historic Site Forms have been completed for this area and are on file in your office.

In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

Michelle L Cottle

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Concur
Margaret
for
Kuwanwisiwma
11-27-14

Attachments:
1. Map of Proposed Work
2. Unanticipated Discovery Protocol

cc: Mr. Leigh Kuwanisiwma, Hopi Tribe Director of Cultural Preservation

Distribution List:
Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
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Eastern Shoshone Tribe
Ely Shoshone Tribe
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Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone Indians
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone

Hoinon'einino'

Northern Arapaho Tribe
TRIBAL HISTORIC PRESERVATION OFFICE

P.O. Box 67 - St. Stephens, Wyoming 82524 - PH: 307.856.1628 - narapahothpo_2009@ymail.com

Dec 15, 2014

Attention of:

Department of Air Force
75th Civil Engineering Group (AFMC)
Hill Air Force Base Utah
Michelle Cottle
Anya.kitterman@us.af.mil.

Subject: "Construction of new drone launch facility"

The office of the Northern Arapaho Tribal Historic Preservation Office has reviewed this project.

Project for review: Construction of drone launch facility for use on the Utah Test and Training Range (UTTR). The only other alteration is a 2" diameter pipe installed to the northwest of the structure which protrudes six inches above ground surface.

Our office would like to report that our office at this time have no concerns about the project and can move forward. With the two eligible historical archaeological site near the APE and will not be impacted and avoided. Our office concludes the project as NO ADVERSE EFFECT. However with any new project we ask that if there are any inadvertent discoveries found we be contacted and our office is provided a report.

Darlene Conrad
Tribal Historic Preservation Officer

THE
NAVAJO
NATION

Historic Preservation Department, POB 4950, Window Rock, AZ 86515 • PH: 928.871-7198 • FAX: 928.871.7886

BEN SHELLY
PRESIDENT

REX LEE JIM
VICE-PRESIDENT

January 21, 2015

Joseph A. Martone, Chief
Department of the Air Force
75th Civil Engineer Group
Hill Air Force Base Utah

Subject: **DRONE LAUNCH FACILITY AT UTAH TEST AND TRAINING RANGE**

Dear: Mr. Martone,

The Historic Preservation Department-Traditional Culture Program, hereafter (HPD-TCP) is in receipt of your letter regarding a proposed construction of a new drone launch facility for use on the Utah Test and Training Range which would provide for more efficient and safer operations located at Hill Air Force Base.

After reviewing the information documents provided, HPD-TCP has determined the project proposed **will not have** adverse effects to Navajo Traditional Cultural Properties. HPD-TCP on behalf of the Navajo Nation has no concerns at this time.

If the proposed application inadvertently discovers habitation sites, plant gathering areas, human remains and objects of cultural patrimony, HPD-TCP request that we be notified respectively in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA). (***The Navajo Nation claims cultural affiliation to all Anaasazi people (periods from Archaic to Pueblo IV) of the southwest. The Navajo Nation makes this claim through Navajo oral history and ceremonial history, which has been documented as early as 1880 and taught from generation to generations).***

The HPD-TCP appreciates the Department of the Air Force's consultation efforts regarding this document. Should you have any additional concerns and/or questions do not hesitate to contact me electronically at tony@navajohistoricpreservation.org or telephone at 928-871-7750.

Sincerely,

Tony H. Joe, Jr., Supervisory Anthropologist
Section 106 Consultation
Traditional Culture Program
Historic Preservation Department

TCP File 15-008

WSEP Fiber Line Worksheet Consultation

Tribal Contact	Title	Address	Letter sent	Number	Return Receipt	Response
Northern Arapaho Tribe						
Dean Goggles	Chairman	Arapaho Business Council PO Box 396 Fort Washakie, WY 82514	6/24/15	7574.0277	6/30	
Corinne Headley	THPO			7574.0413	6/30	
Blackfeet Tribe						
Willie A. Sharp, Jr.	Chairman	Blackfeet Tribal Business Council PO Box 850 Browning, MT 59417		7574.0345	6/29	
John Murray	THPO			7574.0482	6/29	
Confederated Tribes of the Goshute Indian Reservation						
Madeleine Greymountain	Chairperson	CTGR PO Box 6104 Ibapah, UT 83034		7574.0208	6/29	
Confederated Salish & Kootenai Tribes of the Flathead Reservation						
Vernon Finley	Chairman	CSKT PO Box 278 Pablo, MT 59855				
Ira L. Matt	THPO					
Crow Tribe						
Darrin Old Coyote	Chairman	Crow Tribe Council PO Box 159 Crow Agency, MT 59022		7574.0338	6/30	
Emerson Bull Chief	THPO			7574.0475	6/30	
Duckwater Shoshone Tribe						
Virginia Sanchez	Chairwoman	Duckwater Shoshone Tribe PO Box 140068 Duckwater, NV 89314		7574.0321	6/30	
Maurice Churchill	CR Manager			7574.0468	6/30	
Eastern Shoshone Tribe						

Darwin St. Clair, Jr.	Chairman	Eastern Shoshone Tribe PO Box 538 Fort Washakie, WY 82514		7574.0314	6/27	
Wilford Ferris III	Dir of Cultural Preservation			7574.0451	6/27	
Ely Shoshone Tribe						
Alvin S. Marques	Chairman	Ely Shoshone Tribe 16 Shoshone Circle Ely, NV 89301		7574.0307	6/29	
Cindy Marques	CR			7574.0444	6/29	
Hopi Tribe						
Herman Honanie	Chair	Hopi Tribal Council PO Box 123 Kykotsmovi, AZ 86039		7574.0291	6/30	
Mr. Leigh Kuwanwisiwma	Dir of Cultural Preservation			7574.0437	6/30	
Navajo Nation						
Ben Shelly	President	Navajo Nation PO Box 9000 HWY 264, Tribal Hills Drive Window Rock, AZ 86515-9000		7574.0284	6/29	
Timothy Begay	THPO			7574.0420		
Northwestern Band of Shoshone						
Jason Walker	Chairman	Northwestern Band of Shoshone Nation 707 North Main Street Brigham City, UT 84302		7574.0260	6/29	
Patty Timbimboo-Madsen	CR Dir			7574.0406	6/29	
Paiute Indian Tribe of Utah						
Corrina Bow	Chairperson	PITU 440 North Paiute Drive Cedar City, UT 84721		7574.0253	6/29	
Dorena Martineau	CR Dir			7574.0390	6/29	
Pueblo of Zuni						
Val R. Panteah Sr.	Governor	Pueblo of Zuni PO Box 339 Zuni, NM 87327		7574.0246	6/29	
Kurt Dongoske	THPO			7574.0383	7/1	
San Juan Southern Paiute Tribe						

May Preston	President	SJSPT PO Box 1989 Tuba City, AZ 86045		7574.0192	7/2	
Shoshone-Bannock Tribes of the Fort Hall Reservation						
Nathan Small	Chair	S-B Tribes of Fort Hall Reservation PO Box 306 Fort Hall, ID 83203		7574.0239	6/29	
Carolyn Smith	CR Coordinator			7574.0376	6/29	
Shoshone-Paiute Tribes of the Duck Valley Reservation						
Mr. Lindsey Manning	Chairman	S-P tribes of the Duck Valley Reservation PO Box 219 Owyhee, NV		7574.0185	6/29	
Skull Valley Band of Goshute						
Lori Bear	Chairwoman	Skull Valley Band of Goshute Indians PO Box 448 Grantsville, UT 84029		7574.0178	7/8	
Te-Moak Tribe of Western Shoshone						
Davis Gonzales	Chairman	Te-Moak Tribe of Western Shoshone 525 Sunset Street Elko, NV 89801		7574.0161	6/29	
Ute Indian Tribe						
Gordon Howell	Chairman	Ute Indian Tribe PO Box 190 Fort Duchesne, UT 84026		7574.0222	6/29	
Betsy Chapoose	Cultural Rights & Protection			7574.0369	6/29	
Ute Mountain Ute						
Manuel Heart	Chairman	Ute Mountain Ute Tribe PO Box 248 Towaoc, CO 81334-0248		75743.0215	7/1	
Mr. Terry Knight	NAGPRA Specialist			7574.0352	7/1	
Wells Band of Western Shoshone						
Michelle Cure	Chairperson	Wells Band of Western Shoshone PO Box 809		7574.0154	6/29	

		Wells, NV 89835				
SHPO						
Lori Hunsaker	Deputy SHPO	State Historic Preservation Office 300 Rio Grande Salt Lake City, UT 84101		7574.0499	6/29	

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

24 June 2015

Ms. Anya Kitterman
Cultural Resource Program Manager
75 CEG/CEIE
7290 Weiner St., Bldg. 383
Hill Air Force Base Utah 84056-5003

Michelle Cure, Chairwoman
Wells Band of Western Shoshone
PO Box 809
Wells, NV 89835

Dear Chairwoman Cure,

EXAMPLE LETTER

The United States Air Force (USAF) located at Hill Air Force Base (AFB) is proposing to establish commercial power to the new WSEP launch site in order to reduce utilizing on site generators. The proposed action includes plowing both power and fiber lines just to the west of the current road where there has already been previous disturbance from commercial fiber line installation (Attachment 1). Hill AFB and the Utah Test and Training Range-South (UTTRS) are unable to use this existing line. New disturbance will go to a depth of approximately 48" with the top end width being 16". Hill AFB specifically chose this route in order to avoid known historic properties and utilize areas of existing disturbance.

The proposed area of work for this project has been previously inventoried according to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The inventories were completed in 1995 (U-95-WC-558m) and 2012 (U-12-UI-0371M). Additionally, this area was visited on October 27th, 2014 by Hill AFB Archaeologist, Anya Kitterman, and SHPO representative, Chris Merritt, in association with a nearby project (14-1656). Three known eligible archaeological sites are within close proximity to the proposed Area of Potential Effect (APE). These include the Wendover Airfield (42TO855), the Deep Creek Railroad (42TO708), and the former JB-2 Test Launch Facility (42To2749). All three sites and their associated features will be avoided and will not be impacted by this project.

The potential for additional archaeological historic properties is low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan.

Archaeological surveys, including Utah State Historic Site Forms have been completed for this area and are on file in your office.

In consideration of these facts, we request your concurrence with the determination of *no adverse effect* to cultural resources as specified in §36 CFR 800.4(c). Should you or your staff have any questions, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

Attachments:
1. Proposed work and Cultural Survey Map

DISTRIBUTION LIST

EXAMPLE LETTER

Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
Duckwater Shoshone Tribe
Eastern Shoshone Tribe
Ely Shoshone Tribe
Hopi Tribe
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Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone
Utah State Historic Preservation Office

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

24 June 2015

Ms. Anya Kitterman
Cultural Resource Program Manager
75 CEG/CEIE
7290 Weiner St., Bldg. 383
Hill Air Force Base Utah 84056-5003

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

Dear Chairman Honanie,

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Sincerely

JOSEPH A. MARTONE, Ph.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

concur
for Kuwanwisiwma
6-30-15

Attachments:
1. Proposed work and Cultural Survey Map

cc: Mr. Leigh Kuwanisiwma, Director of Cultural Preservation, Hopi Tribe

DISTRIBUTION LIST

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Confederated Tribes of the Goshute Indian Reservation
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Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone
Utah State Historic Preservation Office

WSEP Launch Pad Consultation

Tribal Contact	Title	Address	Letter sent	Number	Return Receipt	Response
Northern Arapaho Tribe						
Darrell O'Neal, Sr.	Chairman	Arapaho Business Council PO Box 396 Fort Washakie, WY 82514		7028 6793	11/24	
Corinne Headley	THPO			7013 1710 0000 7028 6984	11/24	
Blackfeet Tribe						
Willie A. Sharp, Jr.	Chairman	Blackfeet Tribal Business Council PO Box 850 Browning, MT 59417		7028 6717	11/24	
John Murray	THPO			7028 6915	11/25	
Confederated Tribes of the Goshute Indian Reservation						
Madeleine Greymountain	Chairperson	CTGR PO Box 6104 Ibapah, UT 83034		7028 6724	11/21	
Confederated Salish & Kootenai Tribes of the Flathead Reservation						
Ron Trahan	Chairman	CSKT PO Box 278 Pablo, MT 59855		NONE		
Ira L. Matt	THPO			NONE		
Crow Tribe						
Darrin Old Coyote	Chairman	Crow Tribe Council PO Box 159 Crow Agency, MT 59022		7028 6731	11/24	
Emerson Bull Chief	THPO			7028 6922	11/24	
Duckwater Shoshone Tribe						
Virginia Sanchez	Chairwoman	Duckwater Shoshone Tribe PO Box 140068 Duckwater, NV 89314		7028 6748	11/26	
Maurice Churchill	CR Manager			7028 6939	11/26	
Eastern Shoshone Tribe						

Darwin St. Clair, Jr.	Chairman	Eastern Shoshone Tribe PO Box 538 Fort Washakie, WY 82514		7028 6755	11/24	
Wilford Ferris III	Dir of Cultural Preservation			7028 6946	11/24	
Ely Shoshone Tribe						
Alvin S. Marques	Chairman	Ely Shoshone Tribe 16 Shoshone Circle Ely, NV 89301		7028 6762	11/24	
Cindy Marques	CR			7028 6953	11/24	
Hopi Tribe						
Herman Honanie	Chair	Hopi Tribal Council PO Box 123 Kykotsmovi, AZ 86039		7028 6779	11/24	
Mr. Leigh Kuwanwisiwma	Dir of Cultural Preservation			7028 6960	11/24	
Navajo Nation						
Ben Shelly	President	Navajo Nation PO Box 9000 HWY 264, Tribal Hills Drive Window Rock, AZ 86515-9000		7028 6786	11/24	
Timothy Begay	THPO			7028 6977	12/5	
Northwestern Band of Shoshone						
Jason Walker	Chairman	Northwestern Band of Shoshone Nation 707 North Main Street Brigham City, UT 84302		7028 6809	11/21	
Patty Timbimboo-Madsen	CR Dir			7028 6991	11/21	
Paiute Indian Tribe of Utah						
Gari Lafferty	Chairperson	PITU 440 North Paiute Drive Cedar City, UT 84721		7028 6816	11/24	
Dorena Martineau	CR Dir			7028 7004	11/24	
Pueblo of Zuni						
Arlen P. Quetawki, Sr.	Governor	Pueblo of Zuni PO Box 339 Zuni, NM 87327		7028 6823	11/24	
Kurt Dongoske	THPO			7028 7011	11/24	
San Juan Southern Paiute Tribe						

May Preston	President	SJSPT PO Box 1989 Tuba City, AZ 86045		7028 6830	11/25	
Shoshone-Bannock Tribes of the Fort Hall Reservation						
Nathan Small	Chair	S-B Tribes of Fort Hall Reservation PO Box 306 Fort Hall, ID 83203		7028 6847	11/24	
Carolyn Smith	CR Coordinator			7028 7028	11/24	
Shoshone-Paiute Tribes of the Duck Valley Reservation						
Mr. Lindsey Manning	Chairman	S-P tribes of the Duck Valley Reservation PO Box 219 Owyhee, NV		7028 6854	11/24	
Skull Valley Band of Goshute						
Lori Bear	Chairwoman	Skull Valley Band of Goshute Indians PO Box 448 Grantsville, UT 84029		7028 6861	11/24	
Te-Moak Tribe of Western Shoshone						
Davis Gonzales	Chairman	Te-Moak Tribe of Western Shoshone 525 Sunset Street Elko, NV 89801		7028 6878	11/24	
Ute Indian Tribe						
Gordon Howell	Chairman	Ute Indian Tribe PO Box 190 Fort Duchesne, UT 84026		7028 6885	11/24	
Betsy Chapoose	Cultural Rights & Protection			7028 7035	11/24	
Ute Mountain Ute						
Manuel Heart	Chairman	Ute Mountain Ute Tribe PO Box 248 Towaoc, CO 81334-0248		7028 6892	11/25	
Mr. Terry Knight	NAGPRA Specialist			7028 7042	12/1	
Wells Band of Western Shoshone						
Michelle Cure	Chairperson	Wells Band of Western Shoshone PO Box 809		7028 6908	12/3	

		Wells, NV 89835				
SHPO						
Lori Hunsaker	Deputy SHPO	State Historic Preservation Office 300 Rio Grande Salt Lake City, UT 84101		7028 6700	11/21	
Chris Hansen	SHPO	State Historic Preservation Office		7028 6694	11/21	
John M. Fowler	ED, office of Exec Dir	Advisory Council on Historic Preservation 401 F Street NW, Suite 308 Washington DC 20001-2637		7028 6687	11/18	

From: Yufna Soldier Wolf
To: KITTERMAN, ANYA D GS-12 USAF AFMC 75 CEG/CEIE
Subject: WSEP launch site
Date: Wednesday, July 01, 2015 3:15:18 PM

Anya Kitterman,

Hello. I read your letter regarding this project.
The office of the Northern Arapaho THPO would
like to the opportunity to comment in the following:

Following the disturbed corridor would be ideal, however
once ground disturbance happens for the depth of 48" to avoid know
historic properties and utilize areas of existing disturbance. If there should
be any inadvertent discoveries please contact my office and provide a
preliminary report and halt all work until it can be decided upon.

I'd request a buffer of at least 25 to 50 feet for site 42TO3663, 42TO2749, 42TO0708, 42TO2749,
Even though these sites may not be eligible we would request the buffer
to ensure the protection of each site. I'd also request a concluding report to show none of the properties were disturbed.

Thank you for consulting with the Northern Arapaho THPO.

--
Yufna Soldier Wolf
NATHPO-Director
307-840-0837 call or text Cell
307-856-1628 Office call or lv msg

From: KITTERMAN, ANYA D GS-12 USAF AFMC 75 CEG/CEIE
Sent: Wednesday, July 01, 2015 3:33 PM
To: 'Yufna Soldier Wolf'
Subject: RE: WSEP launch site
Attachments: Unanticipated discovery of archaeological deposits.pdf

Good Afternoon,

Thank you so much for your reply. In reference to your comments, if any historic properties or archaeological remains are inadvertently discovered, our unanticipated discovery protocol will go into effect and the project halted immediately. I am happy to contact your office with a preliminary report in this instance. I have also attached a copy of our unanticipated discovery protocol for your records.

Most of the sites will have a minimum of a 25 foot buffer in order to avoid any disturbance. The only one where this is not feasible is 42TO708, the historic Deep Creek Railroad grade. The existing fiber line and previously disturbed area runs approximately 10-15 feet from the west edge of the remaining railroad grade. We will be keeping that same distance and the grade itself will not be impacted by the work. Ideally, we would like to create a larger buffer, but this would include new disturbance and a higher likelihood for disturbing unknown buried archaeology. The base has chosen to stay within the previously disturbed area in order to minimize impact.

We will provide a summary report once the work has been completed to demonstrate the properties were not impacted.

Thank you again for your comments and concerns. Please feel free to contact me anytime for further information or clarification.

Sincerely,

Anya Kitterman
Archaeologist/Cultural Resource Manager
75th CEG/CEIE
Hill Air Force Base
7290 Weiner St.
Bldg 383
Hill AFB, UT 84056-5003
(801) 586-2464
anya.kitterman@us.af.mil

-----Original Message-----
From: Yufna Soldier Wolf [mailto:yufnanathpo@gmail.com]
Sent: Wednesday, July 01, 2015 2:15 PM
To: KITTERMAN, ANYA D GS-12 USAF AFMC 75 CEG/CEIE

Subject: WSEP launch site

Anya Kitterman,

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The office of the Northern Arapaho THPO would like to the opportunity to comment in the following:

Following the disturbed corridor would be ideal, however once ground disturbance happens for the depth of 48" to avoid know historic properties and utilize areas of existing disturbance. If there should be any inadvertent discoveries please contact my office and provide a preliminary report and halt all work until it can be decided upon.

I'd request a buffer of at least 25 to 50 feet for site 42TO3663, 42TO2749, 42TO0708, 42TO2749, Even though these sites may not be eligible we would request the buffer to ensure the protection of each site. I'd also request a concluding report to show none of the properties were disturbed.

Thank you for consulting with the Northern Arapaho THPO.

--

Yufna Soldier Wolf
NATHPO-Director
307-840-0837 call or text Cell
307-856-1628 Office call or lv msg

Annual American Indian Meeting Summary Report

August 20-21 2015

Organized by Hill Air Force Base, Utah National Guard, and Dugway Proving Ground

Co-hosted by the Paiute Indian Tribe of Utah

Attendees of 2015 Annual American Indian Meeting

American Indian Tribal Representatives

Crow Nation of Montana

www.crow-nsn.gov/ 406.638.3708

Name	Title	Email
Emerson Bull Chief	Tribal Historic Preservation Officer	Emerson.bullchief@crow-nsn.gov

Northwestern Band of the Shoshone Nation

www.nwbshoshone.com 435.734.2286

Name	Title	Email
Darren Parry	Vice-Chairman	dparry@arrowpoint.us
Jeff Parry	Economic Coordinator	jparry@tope.us
Dennis A. Alex	Tribal Representative	
Patty Timbimboo-Madsen	Cultural Resources Manager	ptimbimboo@nwbshoshone.com

Paiute Tribe of Utah

www.utahpaiutes.org 435.586.1112

Name	Title	Email
Corrina Bow	Chairwoman	corrina.bow@uhs.gov
Jeanine Borchardt	Chairwoman Indian Peaks Band	jeanine.borchardt@ihs.gov
Eleanor Tom	Tribal Representative	
Jetta Wood	Chairwoman Shivwits Band	jettawood@yahoo.com
Rita Walker	Tribal Representative	
Vala Parashonts	Tribal Elder Cedar Band	
Dorena Martineau	Cultural Resources Director	Dorena.martineau@ihs.gov

Ute Indian Tribe

www.utetribe.com 435.722.5141

Name	Title	Email
Betsy Chapoose	Director, Cultural Rights and Protection	betsyc@utetribe.com

Additional Representatives

Utah Division of Indian Affairs

http://heritage.utah.gov/utah-division-of-indian-affairs

Name	Title	Email
Shirlee Silversmith	Director	ssilversmith@utah.gov

U.S. Military Representatives

Air Force

www.hill.af.mil

Name	Title	Email
Col Wade Lawrence	Vice Commander, 75th Air Base Wing	david.lawrence.2@us.af.mil
James Wilde	AF Cultural Resources Subject Matter Expert (SME), AFCEC	james.wilde@us.af.mil
Allen Fry	Installation Management Division Chief, ITLO	allen.fry@us.af.mil
Ryan Shaw	Environmental Attorney	ryan.shaw@us.af.mil
Jaynie Hirschi	Hill Installation Support Team AFCEC/CZOM	jaynie.hirschi@us.af.mil
Anya Kitterman	Cultural Resources Manager, Archaeologist	anya.kitterman@us.af.mil
Russell Lawrence	Natural Resources Manager	clair.lawrence@us.af.mil
Mike Shane	Environmental Liaison, Headquarters UTTR	michael.shane@us.af.mil
Jamie Brand	Native American Outreach Coordinator, CSU-CEMML	jamie.brand.ctr@us.af.mil
Kelly Merrifield	Cultural Resource Program Associate, OASD/ESOH	kelly.merrifield@colostate.edu

Utah National Guard

www.ut.ngb.army.mil

Name	Title	Email
BG Val L. Peterson	Land Component Commander	val.l.peterson@mail.mil
Col Robert T. Dunton	Director, Construction Facilities Management Office	robert.t.dunton.mil@mail.mil
SFC Chevonne Day	Medical Command Operations NCO	chevonne.a.day.mil@mail.mil
SFC Levi John	Environmental Protection	levi.s.john.mil@mail.mil

	Specialist	
Shaun Nelson	Cultural Resources Manager	shaun.r.nelson4.mil@mail.mil

Army Dugway Proving Ground

www.dugway.army.mil

Name	Title	Email
Don Smith	Garrison Manager	donald.e.smith238.civ@mail.mil
Rachel Quist	Cultural Resources Manager/Native American Coordinator	rachel.quist.civ@mail.mil
Jenni DeGraffenried	Archaeologist	
Nate Anderson	Archaeologist, CSU-CEMML	robert.n.anderson81.ctr@mail.mil
Nate Nelson	Archaeologist, LoganSimpson Design	nnelson@logansimpson.com
Ellyse Simons	Intern	ellysesimons@gmail.com

Army Fort Sill

sill-www.army.mil/

Name	Title	Email
David Fritz	Support Branch Chief, Environmental Quality Division-DPW	david.e.fritz8.civ@mail.mil
Melissa Heindselman	Environmental JAG	melissa.a.heindselman.civ@mail.mil

Slideshow Presentation
By Anya Kitterman

[redacted]

Hill AFB Cultural Resources Management Presentation Notes

- **Hill AFB Projects**
  - [redacted]
  - [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
    - [redacted]

- **UTTR Projects**
  - UTTR currently has hundreds of archaeological sites, historic buildings, and 1 sacred site identified.
  - [redacted]
    - [redacted]
    - [redacted]
    - [redacted]
  - [redacted]
    - [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
  - WSEP Launch Pad
    - Area has been previous surveyed, only one historic site identified.
    - Proposed work coordinated with SHPO and work will not have an adverse effect to the site.

- [redacted]
  - [redacted]
  - [redacted]
  - [redacted]

- [redacted]
  - [redacted]
  - [redacted]
  - [redacted]

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

12 November 2015

Allen Fry
Chief, Installation Management Division
75 CEG/CEI
5713 Lahm Lane, Building 593N
Hill AFB, UT 84056-5137

Madeline Greymountain, Chairwoman
Confederated Tribes of the Goshute Indian Reservation
HC 61
PO Box 6104
Ibapah, UT 84034

Dear Chairwoman Greymountain,

The United States Air Force (USAF) located at Hill Air Force Base (AFB) previously notified you on 19 November 2014 about the proposal to construct a new drone launch facility for use on the Utah Test and Training Range (UTTR). This new facility would provide for more efficient and safer operations. In association with the launch facility, there is a requirement to establish airspace to accommodate the launch and recovery of the aircraft. The land proposed for the airspace is owned primarily by the Air Force, with a small section owned privately. The expected utilization of the airspace and launch facility would be four periods annually, not to exceed one week per period. This is in line with Federal Aviation Administration Order JO 7400.2K, para 23-1-6 which states, "Temporary restricted areas may be designated when necessary to accommodate hazardous activities associated with military exercises, test programs, etc."

As stated above, the land below the proposed airspace is currently owned primarily by the Air Force, with a small section privately owned. The privately owned land belongs to the Intrepid Potash Company and is currently used as evaporative or 'drying' ponds. The land is not inhabited and not used for agricultural practices. The current proposed project operations will launch drones from a site just south of Wendover east over the range, and then the drones will be recovered as they fly west towards the launch/recovery area. The operations will be limited to land just east of the Wendover parcel and will not go any further south than Snoopy Mountain.

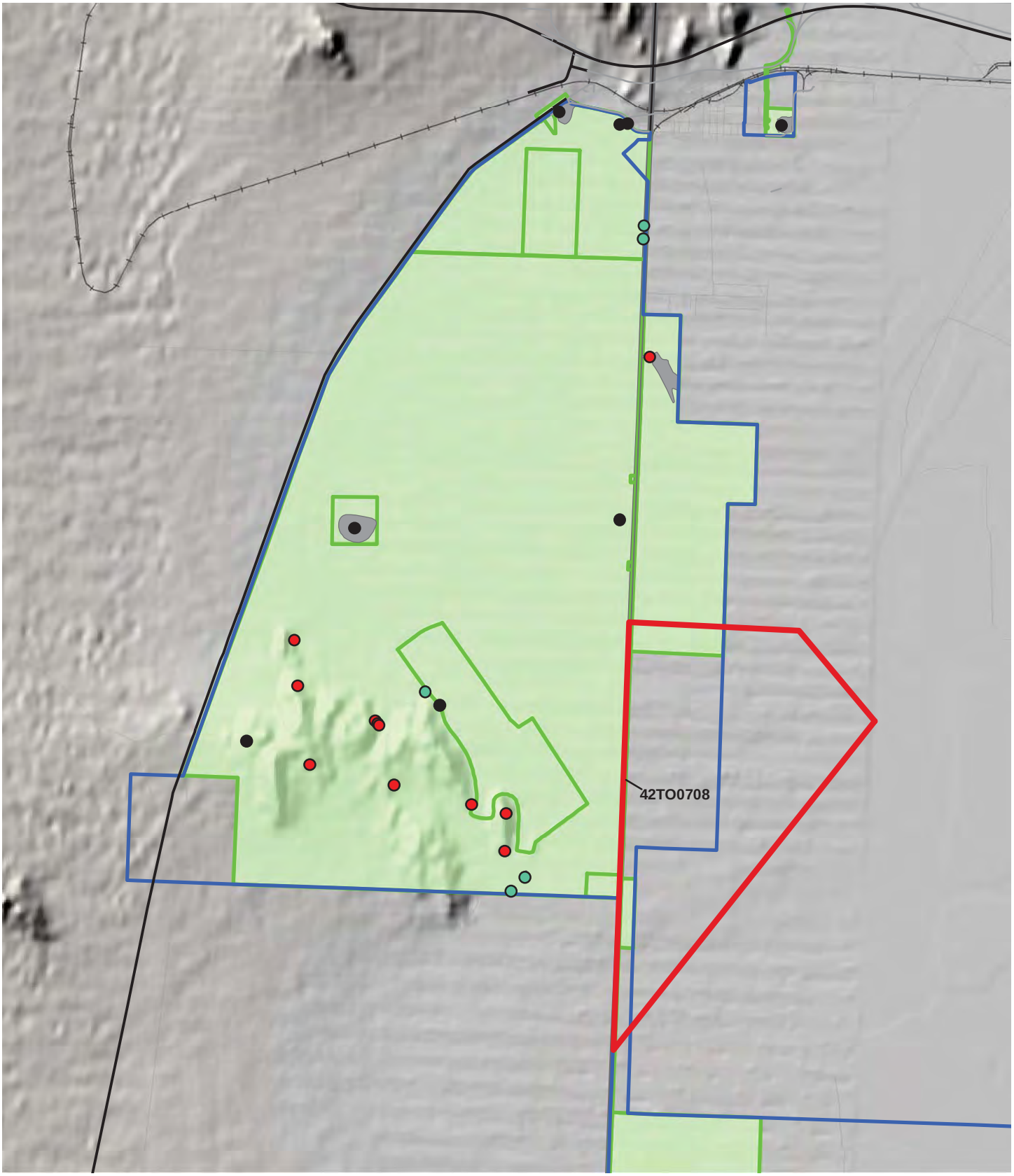
In consideration of these facts, we wish to consult with your office and offer the opportunity to discuss this project further should you request. Should you or your staff have any questions,

comments or would like to set up a face to face meeting, please contact Ms. Anya Kitterman, Archaeologist, CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

ALLEN FRY
Chief, Installation Management Division
Installation Tribal Liaison Officer

Attachments:
1. Proposed Airspace and Impacted Lands Map


42TO0708

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 75TH AIR BASE WING (AFMC)
HILL AIR FORCE BASE UTAH

18 December 2015

Colonel Ronald E. Jolly, SR., USAF
Commander
75th Air Base Wing
7981 Georgia St., Bldg. 1102, Ste. 100
Hill AFB UT 84056

Mr. Dean Goggles
Chairman
Northern Arapaho Tribe
P.O. Box 396
Fort Washakie WY 82514

Dear Chairman Goggles

On 20-21 August 2015, Hill Air Force Base (AFB), Army Dugway Proving Ground (DPG), and the Utah National Guard (UTNG) held their 10th Annual American Indian Meeting. The purpose of this meeting was to continue established government-to-government relationships with American Indian Tribes identified as having a history of land use in areas managed by Hill AFB, DPG, and UTNG, and to further assess the interest level each tribe has in consulting with Hill AFB, DPG, and UTNG. It also served to provide an open forum for tribal members to ask questions, state concerns, and receive updates regarding Hill AFB/DGP/UTNG-managed properties, the cultural resources located on these lands, and any projects that may have effects on resources of interest.

EXAMPLE LETTER

The attached summary report is a compilation of notes, slides, and information regarding the 2015 Annual American Indian Meeting. We have also provided an electronic version of the report on the enclosed CD, as well as digital photos from the event. The 2016 Hill AFB/DPG/UTNG Annual American Indian Meeting is tentatively scheduled for fall 2016, and will be hosted by the Utah National Guard. You will be contacted with additional information in the upcoming months.

Should you or your staff have any questions or suggestions regarding the meeting, please feel free to contact our Cultural Resources Program Manager, Ms. Anya Kitterman, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely

RONALD E. JOLLY, SR., Colonel, USAF
Commander, 75th Air Base Wing

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

15 August 2016

Mr. Allen Fry
Chief, Installation Management Division
5713 Lahm Lane, Building 593N
Hill AFB, UT 84056-5137

Dean Goggles
Chairman, Arapaho Business Council
PO Box 396
Fort Washakie, WY 82514

Dear Chairman Goggles,

On behalf of Hill Air Force Base, it is my pleasure to remind you of the Annual American Indian Meeting on August 25-26, 2016 at the Bear River Migratory Bird Refuge, Brigham City, Utah. As with previous meetings, this is a joint effort among Hill Air Force Base (Hill AFB), the Utah National Guard (UTNG), U.S. Army Dugway Proving Ground (DPG), and Tribal representatives from across the region. The purpose of this meeting is to maintain established government-to-government relationships with American Indian Tribes identified as having a history of land use in areas managed by Hill AFB, DPG, and the UTNG. During the meeting, we will provide updates on current and upcoming projects on the various installations as well as offer a discussion forum for questions and concerns. Included with this letter is a packet of current and upcoming projects which will be discussed. Please take a moment to review and bring questions, comments or concerns to the meeting.

EXAMPLE LETTER

If you need any further information, please contact Ms. Anya Kitterman, 75th CEG/CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely,

Allen W. Fry
Chief, Installation Management Division
Installation Tribal Liaison Officer

Attachments:
1. 2016 Annual American Indian Meeting, Current and Upcoming Project Packet

cc:
Yufna Soldier Wolf, Tribal Historic Preservation Officer, Arapaho Tribe

DISTRIBUTION LIST

Blackfeet Indian Tribe
Confederated Tribes of the Goshute Indian Reservation
Crow Tribe of Montana
Duckwater Shoshone Tribe
Eastern Shoshone Tribe
Ely Shoshone Tribe
Hopi Tribe
Navajo Nation
Northern Arapaho Tribe
Northwestern Band of Shoshone Nation
Paiute Indian Tribe of Utah
Pueblo of Zuni
San Juan Southern Paiute Tribe
Shoshone-Bannock Tribes of the Fort Hall Reservation
Shoshone-Paiute Tribes of the Duck Valley Reservation
Skull Valley Band of Goshute Indians
Te-Moak Tribe of Western Shoshone
Ute Indian Tribe
Ute Mountain Ute Tribe
Wells Band of Western Shoshone

EXAMPLE LETTER

75TH AIR BASE WING

Hill AFB 11th Annual American Indian Meeting

Anya Kitterman
75 CEG/CEIE
25 August 2016

UTTR Fiber Line Expansion

75TH AIR BASE WING

- On Range Fiber Line
  - Work completed during 2015 field season
  - No archaeological resources found
  - Final report forwarded to tribes 31 May 2016
- Off Range Fiber Line
  - Work being completed during 2016 field season
  - BLM is Section 106 Lead as most of the work is on their property
  - Hill will maintain oversight and assure that any concerns from the tribes are addressed.

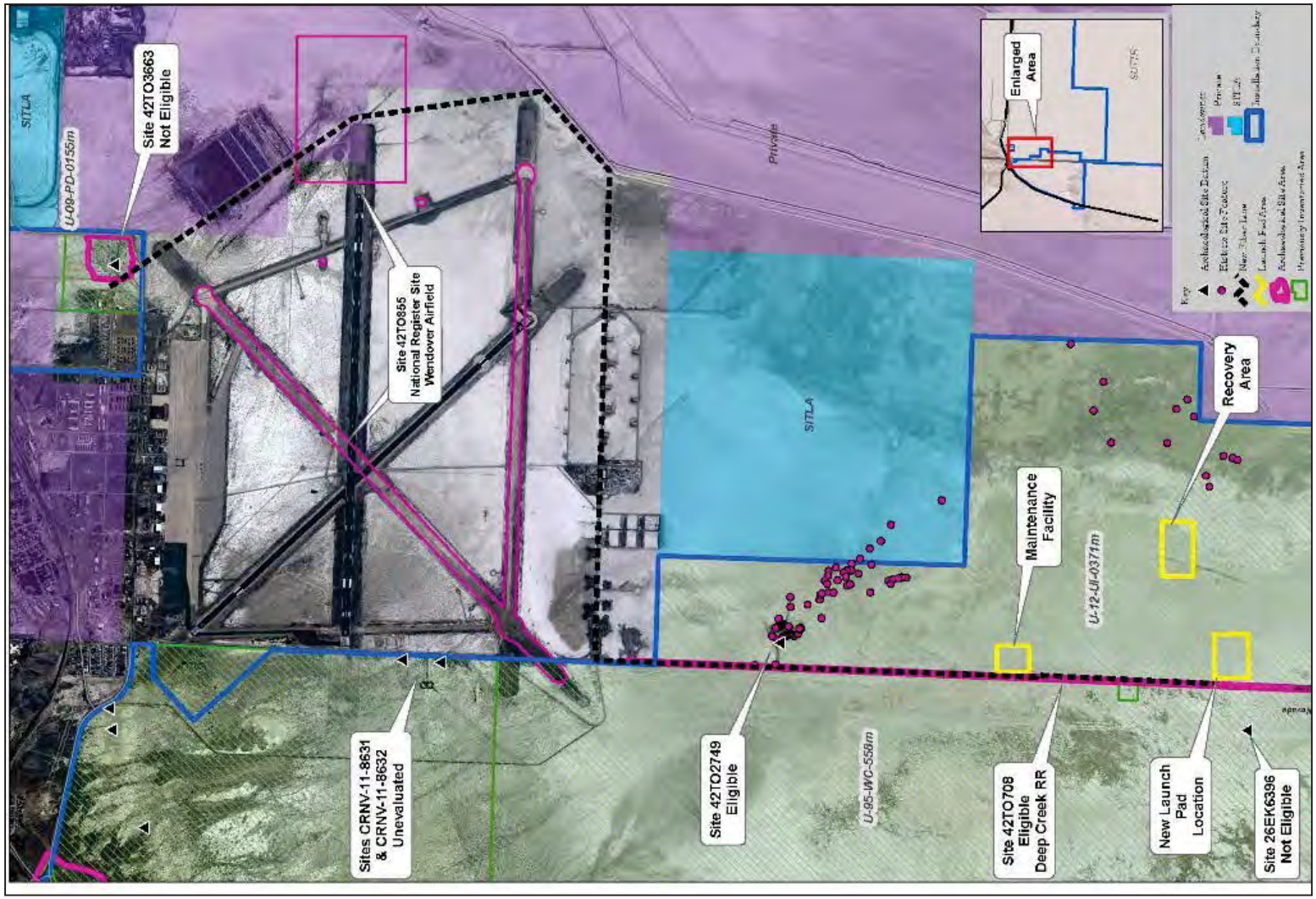
WSEP Launch Pad and MOA Expansion

75TH AIR BASE WING

- SHPO coordinated with on historic eligible site
  - No Adverse Effect
- Facility and infrastructure currently under construction
- Military Operating Space (MOA)
  - New launch facility requires expansion of MOA by 3,445 Acres
  - Required to accommodate the launch and recovery of unmanned aircraft into and out of the adjacent airspace
  - Operating period proposed is four periods annually; not to exceed one week per period

WSEP Launch Pad

75TH AIR BASE WING



HILL AIR FORCE BASE
CURRENT AND UPCOMING PROJECTS
2016 ANNUAL AMERICAN INDIAN MEETING

UTAH TEST AND TRAINING RANGE (UTTR) PROJECTS

[redacted]

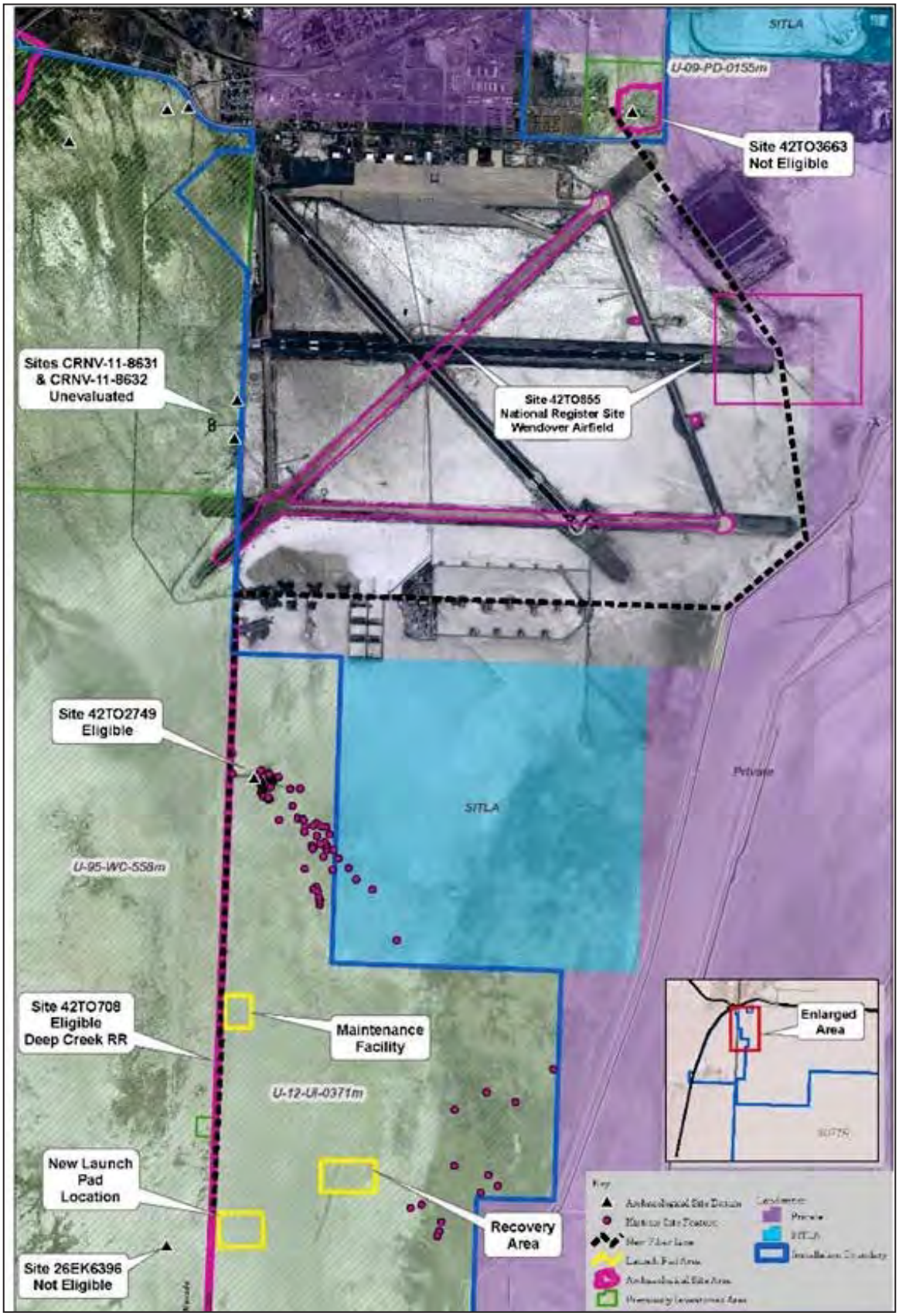
2. UTTR Fiber Line Expansion
    a. On Range Fiber Line
        i. Work completed during 2015 field season
        ii. No archaeological resources found
        iii. Final report forwarded to tribes 31 May 2016
    b. Off Range Fiber Line
        i. Work being completed during 2016 field season
        ii. BLM is Section 106 Lead as most of the work is on their property
        iii. Hill will maintain oversight and assure that any concerns from the tribe are addressed

3. Weapons System Evaluation Program (WSEP) Launch Pad and MOA Expansion (See Attachment 2 & 3)
    a. Launch Pad APE previously surveyed – one eligible historic site
        i. SHPO consulted to impact; work will be No Adverse Effect to site
        ii. Facility and infrastructure currently under construction
    b. Military Operating Space (MOA)
        i. New launch facility requires expansion of MOA by 3,445 Acres
        ii. Required to accommodate the launch and recovery of unmanned aircraft into and out of the adjacent airspace
        iii. Operating period proposed is four periods annually; not to exceed one week per period

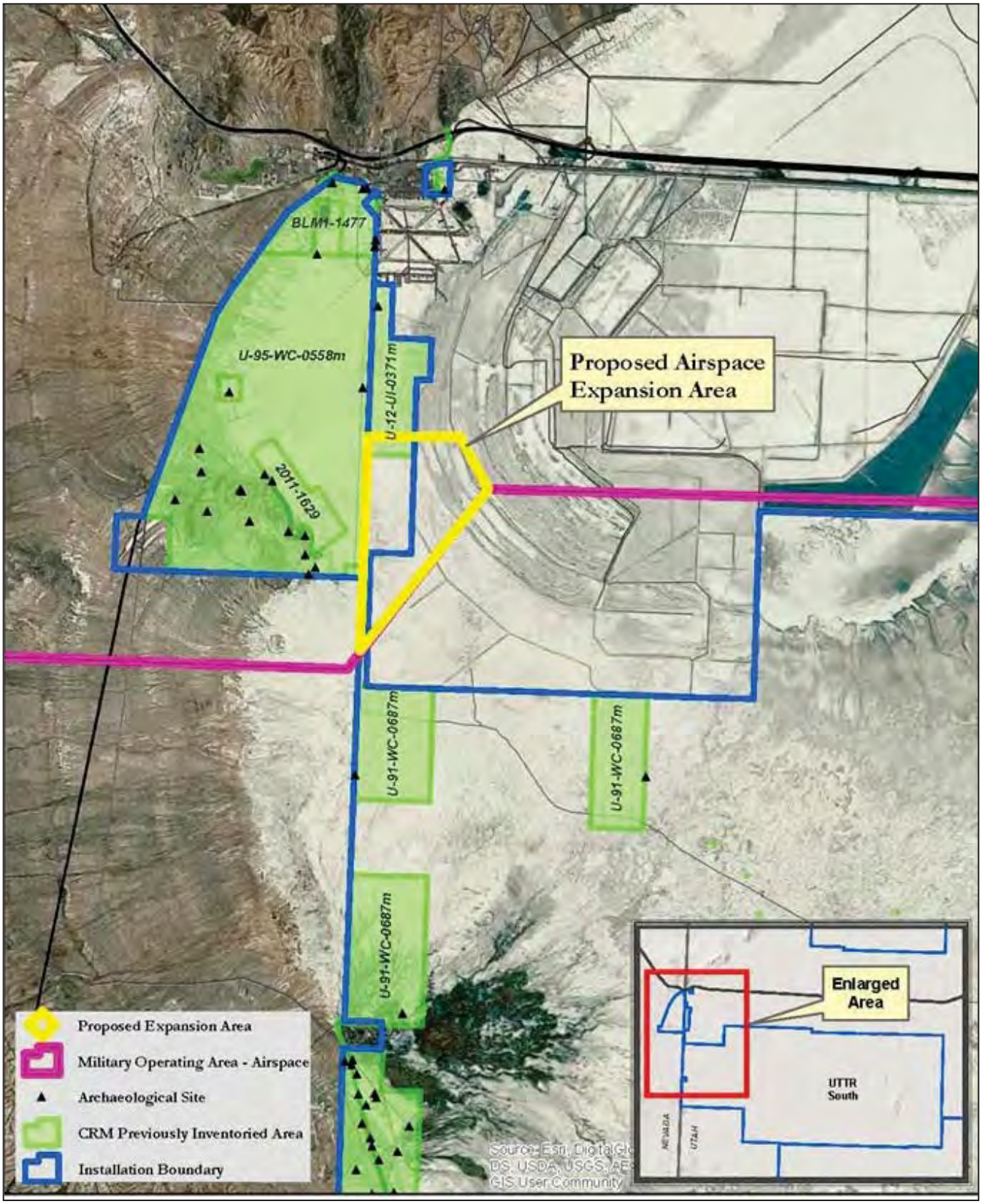
4. [redacted]

5. [redacted]

Attachment 2: WSEP Launch Pad Project Map



Attachment 3: MOA Expansion Map



DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

12 August 2016

Mr. Allen Fry
Chief, Installation Management Division
5713 Lahm Lane, Building 593N
Hill Air Force Base, Utah 84056-5137

Virgil W. Johnson
Chairman, Confederated Tribes of the Goshute Reservation
PO Box 6104
Ibapah, UT 83034

Dear Chairman Johnson,

The United States Air Force (USAF) proposes to create a new restricted airspace (R-6401) of approximately 3, 445 acres for use by the Headquarters UTTR and other USAF missions. This new area is adjacent to its current Military Operations Area (MOA) and restricted airspace (R-6405). The Headquarters UTTR is based at Hill Air Force Base (AFB), Utah and operates properties in the west desert. This work is proposed in order to accommodate the launch and recovery of unmanned aircraft into and out of the adjoining airspace (R-6405). The current launch facility limits the opportunity for future Full-Scale Aerial Target options due to its location on Army property and inability to support full scale testing. In addition, the expanded airspace required for the new launch facility (previously consulted on with tribes) will provide a larger safety area for launch and recovery. The expected utilization of the airspace and launch facility would be four periods annually, not to exceed one week per period.

Although the proposed undertaking would result in aerial target launch and recover procedures, none of the activities will adversely affect historic properties in the APE. The relatively short flight time in the area roughly around 20 min for launch and recover procedures would result in negligible change to the visual setting. There would be an imperceptible change in subsonic noise due to the proposed action. Finally, the location of flight operations and the short time span would ensure that there would be no adverse effect to historic structures.

Should you or your staff have any questions about the project, please contact our Cultural Resource Manager, Ms. Anya Kitterman, 75th CEG/CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely,

Allen W. Fry
Chief, Installation Management Division
Installation Tribal Liaison Officer

Attachments:
1. Location Map of proposed Military Operating Space Expansion

DISTRIBUTION LIST
Confederated Tribes of the Goshute Reservation
Skull Valley Band of the Goshute Indians
Northwestern Band of the Shoshone Nation

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

12 August 2016

Mr. Allen Fry
Chief, Installation Management Division
5713 Lahm Lane, Building 593N
Hill Air Force Base, Utah 84056-5137

Shane Warner
Chairman, Northwestern Band of Shoshone Nation
707 North Main Street
Brigham City, UT 84302

Dear Chairman Warner,

The United States Air Force (USAF) proposes to create a new restricted airspace (R-6401) of approximately 3, 445 acres for use by the Headquarters UTTR and other USAF missions. This new area is adjacent to its current Military Operations Area (MOA) and restricted airspace (R-6405). The Headquarters UTTR is based at Hill Air Force Base (AFB), Utah and operates properties in the west desert. This work is proposed in order to accommodate the launch and recovery of unmanned aircraft into and out of the adjoining airspace (R-6405). The current launch facility limits the opportunity for future Full-Scale Aerial Target options due to its location on Army property and inability to support full scale testing. In addition, the expanded airspace required for the new launch facility (previously consulted on with tribes) will provide a larger safety area for launch and recovery. The expected utilization of the airspace and launch facility would be four periods annually, not to exceed one week per period.

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Should you or your staff have any questions about the project, please contact our Cultural Resource Manager, Ms. Anya Kitterman, 75th CEG/CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely,

Allen W. Fry
Chief, Installation Management Division
Installation Tribal Liaison Officer

Attachments:
1. Location Map of proposed Military Operating Space Expansion

DISTRIBUTION LIST
Confederated Tribes of the Goshute Reservation
Skull Valley Band of the Goshute Indians
Northwestern Band of the Shoshone Nation

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

12 August 2016

Mr. Allen Fry
Chief, Installation Management Division
5713 Lahm Lane, Building 593N
Hill Air Force Base, Utah 84056-5137

Patty Timbimboo-Madsen
Cultural Resources Director, Northwestern Band of Shoshone Nation
707 North Main Street
Brigham City, UT 84302

Dear Ms. Timbimboo-Madsen,

The United States Air Force (USAF) proposes to create a new restricted airspace (R-6401) of approximately 3, 445 acres for use by the Headquarters UTTR and other USAF missions. This new area is adjacent to its current Military Operations Area (MOA) and restricted airspace (R-6405). The Headquarters UTTR is based at Hill Air Force Base (AFB), Utah and operates properties in the west desert. This work is proposed in order to accommodate the launch and recovery of unmanned aircraft into and out of the adjoining airspace (R-6405). The current launch facility limits the opportunity for future Full-Scale Aerial Target options due to its location on Army property and inability to support full scale testing. In addition, the expanded airspace required for the new launch facility (previously consulted on with tribes) will provide a larger safety area for launch and recovery. The expected utilization of the airspace and launch facility would be four periods annually, not to exceed one week per period.

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Should you or your staff have any questions about the project, please contact our Cultural Resource Manager, Ms. Anya Kitterman, 75th CEG/CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely,

Allen W. Fry
Chief, Installation Management Division
Installation Tribal Liaison Officer

Attachments:
1. Location Map of proposed Military Operating Space Expansion

DISTRIBUTION LIST
Confederated Tribes of the Goshute Reservation
Skull Valley Band of the Goshute Indians
Northwestern Band of the Shoshone Nation

DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

12 August 2016

Mr. Allen Fry
Chief, Installation Management Division
5713 Lahm Lane, Building 593N
Hill Air Force Base, Utah 84056-5137

Candace Bear
Chairwoman, Skull Valley Band of Goshute Indians
PO Box 448
Grantsville, UT 84029

Dear Chairwoman Bear,

The United States Air Force (USAF) proposes to create a new restricted airspace (R-6401) of approximately 3, 445 acres for use by the Headquarters UTTR and other USAF missions. This new area is adjacent to its current Military Operations Area (MOA) and restricted airspace (R-6405). The Headquarters UTTR is based at Hill Air Force Base (AFB), Utah and operates properties in the west desert. This work is proposed in order to accommodate the launch and recovery of unmanned aircraft into and out of the adjoining airspace (R-6405). The current launch facility limits the opportunity for future Full-Scale Aerial Target options due to its location on Army property and inability to support full scale testing. In addition, the expanded airspace required for the new launch facility (previously consulted on with tribes) will provide a larger safety area for launch and recovery. The expected utilization of the airspace and launch facility would be four periods annually, not to exceed one week per period.

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Should you or your staff have any questions about the project, please contact our Cultural Resource Manager, Ms. Anya Kitterman, 75th CEG/CEIE, at (801) 586-2464 or at anya.kitterman@us.af.mil.

Sincerely,

Allen W. Fry
Chief, Installation Management Division
Installation Tribal Liaison Officer

Attachments:
1. Location Map of proposed Military Operating Space Expansion

DISTRIBUTION LIST
Confederated Tribes of the Goshute Reservation
Skull Valley Band of the Goshute Indians
Northwestern Band of the Shoshone Nation

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Appendix E

USFWS Correspondence and Special Status Species

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USFWS CORRESPONDENCE

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
Phone: (775) 861-6300 Fax: (775) 861-6301
http://www.fws.gov/nevada/

In Reply Refer To: July 13, 2020
Consultation Code: 08ENVD00-2020-SLI-0498
Event Code: 08ENVD00-2020-E-01398
Project Name: UTTR

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list indicates threatened, endangered, proposed, and candidate species and designated or proposed critical habitat that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act of 1973, as amended (ESA, 16 U.S.C. 1531 *et seq*.), for projects that are authorized, funded, or carried out by a Federal agency. Candidate species have no protection under the ESA but are included for consideration because they could be listed prior to the completion of your project. Consideration of these species during project planning may assist species conservation efforts and may prevent the need for future listing actions. For additional information regarding species that may be found in the proposed project area, visit http://www.fws.gov/nevada/es/ipac.html.

The purpose of the ESA is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the ESA and its implementing regulations (50 CFR 402 *et seq*.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or

designated or proposed critical habitat. Guidelines for preparing a Biological Assessment can be found at: http://www.fws.gov/midwest/endangered/section7/ba_guide.html.

If a Federal action agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this species list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally listed, proposed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally, as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation, for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the attached list.

The Nevada Fish and Wildlife Office (NFWO) no longer provides species of concern lists. Most of these species for which we have concern are also on the Animal and Plant At-Risk Tracking List for Nevada (At-Risk list) maintained by the State of Nevada's Natural Heritage Program (Heritage). Instead of maintaining our own list, we adopted Heritage's At-Risk list and are partnering with them to provide distribution data and information on the conservation needs for at-risk species to agencies or project proponents. The mission of Heritage is to continually evaluate the conservation priorities of native plants, animals, and their habitats, particularly those most vulnerable to extinction or in serious decline. In addition, in order to avoid future conflicts, we ask that you consider these at-risk species early in your project planning and explore management alternatives that provide for their long-term conservation.

For a list of at-risk species by county, visit Heritage's website (http://heritage.nv.gov). For a specific list of at-risk species that may occur in the project area, you can obtain a data request form from the website (http://heritage.nv.gov/get_data) or by contacting the Administrator of Heritage at 901 South Stewart Street, Suite 5002, Carson City, Nevada 89701-5245, (775) 684-2900. Please indicate on the form that your request is being obtained as part of your coordination with the Service under the ESA. During your project analysis, if you obtain new information or data for any Nevada sensitive species, we request that you provide the information to Heritage at the above address.

Furthermore, certain species of fish and wildlife are classified as protected by the State of Nevada (http://www.leg.state.nv.us/NAC/NAC-503.html). You must first obtain the appropriate license, permit, or written authorization from the Nevada Department of Wildlife (NDOW) to take, or possess any parts of protected fish and wildlife species. Please visit http://www.ndow.org or contact NDOW in northern Nevada (775) 688-1500, in southern Nevada (702) 486-5127, or in eastern Nevada (775) 777-2300.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq*.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Service's wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

The Service's Pacific Southwest Region developed the *Interim Guidelines for the Development of a Project Specific Avian and Bat Protection Plan for Wind Energy Facilities* (Interim Guidelines). This document provides energy facility developers with a tool for assessing the risk of potential impacts to wildlife resources and delineates how best to design and operate a bird- and bat-friendly wind facility. These Interim Guidelines are available upon request from the NFWO. The intent of a Bird and Bat Conservation Strategy is to conserve wildlife resources while supporting project developers through: (1) establishing project development in an adaptive management framework; (2) identifying proper siting and project design strategies; (3) designing and implementing pre-construction surveys; (4) implementing appropriate conservation measures for each development phase; (5) designing and implementing appropriate post-construction monitoring strategies; (6) using post-construction studies to better understand the dynamics of mortality reduction (*e.g.*, changes in blade cut-in speed, assessments of blade “feathering” success, and studies on the effects of visual and acoustic deterrents) including efforts tied into Before-After/Control-Impact analysis; and (7) conducting a thorough risk assessment and validation leading to adjustments in management and mitigation actions.

The template and recommendations set forth in the Interim Guidelines were based upon the Avian Powerline Interaction Committee's Avian Protection Plan template (http://www.aplic.org/) developed for electric utilities and modified accordingly to address the unique concerns of wind energy facilities. These recommendations are also consistent with the Service's wind energy guidelines. We recommend contacting us as early as possible in the planning process to discuss the need and process for developing a site-specific Bird and Bat Conservation Strategy.

The Service has also developed guidance regarding wind power development in relation to prairie grouse leks (sage-grouse are included in this). This document can be found at: http://www.fws.gov/southwest/es/Oklahoma/documents/te_species/wind%20power/prairie%20grouse%20lek%205%20mile%20public.pdf.

Migratory Birds are a Service Trust Resource. Based on the Service's conservation responsibilities and management authority for migratory birds under the Migratory Bird Treaty Act of 1918, as amended (MBTA; 16 U.S.C. 703 *et seq*.), we recommend that any land clearing or other surface disturbance associated with proposed actions within the project area be timed to

avoid potential destruction of bird nests or young, or birds that breed in the area. Such destruction may be in violation of the MBTA. Under the MBTA, nests with eggs or young of migratory birds may not be harmed, nor may migratory birds be killed. Therefore, we recommend land clearing be conducted outside the avian breeding season. If this is not feasible, we recommend a qualified biologist survey the area prior to land clearing. If nests are located, or if other evidence of nesting (*i.e.*, mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active.

Guidance for minimizing impacts to migratory birds for projects involving communications towers (*e.g.*, cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

If wetlands, springs, or streams are are known to occur in the project area or are present in the vicinity of the project area, we ask that you be aware of potential impacts project activities may have on these habitats. Discharge of fill material into wetlands or waters of the United States is regulated by the U.S. Army Corps of Engineers (ACOE) pursuant to section 404 of the Clean Water Act of 1972, as amended. We recommend you contact the ACOE's Regulatory Section regarding the possible need for a permit. For projects located in northern Nevada (Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, and Washoe Counties) contact the Reno Regulatory Office at 300 Booth Street, Room 3060, Reno, Nevada 89509, (775) 784-5304; in southern Nevada (Clark, Lincoln, Nye, and White Pine Counties) contact the St. George Regulatory Office at 321 North Mall Drive, Suite L-101, St. George, Utah 84790-7314, (435) 986-3979; or in California along the eastern Sierra contact the Sacramento Regulatory Office at 650 Capitol Mall, Suite 5-200, Sacramento, California 95814, (916) 557-5250.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

The table below outlines lead FWS field offices by county and land ownership/project type. Please refer to this table when you are ready to coordinate (including requests for section 7 consultation) with the field office corresponding to your project, and send any documentation regarding your project to that corresponding office. Therefore, the lead FWS field office may not be the office listed above in the letterhead.

Lead FWS offices by County and Ownership/Program

County	Ownership/Program	Species	Office Lead*

Alameda	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Alameda	All ownerships but tidal/estuarine	All	SFWO
Alpine	Humboldt Toiyabe National Forest	All	RFWO
Alpine	Lake Tahoe Basin Management Unit	All	RFWO
Alpine	Stanislaus National Forest	All	SFWO
Alpine	El Dorado National Forest	All	SFWO
Colusa	Mendocino National Forest	All	AFWO
Colusa	Other	All	By jurisdiction (see map)
Contra Costa	Legal Delta (Excluding ECCHCP)	All	BDFWO
Contra Costa	Antioch Dunes NWR	All	BDFWO
Contra Costa	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Contra Costa	All ownerships but tidal/estuarine	All	SFWO
Del Norte	All	All	AFWO
El Dorado	El Dorado National Forest	All	SFWO
El Dorado	LakeTahoe Basin Management Unit		RFWO
Glenn	Mendocino National Forest	All	AFWO
Glenn	Other	All	By jurisdiction (see map)
Humboldt	All except Shasta Trinity National Forest	All	AFWO

Humboldt	Shasta Trinity National Forest	All	YFWO
Lake	Mendocino National Forest	All	AFWO
Lake	Other	All	By jurisdiction (see map)
Lassen	Modoc National Forest	All	KFWO
Lassen	Lassen National Forest	All	SFWO
Lassen	Toiyabe National Forest	All	RFWO
Lassen	BLM Surprise and Eagle Lake Resource Areas	All	RFWO
Lassen	BLM Alturas Resource Area	All	KFWO
Lassen	Lassen Volcanic National Park	All (includes Eagle Lake trout on all ownerships)	SFWO
Lassen	All other ownerships	All	By jurisdiction (see map)
Marin	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Marin	All ownerships but tidal/estuarine	All	SFWO
Mendocino	Russian River watershed	All	SFWO
Mendocino	All except Russian River watershed	All	AFWO
Modoc	Modoc National Forest	All	KFWO
Modoc	BLM Alturas Resource Area	All	KFWO
Modoc	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Modoc	BLM Surprise and Eagle Lake Resource Areas	All	RFWO

Modoc	All other ownerships	All	By jurisdiction (See map)
Mono	Inyo National Forest	All	RFWO
Mono	Humboldt Toiyabe National Forest	All	RFWO
Napa	All ownerships but tidal/estuarine	All	SFWO
Napa	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Nevada	Humboldt Toiyabe National Forest	All	RFWO
Nevada	All other ownerships	All	By jurisdiction (See map)
Placer	Lake Tahoe Basin Management Unit	All	RFWO
Placer	All other ownerships	All	SFWO
Sacramento	Legal Delta	Delta Smelt	BDFWO
Sacramento	Other	All	By jurisdiction (see map)
San Francisco	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Francisco	All ownerships but tidal/estuarine	All	SFWO
San Mateo	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Mateo	All ownerships but tidal/estuarine	All	SFWO
San Joaquin	Legal Delta excluding San Joaquin HCP	All	BDFWO

San Joaquin	Other	All	SFWO
Santa Clara	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
Santa Clara	All ownerships but tidal/estuarine	All	SFWO
Shasta	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Shasta	Hat Creek Ranger District	All	SFWO
Shasta	Bureau of Reclamation (Central Valley Project)	All	BDFWO
Shasta	Whiskeytown National Recreation Area	All	YFWO
Shasta	BLM Alturas Resource Area	All	KFWO
Shasta	Caltrans	By jurisdiction	SFWO/AFWO
Shasta	Ahjumawi Lava Springs State Park	Shasta crayfish	SFWO
Shasta	All other ownerships	All	By jurisdiction (see map)
Shasta	Natural Resource Damage Assessment, all lands	All	SFWO/BDFWO
Sierra	Humboldt Toiyabe National Forest	All	RFWO
Sierra	All other ownerships	All	SFWO
Siskiyou	Klamath National Forest (except Ukonom District)	All	YFWO
Siskiyou	Six Rivers National Forest and Ukonom District	All	AFWO
Siskiyou	Shasta Trinity National Forest	All	YFWO

Siskiyou	Lassen National Forest	All	SFWO
Siskiyou	Modoc National Forest	All	KFWO
Siskiyou	Lava Beds National Volcanic Monument	All	KFWO
Siskiyou	BLM Alturas Resource Area	All	KFWO
Siskiyou	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Siskiyou	All other ownerships	All	By jurisdiction (see map)
Solano	Suisun Marsh	All	BDFWO
Solano	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Solano	All ownerships but tidal/estuarine	All	SFWO
Solano	Other	All	By jurisdiction (see map)
Sonoma	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Sonoma	All ownerships but tidal/estuarine	All	SFWO
Tehama	Mendocino National Forest	All	AFWO
Tehama	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Tehama	All other ownerships	All	By jurisdiction (see map)
Trinity	BLM	All	AFWO
Trinity	Six Rivers National Forest	All	AFWO
Trinity	Shasta Trinity National Forest	All	YFWO

Trinity	Mendocino National Forest	All	AFWO
Trinity	BIA (Tribal Trust Lands)	All	AFWO
Trinity	County Government	All	AFWO
Trinity	All other ownerships	All	By jurisdiction (See map)
Yolo	Yolo Bypass	All	BDFWO
Yolo	Other	All	By jurisdiction (see map)
All	FERC-ESA	All	By jurisdiction (see map)
All	FERC-ESA	Shasta crayfish	SFWO
All	FERC-Relicensing (non-ESA)	All	BDFWO

***Office Leads:**

AFWO=Arcata Fish and Wildlife Office

BDFWO=Bay Delta Fish and Wildlife Office

KFWO=Klamath Falls Fish and Wildlife Office

RFWO=Reno Fish and Wildlife Office

YFWO=Yreka Fish and Wildlife Office

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
(775) 861-6300

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

Utah Ecological Services Field Office
2369 West Orton Circle, Suite 50
West Valley City, UT 84119-7603
(801) 975-3330

Project Summary

Consultation Code: 08ENVD00-2020-SLI-0498

Event Code: 08ENVD00-2020-E-01398

Project Name: UTTR

Project Type: MILITARY OPERATIONS / MANEUVERS

Project Description: ENVIRONMENTAL ASSESSMENT FOR ESTABLISHING RESTRICTED AREA (R-6401) AND OPERATION OF UNMANNED AIRCRAFT, WENDOVER, UTAH

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/40.95224692589943N113.22068828231443W

Counties: Box Elder, UT | Tooele, UT

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Fishes

NAME	STATUS
Lahontan Cutthroat Trout *Oncorhynchus clarkii henshawi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3964 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/233/office/14320.pdf	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Brewer's Sparrow *Spizella breweri* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9291	Breeds May 15 to Aug 10
Green-tailed Towhee *Pipilo chlorurus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9444	Breeds May 1 to Aug 10

NAME	BREEDING SEASON
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Sage Thrasher *Oreoscoptes montanus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9433	Breeds Apr 15 to Aug 10
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5
Willow Flycatcher *Empidonax traillii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/3482	Breeds May 20 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

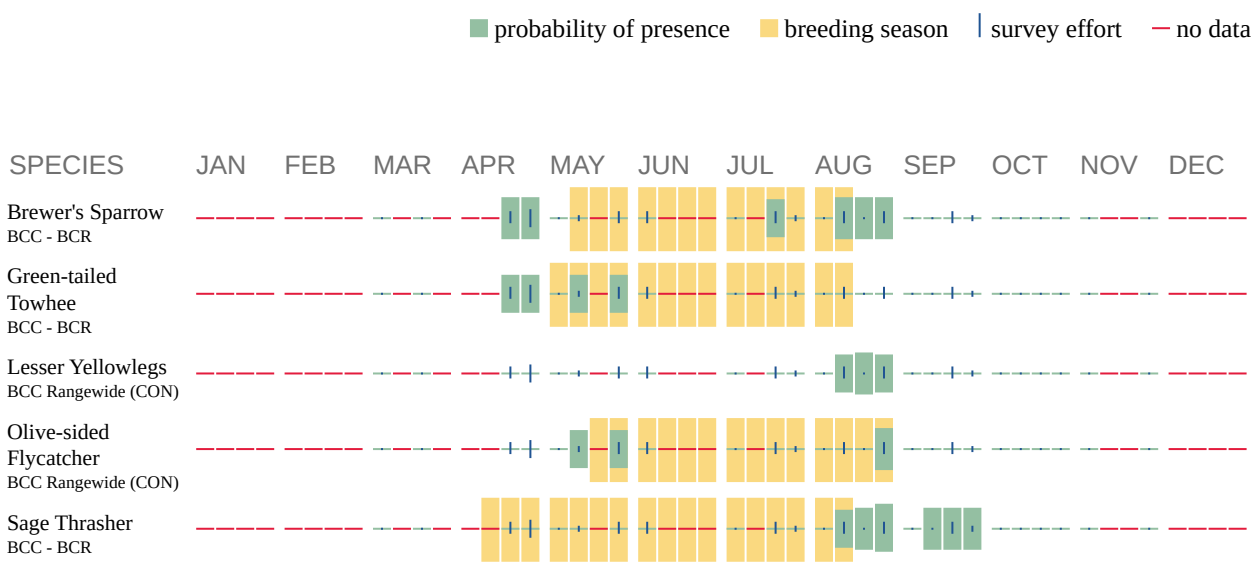
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

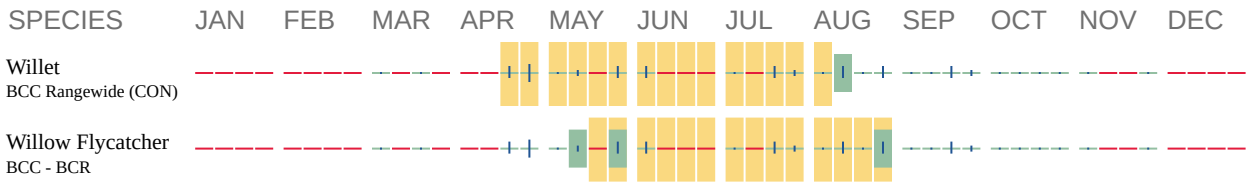
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.
Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- PEM1C
- PEM1A
- PEM1B

FRESHWATER FORESTED/SHRUB WETLAND

- PSS1B
- PSS1A
- PSSC

LAKE

- L2USJ

RIVERINE

- R5UBH
- R4SBC
- R4SBA
- R4SBJ

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Utah Ecological Services Field Office
2369 West Orton Circle, Suite 50
West Valley City, UT 84119-7603
Phone: (801) 975-3330 Fax: (801) 975-3331
http://www.fws.gov
http://www.fws.gov/utahfieldoffice/

In Reply Refer To: July 13, 2020
Consultation Code: 06E23000-2020-SLI-0720
Event Code: 06E23000-2020-E-01657
Project Name: UTTR

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Utah Ecological Services Field Office
2369 West Orton Circle, Suite 50
West Valley City, UT 84119-7603
(801) 975-3330

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
(775) 861-6300

Project Summary

Consultation Code: 06E23000-2020-SLI-0720

Event Code: 06E23000-2020-E-01657

Project Name: UTTR

Project Type: MILITARY OPERATIONS / MANEUVERS

Project Description: ENVIRONMENTAL ASSESSMENT FOR ESTABLISHING RESTRICTED AREA (R-6401) AND OPERATION OF UNMANNED AIRCRAFT, WENDOVER, UTAH

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/40.95224692589943N113.22068828231443W

Counties: Box Elder, UT | Tooele, UT

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **proposed** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/6901/office/65411.pdf	Threatened

Fishes

NAME	STATUS
Lahontan Cutthroat Trout *Oncorhynchus clarkii henshawi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3964	Threatened

Flowering Plants

NAME	STATUS
Ute Ladies'-tresses *Spiranthes diluvialis*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/2159
Species survey guidelines:
https://ecos.fws.gov/ipac/guideline/survey/population/1073/office/65411.pdf

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

The following FWS National Wildlife Refuge Lands and Fish Hatcheries lie fully or partially within your project area:

FACILITY NAME	ACRES
Bear River Migratory Bird Refuge **Bear River Migratory Bird Refuge** 2155 West Forest Street Brigham City, UT 84302-4426 (435) 723-5887 https://www.fws.gov/refuges/profiles/index.cfm?id=65530	78,400

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Black Rosy-finch *Leucosticte atrata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9460	Breeds Jun 15 to Aug 31

NAME	BREEDING SEASON
Brewer's Sparrow *Spizella breweri* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9291	Breeds May 15 to Aug 10
Burrowing Owl *Athene cunicularia* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9737	Breeds Mar 15 to Aug 31
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31
Golden Eagle *Aquila chrysaetos* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Gray Vireo *Vireo vicinior* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8680	Breeds May 10 to Aug 20
Green-tailed Towhee *Pipilo chlorurus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9444	Breeds May 1 to Aug 10
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Lewis's Woodpecker *Melanerpes lewis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Long-billed Curlew *Numenius americanus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5511	Breeds Apr 1 to Jul 31
Long-eared Owl *asio otus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3631	Breeds Mar 1 to Jul 15

NAME	BREEDING SEASON
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Pinyon Jay *Gymnorhinus cyanocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9420	Breeds Feb 15 to Jul 15
Rufous Hummingbird *selasphorus rufus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds elsewhere
Sage Thrasher *Oreoscoptes montanus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9433	Breeds Apr 15 to Aug 10
Virginia's Warbler *Vermivora virginiae* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9441	Breeds May 1 to Jul 31
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5
Williamson's Sapsucker *Sphyrapicus thyroideus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8832	Breeds May 1 to Jul 31
Willow Flycatcher *Empidonax traillii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/3482	Breeds May 20 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

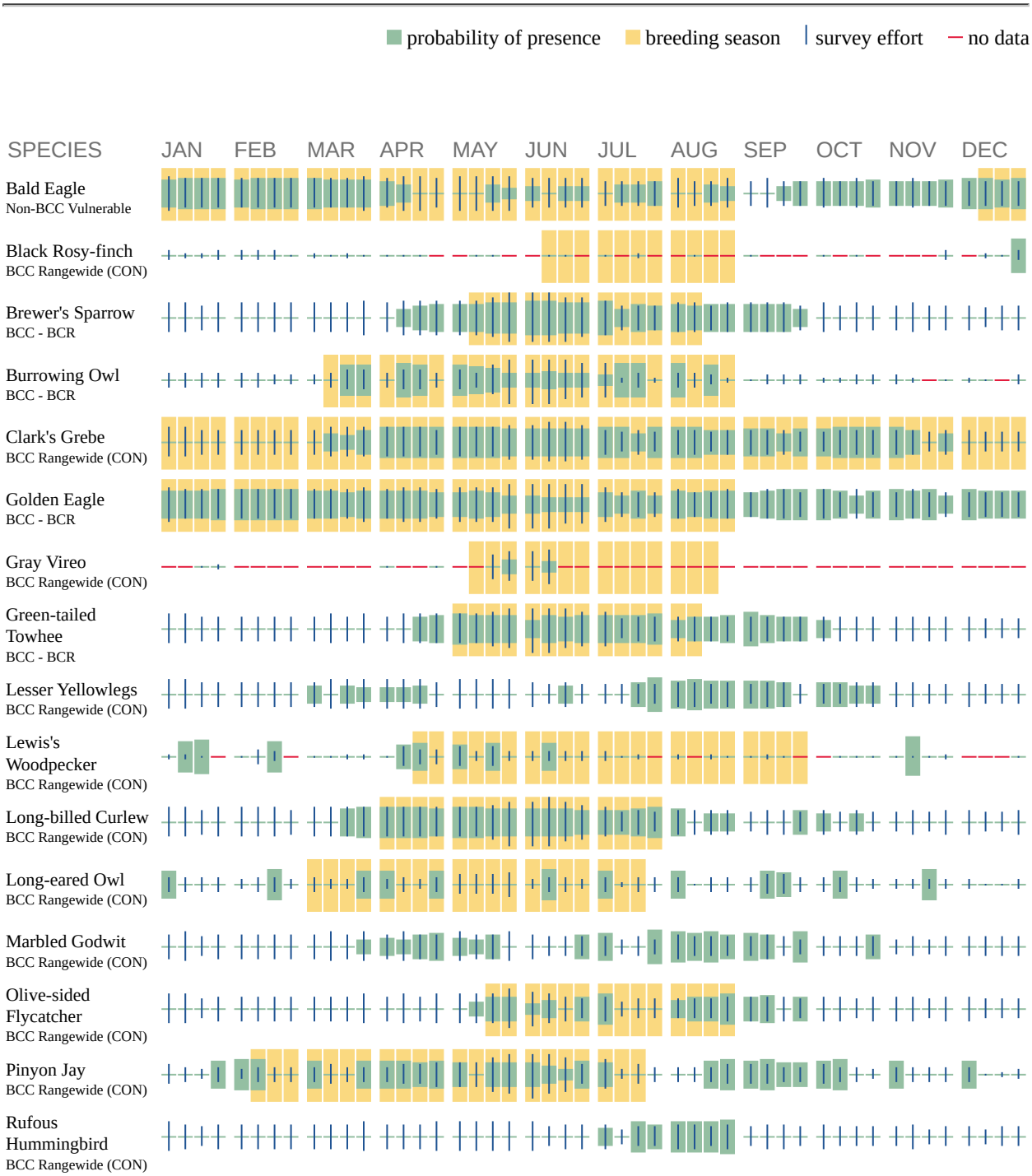
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

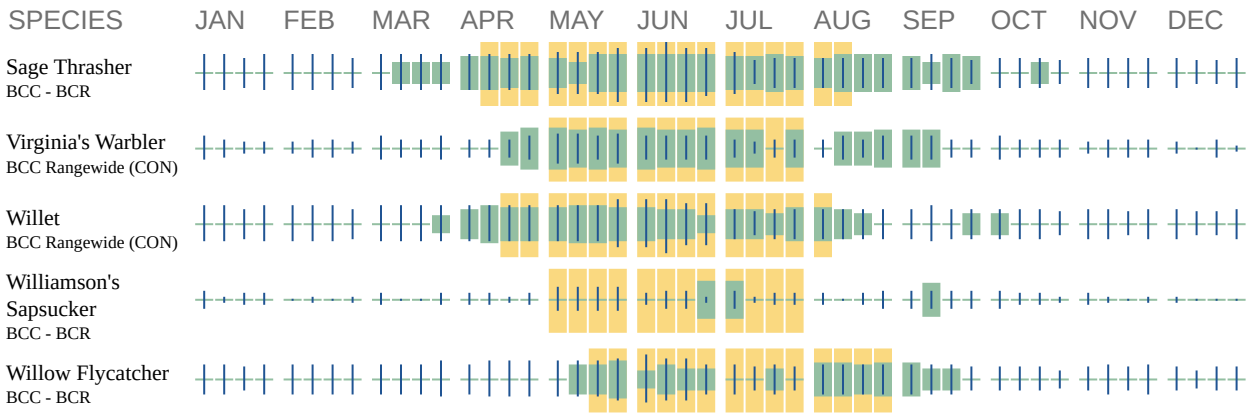
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.
Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as

warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can

implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

STATE SPECIES LIST

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Utah's State Listed Species by County

Disclaimer: This list was compiled using known species occurrences and species observations from the Utah Natural Heritage Program's Biodiversity Tracking and Conservation System (BIOTICS); other species of special concern likely occur in Utah Counties. This list includes both current and historic records. (Last updated on November 1, 2017).

Beaver County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Big Free-tailed Bat	Nyctinomops macrotis	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Burrowing Owl	Athene cunicularia	SPC
Dark Kangaroo Mouse	Microdipodops megacephalus	SPC
Ferruginous Hawk	Buteo regalis	SPC
Fringed Myotis	Myotis thysanodes	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Hamlin Valley Pyrg	Pyrgulopsis hamlinensis	SPC
Kit Fox	Vulpes macrotis	SPC
Least Chub	Iotichthys phlegethontis	CS
Long-billed Curlew	Numenius americanus	SPC
Northern Goshawk	Accipiter gentilis	CS
Pygmy Rabbit	Brachylagus idahoensis	SPC
Short-eared Owl	Asio flammeus	SPC
Southern Leatherside Chub	Lepidomeda aliciae	SPC
Spotted Bat	Euderma maculatum	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Utah Prairie Dog	Cynomys parvidens	S-ESA
Western Toad	Bufo anaxyrus	SPC

Box Elder County

Common Name	Scientific Name	State Status
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Bluehead Sucker	Catostomus discobolus	CS
Bobolink	Dolichonyx oryzivorus	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Burrowing Owl	Athene cunicularia	SPC
California Floater	Anodonta californiensis	SPC
Columbian Sharp-tailed Grouse	Tympanuchus phasianellus columbianus	SPC
Deseret Mountainsnail	Oreohelix peripherica	SPC
Ferruginous Hawk	Buteo regalis	SPC
Grasshopper Sparrow	Ammodramus savannarum	SPC
Gray Wolf - Historically	Canis lupus	S-ESA

Sevier - continued

Common Name	Scientific Name	State Status
Smooth Glenwood Pyrg	Pyrgulopsis chamberlini	SPC
Southern Leatherside Chub	Lepidomeda aliciae	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Utah Prairie Dog	Cynomys parvidens	S-ESA
Western Toad	Bufo anaxyrus	SPC

Summit County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Bluehead Sucker	Catostomus discobolus	CS
Bobolink	Dolichonyx oryzivorus	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Brown (Grizzly) Bear -Historically	Ursus arctos	S-ESA
Canada Lynx - Historically	Lynx canadensis	S-ESA
Colorado River Cutthroat Trout	Oncorhynchus clarkii pleuriticus	CS
Columbia Spotted Frog	Rana luteiventris	CS
Deseret Mountainsnail	Oreohelix peripherica	SPC
Ferruginous Hawk	Buteo regalis	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Lewis's Woodpecker	Melanerpes lewis	SPC
Northern Goshawk	Accipiter gentilis	CS
Northern Leatherside Chub	Lepidomeda copei	SPC
Short-eared Owl	Asio flammeus	SPC
Smooth Greensnake	Opheodrys vernalis	SPC
Western Pearlshell	Margaritifera falcata	SPC
Western Toad	Bufo anaxyrus	SPC
White-tailed Prairie Dog	Cynomys leucurus	SPC

Tooele County

Common Name	Scientific Name	State Status
Allen's Big-eared Bat	Idionycteris phyllotis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Bobolink	Dolichonyx oryzivorus	SPC
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	CS
Burrowing Owl	Athene cunicularia	SPC
California Floater	Anodonta californiensis	SPC
Columbia Spotted Frog	Rana luteiventris	CS
Dark Kangaroo Mouse	Microdipodops megacephalus	SPC
Eureka Mountainsnail	Oreohelix eurekensis	SPC
Ferruginous Hawk	Buteo regalis	SPC
Fringed Myotis	Myotis thysanodes	SPC
Grasshopper Sparrow	Ammodramus savannarum	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC

Tooele County - continued

Common Name	Scientific Name	State Status
Kit Fox	Vulpes macrotis	SPC
Least Chub	Iotichthys phlegethontis	CS
Lewis's Woodpecker	Melanerpes lewis	SPC
Long-billed Curlew	Numenius americanus	SPC
Lyrate Mountainsnail	Oreohelix haydeni	SPC
Northern Goshawk	Accipiter gentilis	CS
Northwest Bonneville Pyrg	Pyrgulopsis variegata	SPC
Preble's Shrew	Sorex preblei	SPC
Pygmy Rabbit	Brachylagus idahoensis	SPC
Short-eared Owl	Asio flammeus	SPC
Southern Bonneville Springsnail	Pyrgulopsis transversa	SPC
Southern Tightcoil	Ogaridiscus subrupicola	SPC
Townsend's Big-eared Bat	Corynorhinus townsendii	SPC
Utah Physa	Physella utahensis	SPC

Uintah County

Common Name	Scientific Name	State Status
American Three-toed Woodpecker	Picoides dorsalis	SPC
American White Pelican	Pelecanus erythrorhynchos	SPC
Bald Eagle	Haliaeetus leucocephalus	SPC
Big Free-tailed Bat	Nyctinomops macrotis	SPC
Black-footed Ferret - Introduced	Mustela nigripes	S-ESA
Bluehead Sucker	Catostomus discobolus	CS
Bobolink	Dolichonyx oryzivorus	SPC
Bonytail	Gila elegans	S-ESA
Brown (Grizzly) Bear - Historically	Ursus arctos	S-ESA
Burrowing Owl	Athene cunicularia	SPC
Canada Lynx	Lynx canadensis	S-ESA
Colorado Pikeminnow	Ptychocheilus lucius	S-ESA
Colorado River Cutthroat Trout	Oncorhynchus clarkii pleuriticus	CS
Cornsnake	Elaphe emoryi	SPC
Ferruginous Hawk	Buteo regalis	SPC
Flannelmouth Sucker	Catostomus latipinnis	CS
Fringed Myotis	Myotis thysanodes	SPC
Greater Sage-grouse	Centrocercus urophasianus	SPC
Humpback Chub	Gila cypha	S-ESA
Kit Fox	Vulpes macrotis	SPC
Lewis's Woodpecker	Melanerpes lewis	SPC
Long-billed Curlew	Numenius americanus	SPC
Mountain Plover	Charadrius montanus	SPC
Northern Goshawk	Accipiter gentilis	CS
Razorback Sucker	Xyrauchen texanus	S-ESA
Roundtail Chub	Gila robusta	CS
Short-eared Owl	Asio flammeus	SPC
Smooth Greensnake	Opheodrys vernalis	SPC

Key to State Status Field

Symbol	Definition
S-ESA	Federally-listed or candidate species under the Endangered Species Act.
SPC	Wildlife species of concern.
CS	Species receiving special management under a Conservation Agreement in order to preclude the need for Federal listing.

BIRD CONSERVATION REGION (BCR) LIST

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BCR 9 (Great Basin) *BCC 2008* list.[9]

Greater Sage-Grouse (Columbia Basin DPS) (a)
Eared Grebe (nb)
Bald Eagle (b)
Ferruginous Hawk
Golden Eagle
Peregrine Falcon (b)
Yellow Rail
Snowy Plover (c)
Long-billed Curlew
Marbled Godwit (nb)
Yellow-billed Cuckoo (w. U.S. DPS) (a)
Flammulated Owl
Black Swift
Calliope Hummingbird
Lewis's Woodpecker
Williamson's Sapsucker
White-headed Woodpecker
Willow Flycatcher (c)
Loggerhead Shrike
Pinyon Jay
Sage Thrasher
Virginia's Warbler
Green-tailed Towhee
Brewer's Sparrow
Black-chinned Sparrow
Sage Sparrow
Tricolored Blackbird
Black Rosy-Finch

9 (a) ESA candidate, (b) ESA delisted, (c) non-listed subspecies or population of Threatened or Endangered species, (d) MBTA protection uncertain or lacking, (nb) non-breeding in this BCR

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Appendix F

Air Quality

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Acronyms and Abbreviations

Acronym	*Definition*
$\mu g/m^3$	Micrograms per cubic meter
CAA	Clean Air Act
CFR	*Code of Federal Regulations*
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalents
DoD	U.S. Department of Defense
ft	Feet
ft^2	Square feet
HDDV	Heavy Duty Diesel Vehicle
HDGV	Heavy Duty Gas Vehicle
Lb	pounds
LDDT	Light Duty Diesel Truck
LDDV	Light Duty Diesel Vehicle
LDGT	Light Duty Gas Truck
LDGV	Light Duty Gas Vehicle
MC	Motorcycle
mg/m^3	Milligrams per cubic meter
NAAQS	National Ambient Air Quality Standards
NEI	National Emissions Inventory
NO_2	Nitrogen dioxide
NO_x	Nitrogen oxides
O_3	Ozone
PM_{10}	particulate matter less than or equal to 10 microns in diameter
$PM_{2.5}$	particulate matter less than or equal to 2.5 microns in diameter
POV	Privately owned vehicle
ppb	Parts per billion
ppm	Parts per million
PSD	Prevention of Significant Deterioration
ROI	region of influence
SO_2	Sulfur dioxides
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound
Yd^3	Cubic yards

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AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

F.1 AIR QUALITY METHODOLOGY AND CALCULATIONS

This appendix presents an overview of the Clean Air Act (CAA) requirements, as well as calculations, including the assumptions used for the air quality analyses presented in the Environmental Assessment.

F.1.1 Air Quality Program Overview

In order to protect public health and welfare, the U.S. Environmental Protection Agency (USEPA) has developed numerical concentration-based standards, or National Ambient Air Quality Standards (NAAQS), for six "criteria" pollutants (based on health-related criteria) under the provisions of the CAA Amendments of 1970. There are two kinds of NAAQS: primary and secondary standards. Primary standards prescribe the maximum permissible concentration in the ambient air to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards prescribe the maximum concentration or level of air quality required to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings (40 *Code of Federal Regulations [CFR]* 50).

The CAA gives states the authority to establish air quality rules and regulations. These rules and regulations must be equivalent to, or more stringent than, the federal program.

Utah has adopted the federal NAAQS as shown in Table F-1. Based on measured ambient air pollutant concentrations, the USEPA designates areas of the United States as having air quality better than the NAAQS (attainment), worse than the NAAQS (nonattainment), and unclassifiable. The areas that cannot be classified (on the basis of available information) as meeting or not meeting the NAAQS for a particular pollutant are "unclassifiable" and are treated as attainment areas until proven otherwise. Attainment areas can be further classified as "maintenance" areas, which are areas previously classified as nonattainment areas but where air pollutant concentrations have been successfully reduced to below the standard. Maintenance areas are subject to special maintenance plans and must operate under some of the nonattainment area plans to ensure compliance with the NAAQS. Portions of Tooele County are classified as being in serious nonattainment for the 2006 $PM_{2.5}$ standard, nonattainment for the 1971 sulfur dioxide standard, and marginal nonattainment for the 8-hour ozone 2015 standard. However, these nonattainment areas are not located outside of the proposed project area. Therefore, a conformity determination is not required for the proposed action.

A general conformity analysis is required to be conducted for areas designated as nonattainment or maintenance of the NAAQS if the action's direct and indirect emissions have a potential to emit one or more of the six criteria pollutants at or above concentrations standards shown in Table F-1 or the *de minimis* emission rate thresholds in Table F-2 or Table F-3.

Table F-1. Summary of National Ambient Air Quality Standards

Pollutants		Primary/Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)		primary	8 hours	9 ppm	Not to be exceeded more than once per year
			1 hour	35 ppm	
Lead (Pb)		primary and secondary	Rolling 3 month average	0.15 $\mu g/m^3$ (1)	Not to be exceeded
Nitrogen Dioxide (NO_2)		primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		primary and secondary	1 year	53 ppb (2)	Annual mean
Ozone (O_3)		primary and secondary	8 hours	0.070 ppm (3)	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution	$PM_{2.5}$	primary	1 year	12.0 $\mu g/m^3$	annual mean, averaged over 3 years
		secondary	1 year	15 $\mu g/m^3$	annual mean, averaged over 3 years
		primary and secondary	24 hours	35 $\mu g/m^3$	98th percentile , averaged over 3 years
	PM_{10}	primary and secondary	24 hours	150 $\mu g/m^3$	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO_2)		primary	1 hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

Source: (U.S. EPA, 2020)

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

Table F-2. Emission Rates for Criteria Pollutants in Nonattainment Areas[1]

Pollutant	*Emission Rate (tons/year)*
Ozone (VOCs or NO_x)	
Serious nonattainment areas	50
Severe nonattainment areas	25
Extreme nonattainment areas	10
Other ozone nonattainment areas outside an ozone transport region	100
Marginal and moderate nonattainment areas inside an ozone transport region	
VOCs	50
NO_x	100
CO: All nonattainment areas	100
SO_2 or NO_2: All nonattainment areas	100
PM_{10}	
Moderate nonattainment areas	100
Serious nonattainment areas	70
$PM_{2.5}$	
Direct emissions	100
SO_2	100
NO_x (unless determined not to be a significant precursor)	100
VOCs or ammonia (if determined to be significant precursors)	100
Pb: All nonattainment areas	25

Source: (U.S. EPA, 2017)

Key: CO = carbon monoxide; NO_2 = nitrogen dioxide; NO_x = nitrogen oxides; VOC = volatile organic compound; Pb = lead; $PM_{2.5}$ = particulate matter with a diameter less than or equal to 2.5 microns; PM_{10} = particulate matter with a diameter less than or equal to 10 microns; SO_2 = sulfur dioxide.

[1] *De minimis* threshold levels for conformity applicability analysis.

Table F-3. Emission Rates for Criteria Pollutants in Attainment (Maintenance) Areas[1]

Pollutant	*Emission Rate (tons/year)*
Ozone (NO_x, SO_2, or NO_2): All maintenance areas	100
Ozone (VOCs)	
Maintenance areas inside an ozone transport region	50
Maintenance areas outside an ozone transport region	100
CO: All maintenance areas	100
PM_{10}: All maintenance areas	100
$PM_{2.5}$	
Direct emissions	100
SO_2	100
NO_x (unless determined not to be a significant precursor)	100
VOCs or ammonia (if determined to be significant precursors)	100
Pb: All maintenance areas	25

Source: (U.S. EPA, 2017)

Key: CO = carbon monoxide; NO_x = nitrogen oxides; VOC = volatile organic compound; Pb = lead; $PM_{2.5}$ = particulate matter with a diameter less than or equal to 2.5 microns; PM_{10} = particulate matter with a diameter less than or equal to 10 microns; SO_2 = sulfur dioxide.

[1] *De minimis* threshold levels for conformity applicability analysis.

Each state is required to develop a State Implementation Plan (SIP) that sets forth how CAA provisions will be imposed within the state. The SIP is the primary means for the implementation, maintenance, and enforcement of the measures needed to attain and maintain the NAAQS within each state and includes control measures, emissions limitations, and other provisions required to attain and maintain the ambient air quality standards. The purpose of the SIP is twofold. First, it must provide a control strategy that will result in the attainment and maintenance of the NAAQS. Second, it must demonstrate that progress is being made in attaining the standards in each nonattainment area.

In attainment areas, major new or modified stationary sources of air emissions on and in the area are subject to Prevention of Significant Deterioration (PSD) review to ensure that these sources are constructed without causing significant adverse deterioration of the clean air in the area. A major new source is defined as one that has the potential to emit any pollutant regulated under the CAA in amounts equal to or exceeding specific major source thresholds, that is, 100 or 250 tons/year based on the source's industrial category. A major modification is a physical change or change in the method of operation at an existing major source that causes a significant "net emissions increase" at that source of any regulated pollutant. Table F-4 lists the PSD significant emissions rate thresholds for selected criteria pollutants (U.S. EPA, 1990).

Table F-4. Criteria Pollutant Significant Emissions Rate Increases Under PSD Regulations

Pollutant	*Significant Emissions Rate (tons/year)*
PM_{10}	15
$PM_{2.5}$	10
Total suspended particulates	25
SO_2	40
NO_x	40
Ozone (VOCs)	40
CO	100

Source: Title 40 CFR Part 51

Key: CO = carbon monoxide; NO_x = nitrogen oxides; VOC = volatile organic compound; Pb = lead; $PM_{2.5}$ = particulate matter with a diameter less than or equal to 2.5 microns; PM_{10} = particulate matter with a diameter less than or equal to 10 microns; PSD = Prevention of Significant Deterioration; SO_2 = sulfur dioxide; VOC = volatile organic compound.

The goals of the PSD program are to (1) ensure economic growth while preserving existing air quality; (2) protect public health and welfare from adverse effects that might occur even at pollutant levels better than the NAAQS; and (3) preserve, protect, and enhance the air quality in areas of special natural recreational, scenic, or historic value, such as national parks and wilderness areas. Sources subject to PSD review are required by the CAA to obtain a permit before commencing construction. The permit process requires an extensive review of all other major sources within a 50-mile radius and all Class I areas within a 62-mile radius of the facility. Emissions from any new or modified source must be controlled using best available control technology. The air quality, in combination with other PSD sources in the area, must not exceed the maximum allowable incremental increase identified in Table F-5. National parks and wilderness areas are designated as Class I areas, where any appreciable deterioration in air quality is considered significant. Class II areas are those where moderate, well-controlled industrial growth could be permitted. Class III areas allow for greater industrial development.

Table F-5. Federal Allowable Pollutant Concentration Increases Under PSD Regulations

Pollutant	*Averaging Time*	*Maximum Allowable Concentration ($\mu g/m^3$)*		
		Class I	*Class II*	*Class III*
PM_{10}	Annual	4	17	34
	24-hour	8	30	60
SO_2	Annual	2	20	40
	24-hour	5	91	182
	3-hour	25	512	700
NO_2	Annual	2.5	25	50

Source: Title 40 CFR Part 51
Key: NO_2 = nitrogen dioxide; PM_{10} = particulate matter with a diameter less than or equal to 10 microns; PSD = Prevention of Significant Deterioration; SO_2 = sulfur dioxide; $\mu g/m^3$ = micrograms per cubic meter.

The Ambient Monitoring Program measures levels of air pollutants throughout the state. The data are used to determine compliance with air standards established for five compounds and to evaluate the need for special controls for various other pollutants.

The air quality monitoring network is used to identify areas where the ambient air quality standards are being violated and plans are needed to reduce pollutant concentration levels to be in attainment with the standards. Also included are areas where the ambient standards are being met, but plans are necessary to ensure maintenance of acceptable levels of air quality in the face of anticipated population or industrial growth.

The result of this attainment/maintenance analysis is the development of local and statewide strategies for controlling emissions of criteria air pollutants from stationary and mobile sources. The first step in this process is the annual compilation of the ambient air monitoring results, and the second step is the analysis of the monitoring data for general air quality, exceedances of air quality standards, and pollutant trends.

F.1.2 Regulatory Comparisons

The CAA Section 176(c), General Conformity, requires federal agencies to demonstrate that their proposed activities would conform to the applicable SIP for attainment of the NAAQS. General Conformity applies only to nonattainment and maintenance areas. If the emissions from a federal action proposed in a nonattainment area exceed annual *de minimis* thresholds identified in the rule, a formal conformity determination is required of that action. The thresholds are more restrictive as the severity of the nonattainment status of the region increases. The criteria pollutants are compared with the region of influence (ROI) emissions (Tooele County), which contains portions of the county that are classified as being in nonattainment for $PM_{2.5}$ and SO_2 standard (U.S. EPA, 2020). However, the proposed project area is not located in the nonattainment areas, so a conformity determination is not required.

For the analysis, in order to evaluate air emissions and their impact on the overall ROI, the emissions associated with the project activities were compared with the total emissions on a pollutant-by-pollutant basis for the ROI's 2017 National Emissions Inventory (NEI) data. Potential impacts to air quality are evaluated with respect to the extent, context, and intensity of the impact in relation to relevant regulations, guidelines, and scientific documentation. The Council on Environmental Quality defines significance in terms of context and intensity in 40 CFR 1508.27. This requires that the significance of the action must be analyzed in respect to the setting of the

proposed action and based relative to the severity of the impact. The Council on Environmental Quality National Environmental Policy Act regulations (40 CFR 1508.27(b)) provide 10 key factors to consider in determining an impact's intensity. To provide a more conservative analysis, the county was selected as the ROI instead of the USEPA-designated Air Quality Control Region, which is a much larger area.

F.1.3 National Emissions Inventory

The NEI is operated under the USEPA's Emission Factor and Inventory Group, which prepares the national database of air emissions information with input from numerous state and local air agencies, tribes, and industries. The database contains information on stationary and mobile sources that emit criteria air pollutants and hazardous air pollutants. The database includes estimates of annual emissions, by source, of air pollutants in each area of the country on a yearly basis. The NEI includes emission estimates for all 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands. Emission estimates for individual point or major sources (facilities), as well as county-level estimates for area, mobile, and other sources, are currently available for years 2014 and 2017 for criteria pollutants and hazardous air pollutants. The 2017 NEI data was last updated July 7, 2020, so those data were used in all analysis.

Criteria air pollutants are those for which the USEPA has set health-based standards. Four of the six criteria pollutants are included in the NEI database:

- Carbon monoxide
- Nitrogen oxides
- Sulfur dioxide
- Particulate matter (with a diameter less than or equal to 10 and 2.5 microns)

The NEI also includes emissions of volatile organic compounds (VOCs), which are ozone precursors, emitted from motor vehicle fuel distribution and chemical manufacturing, as well as other solvent uses. VOCs react with nitrogen oxides in the atmosphere to form ozone. The NEI database defines three classes of criteria air pollutant sources:

- **Point sources.** Stationary sources of emissions, such as an electric power plant, that can be identified by name and location. A "major" source emits a threshold amount (or more) of at least one criteria pollutant and must be inventoried and reported. Many states also inventory and report stationary sources that emit amounts below the thresholds for each pollutant.
- **Area sources.** Small point sources such as a home or office building or a diffuse stationary source such as wildfires or agricultural tilling. These sources do not individually produce sufficient emissions to qualify as point sources. Dry cleaners are one example; for instance, a single dry cleaner within an inventory area typically will not qualify as a point source, but collectively the emissions from all of the dry cleaning facilities in the inventory area may be significant and, therefore, must be included in the inventory.
- **Mobile sources.** Any kind of vehicle or equipment with a gasoline or diesel engine (such as an airplane or ship).

The following are the main sources of criteria pollutant emissions data for the NEI:

- For electric generating units—USEPA's Emission Tracking System/Continuous Emissions Monitoring Data and Department of Energy fuel use data.
- For other large stationary sources—state data and older inventories where state data were not submitted.
- For on-road mobile sources—the Federal Highway Administration's estimate of vehicle miles traveled and emission factors from USEPA's MOBILE Model.
- For nonroad mobile sources—USEPA's NONROAD Model.
- USEPA's Clean Air Market program supplies emissions data for electric power plants.
- For stationary area sources—state data, USEPA-developed estimates for some sources, and older inventories where state or USEPA data were not submitted.
- State and local environmental agencies supply most of the point source data.

F.2 PROJECT EMISSION CALCULATIONS

1. General Information

- Action Location

Base: HILL AFB

State: Utah

County(s): Tooele

Regulatory Area(s): NOT IN A REGULATORY AREA

- Action Title: SUB-SCALE AERIAL TARGET LAUNCH, CONTROL AND RECOVERY AT THE UTAH TEST AND TRAINING RANGE

- Project Number/s (if applicable):

- Projected Action Start Date: 1 / 2021

- Action Purpose and Need:

The proposed action is the relocation of the UA launch and recovery system from the former GLCM site at DPG to the Wendover Site and the launch, control, recovery, and maintenance of UA from the Wendover Site

- Action Description:

The proposed action is the relocation of the UA launch and recovery system from the former GLCM site at DPG to the Wendover Site and the launch, control, recovery, and maintenance of UA from the Wendover Site

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The Wendover Site would be used to launch and recover UAs. The BQM-167 and BQM-34 are the SSATs that would be launched from this site. Three primary facilities would be required for this operation. These facilities consist of the launch, control, and maintenance facilities (Table 2-2). As described in Section 1.1, renovation of the control facility (Building 625) and partial construction of the maintenance and launch facilities was completed under a separate NEPA analysis using CATEXs.

- Point of Contact

Name: Brad Boykin

Title: CTR

Organization: Leidos

Email: boykinb@leidos.com

Phone Number: 7377178070

- Activity List:

Activity Type		Activity Title
2.	Construction / Demolition	Launch and Control Facilities
3.	Construction / Demolition	Control Facility
4.	Construction / Demolition	Maintenance Facility
5.	Personnel	40 Personnel
6.	Tanks	500-gallon Jet Fuel AST
7.	Tanks	500-gallon Jet Fuel Recovery AST
8.	Aircraft	BQM-167 and BQM-34 Operations
9.	Emergency Generator	Control Facility Emergency Generator
10.	Emergency Generator	Launch Facility Generator
11.	Emergency Generator	Maintenance Facility Generator

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.

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

2. Construction / Demolition

2.1 General Information & Timeline Assumptions

- Activity Location

County: Tooele

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Launch and Control Facilities

- Activity Description:

100x250' gravel pad covered by 55x100'concrete pad

Armored launch building 50x50'

Four storage buildings 25x25'

A 30' radio relay towers

Covered drum storage area 50x50'

- 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	0.991894
SO_x	0.009655
NO_x	4.040443
CO	3.980989
PM 10	4.193439

Pollutant	Total Emissions (TONs)
PM 2.5	0.171535
Pb	0.000000
NH_3	0.002792
CO_2e	950.4

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

2.1 Site Grading Phase

2.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

Start Month: 1

Start Quarter: 1

Start Year: 2021

- Phase Duration

Number of Month: 12

Number of Days: 0

2.1.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft^2): 33687.5

Amount of Material to be Hauled On-Site (yd^3): 33.6

Amount of Material to be Hauled Off-Site (yd^3): 33.6

- Site Grading Default Settings

Default Settings Used: Yes

Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	6
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	6
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Capacity (yd^3): 20 (default)

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

2.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Graders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0860	0.0014	0.5212	0.5747	0.0247	0.0247	0.0077	132.93
Other Construction Equipment Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0533	0.0012	0.3119	0.3497	0.0121	0.0121	0.0048	122.61
Rubber Tired Dozers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.2015	0.0024	1.4660	0.7661	0.0581	0.0581	0.0181	239.53
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	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

2.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD}$ = (20 * ACRE * WD) / 2000

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

EF_{POL}: Emission Factor for Pollutant (lb/hour)

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

VMT_{VE} = (HA_{OnSite} + $HA_{OffSite}$) * (1 / HC) * HT

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)

$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)

HC: Average Hauling Truck Capacity (yd^3)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^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: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

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

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

2.2 Building Construction Phase

2.2.1 Building Construction Phase Timeline Assumptions

- Phase Start Date

Start Month: 1

Start Quarter: 1

Start Year: 2021

- Phase Duration

Number of Month: 12

Number of Days: 0

2.2.2 Building Construction Phase Assumptions

- General Building Construction Information

Building Category: Office or Industrial

Area of Building (ft^2): 30625

Height of Building (ft): 50

Number of Units: N/A

- Building Construction Default Settings

Default Settings Used: Yes

Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	6
Forklifts Composite	2	6
Generator Sets Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8
Welders Composite	3	8

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

2.2.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Cranes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0845	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
Generator Sets Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0362	0.0006	0.2977	0.2707	0.0130	0.0130	0.0032	61.074
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
Welders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0280	0.0003	0.1634	0.1787	0.0088	0.0088	0.0025	25.665

- 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	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

2.2.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

EF_{POL}: Emission Factor for Pollutant (lb/hour)

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

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

2.3 Architectural Coatings Phase

2.3.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date

Start Month: 7
Start Quarter: 1
Start Year: 2021

- Phase Duration

Number of Month: 6

Number of Days: 0

2.3.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information

Building Category: Non-Residential

Total Square Footage (ft^2): 30625

Number of Units: N/A

- Architectural Coatings Default Settings

Default Settings Used: Yes

Average Day(s) worked per week: 5 (default)

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

2.3.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

2.3.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase

VMT_{WT} = (1 * WT * PA) / 800

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

1: Conversion Factor man days to trips (1 trip / 1 man * day)

WT: Average Worker Round Trip Commute (mile)

PA: Paint Area (ft^2)

800: Conversion Factor square feet to man days (1 ft^2 / 1 man * day)

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

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0

VOC_{AC}: Architectural Coating VOC Emissions (TONs)

BA: Area of Building (ft^2)

2.0: Conversion Factor total area to coated area (2.0 ft^2 coated area / total area)

0.0116: Emission Factor (lb/ft^2)

2000: Conversion Factor pounds to tons

3. Construction / Demolition

3.1 General Information & Timeline Assumptions

- Activity Location

County: Tooele

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Control Facility

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

- Activity Description:

H-97 and I-80 Radio Relay Stations

- 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	0.526279
SO_x	0.007350
NO_x	2.928327
CO	2.881451
PM 10	0.836654

Pollutant	Total Emissions (TONs)
PM 2.5	0.120326
Pb	0.000000
NH_3	0.001385
CO_2e	724.0

3.1 Site Grading Phase

3.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

Start Month: 1

Start Quarter: 1

Start Year: 2021

- Phase Duration

Number of Month: 12

Number of Days: 0

3.1.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft^2): 6000

Amount of Material to be Hauled On-Site (yd^3): 6

Amount of Material to be Hauled Off-Site (yd^3): 6

- Site Grading Default Settings

Default Settings Used: Yes

Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	6
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	6
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Capacity (yd^3): 20 (default)

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

3.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Graders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0860	0.0014	0.5212	0.5747	0.0247	0.0247	0.0077	132.93
Other Construction Equipment Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0533	0.0012	0.3119	0.3497	0.0121	0.0121	0.0048	122.61
Rubber Tired Dozers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.2015	0.0024	1.4660	0.7661	0.0581	0.0581	0.0181	239.53
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	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

3.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD}$ = (20 * ACRE * WD) / 2000

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

EF_{POL}: Emission Factor for Pollutant (lb/hour)

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)

$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)

HC: Average Hauling Truck Capacity (yd^3)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^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: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

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

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

3.2 Building Construction Phase

3.2.1 Building Construction Phase Timeline Assumptions

- Phase Start Date

Start Month: 1

Start Quarter: 1

Start Year: 2021

- Phase Duration

Number of Month: 12

Number of Days: 0

3.2.2 Building Construction Phase Assumptions

- General Building Construction Information

Building Category: Office or Industrial

Area of Building (ft^2): 5000

Height of Building (ft): 15

Number of Units: N/A

- Building Construction Default Settings

Default Settings Used: Yes

Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	4
Forklifts Composite	2	6
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

3.2.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Cranes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0845	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	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

3.2.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

EF_{POL}: Emission Factor for Pollutant (lb/hour)

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

VMT_{VE} = BA * BH * (0.42 / 1000) * HT

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

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

3.3 Architectural Coatings Phase

3.3.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date

Start Month: 7

Start Quarter: 1

Start Year: 2021

- Phase Duration

Number of Month: 6

Number of Days: 0

3.3.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information

Building Category: Non-Residential

Total Square Footage (ft^2): 5000

Number of Units: N/A

- Architectural Coatings Default Settings

Default Settings Used: Yes

Average Day(s) worked per week: 5 (default)

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

3.3.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

3.3.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase

VMT_{WT} = (1 * WT * PA) / 800

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

1: Conversion Factor man days to trips (1 trip / 1 man * day)

WT: Average Worker Round Trip Commute (mile)

PA: Paint Area (ft^2)

800: Conversion Factor square feet to man days (1 ft^2 / 1 man * day)

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

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0

VOC_{AC}: Architectural Coating VOC Emissions (TONs)

BA: Area of Building (ft^2)

2.0: Conversion Factor total area to coated area (2.0 ft^2 coated area / total area)

0.0116: Emission Factor (lb/ft^2)

2000: Conversion Factor pounds to tons

4. Construction / Demolition

4.1 General Information & Timeline Assumptions

- Activity Location

County: Tooele

Regulatory Area(s): NOT IN A REGULATORY AREA

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

- Activity Title: Maintenance Facility

- Activity Description:

Covered drum storage area 50x50'

- 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	0.655223
SO_x	0.007388
NO_x	2.942868
CO	2.886326
PM 10	0.419341

Pollutant	Total Emissions (TONs)
PM 2.5	0.120789
Pb	0.000000
NH_3	0.001467
CO_2e	728.4

4.1 Site Grading Phase

4.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

Start Month: 1

Start Quarter: 1

Start Year: 2021

- Phase Duration

Number of Month: 12

Number of Days: 0

4.1.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft^2): 2500

Amount of Material to be Hauled On-Site (yd^3): 25

Amount of Material to be Hauled Off-Site (yd^3): 25

- Site Grading Default Settings

Default Settings Used: Yes

Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	6
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	6
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Capacity (yd^3): 20 (default)

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

4.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Graders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0860	0.0014	0.5212	0.5747	0.0247	0.0247	0.0077	132.93
Other Construction Equipment Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0533	0.0012	0.3119	0.3497	0.0121	0.0121	0.0048	122.61
Rubber Tired Dozers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.2015	0.0024	1.4660	0.7661	0.0581	0.0581	0.0181	239.53
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	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

4.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD}$ = (20 * ACRE * WD) / 2000

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

EF_{POL}: Emission Factor for Pollutant (lb/hour)

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)

$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)

HC: Average Hauling Truck Capacity (yd^3)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^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: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

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

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

4.2 Building Construction Phase

4.2.1 Building Construction Phase Timeline Assumptions

- Phase Start Date

Start Month: 1

Start Quarter: 1

Start Year: 2021

- Phase Duration

Number of Month: 12

Number of Days: 0

4.2.2 Building Construction Phase Assumptions

- General Building Construction Information

Building Category: Office or Industrial

Area of Building (ft^2): 16000

Height of Building (ft): 15

Number of Units: N/A

- Building Construction Default Settings

Default Settings Used: Yes

Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	4
Forklifts Composite	2	6
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

4.2.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Cranes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0845	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	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

4.2.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

EF_{POL}: Emission Factor for Pollutant (lb/hour)

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

VMT_{VE} = BA * BH * (0.42 / 1000) * HT

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

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

4.3 Architectural Coatings Phase

4.3.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date

Start Month: 1

Start Quarter: 1

Start Year: 2021

- Phase Duration

Number of Month: 12

Number of Days: 0

4.3.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information

Building Category: Non-Residential

Total Square Footage (ft^2): 16000

Number of Units: N/A

- Architectural Coatings Default Settings

Default Settings Used: Yes

Average Day(s) worked per week: 5 (default)

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

4.3.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

4.3.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase

$VMT_{WT} = (1 * WT * PA) / 800$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

1: Conversion Factor man days to trips (1 trip / 1 man * day)

WT: Average Worker Round Trip Commute (mile)

PA: Paint Area (ft^2)

800: Conversion Factor square feet to man days (1 ft^2 / 1 man * day)

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

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

$VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0$

VOC_{AC}: Architectural Coating VOC Emissions (TONs)

BA: Area of Building (ft^2)

2.0: Conversion Factor total area to coated area (2.0 ft^2 coated area / total area)

0.0116: Emission Factor (lb/ft^2)

2000: Conversion Factor pounds to tons

5. Personnel

5.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Tooele

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: 40 Personnel

- Activity Description:

Up to 40 new full-time personnel.

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

- Activity Start Date

Start Month: 1

Start Year: 2021

- Activity End Date

Indefinite: Yes

End Month: N/A

End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.087885
SO_x	0.000602
NO_x	0.077686
CO	0.997492
PM 10	0.002426

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.002184
Pb	0.000000
NH_3	0.005535
CO_2e	88.9

5.2 Personnel Assumptions

- Number of Personnel

Active Duty Personnel: 40

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)

5.3 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

5.4 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	000.295	000.002	000.223	003.377	000.009	000.008		000.023	00328.308
LDGT	000.367	000.003	000.395	004.664	000.011	000.010		000.024	00423.961
HDGV	000.747	000.005	001.118	016.415	000.026	000.023		000.045	00780.112
LDDV	000.122	000.003	000.135	002.483	000.004	000.004		000.008	00317.249
LDDT	000.269	000.004	000.392	004.291	000.007	000.006		000.008	00451.014
HDDV	000.455	000.013	004.925	001.651	000.170	000.157		000.028	01491.057
MC	002.659	000.003	000.839	013.635	000.029	000.025		000.053	00399.234

5.5 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

6. Tanks

6.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Tooele

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: 500-gallon Jet Fuel AST

- Activity Description:

Portable double-wall, above ground storage tank for jet fuel

- Activity Start Date

Start Month: 1

Start Year: 2021

- Activity End Date

Indefinite: Yes

End Month: N/A

End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.001013
SO_x	0.000000
NO_x	0.000000
CO	0.000000
PM 10	0.000000

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.000000
Pb	0.000000
NH_3	0.000000
CO_2e	0.0

6.2 Tanks Assumptions

- Chemical

Chemical Name: Jet kerosene (JP-5, JP-8 or Jet-A)

Chemical Category: Petroleum Distillates

Chemical Density: 7

Vapor Molecular Weight (lb/lb-mole): 130

Stock Vapor Density (lb/ft^3): 0.000170775135930213

Vapor Pressure: 0.00725

Vapor Space Expansion Factor (dimensionless): 0.068

- Tank

Type of Tank: Horizontal Tank

Tank Length (ft): 8

Tank Diameter (ft): 3.25

Annual Net Throughput (gallon/year): 10000

6.3 Tank Formula(s)

- Vapor Space Volume

$VSV = (PI / 4) * D^2 * L / 2$

VSV: Vapor Space Volume (ft^3)

PI: PI Math Constant

D^2: Tank Diameter (ft)

L: Tank Length (ft)

2: Convertion Factor (Vapor Space Volume is assumed to be one-half of the tank volume)

- Vented Vapor Saturation Factor

VVSF = 1 / (1 + (0.053 * VP * L / 2))

VVSF: Vented Vapor Saturation Factor (dimensionless)

0.053: Constant

VP: Vapor Pressure (psia)

L: Tank Length (ft)

- Standing Storage Loss per Year

SSL_{VOC} = 365 * VSV * SVD * VSEF * VVSF / 2000

SSL_{VOC}: Standing Storage Loss Emissions (TONs)

365: Number of Daily Events in a Year (Constant)

VSV: Vapor Space Volume (ft^3)

SVD: Stock Vapor Density (lb/ft^3)

VSEF: Vapor Space Expansion Factor (dimensionless)

VVSF: Vented Vapor Saturation Factor (dimensionless)

2000: Conversion Factor pounds to tons

- Number of Turnovers per Year

NT = (7.48 * ANT) / ((PI / 4.0) * D * L)

NT: Number of Turnovers per Year

7.48: Constant

ANT: Annual Net Throughput

PI: PI Math Constant

D^2: Tank Diameter (ft)

L: Tank Length (ft)

- Working Loss Turnover (Saturation) Factor per Year

WLSF = (18 + NT) / (6 * NT)

WLSF: Working Loss Turnover (Saturation) Factor per Year

18: Constant

NT: Number of Turnovers per Year

6: Constant

- Working Loss per Year

WL_{VOC} = 0.0010 * VMW * VP * ANT * WLSF / 2000

0.0010: Constant

VMW: Vapor Molecular Weight (lb/lb-mole)

VP: Vapor Pressure (psia)

ANT: Annual Net Throughput

WLSF: Working Loss Turnover (Saturation) Factor

2000: Conversion Factor pounds to tons

7. Tanks

7.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Tooele

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: 500-gallon Jet Fuel Recovery AST

- Activity Description:

Portable 500-gallon, double-wall, above ground storage tank for jet fuel recovery

- Activity Start Date

Start Month: 1

Start Year: 2021

- Activity End Date

Indefinite: Yes

End Month: N/A

End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.001013
SO_x	0.000000
NO_x	0.000000
CO	0.000000
PM 10	0.000000

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.000000
Pb	0.000000
NH_3	0.000000
CO_2e	0.0

7.2 Tanks Assumptions

- Chemical

Chemical Name: Jet kerosene (JP-5, JP-8 or Jet-A)

Chemical Category: Petroleum Distillates

Chemical Density: 7

Vapor Molecular Weight (lb/lb-mole): 130

Stock Vapor Density (lb/ft^3): 0.000170775135930213

Vapor Pressure: 0.00725

Vapor Space Expansion Factor (dimensionless): 0.068

- Tank

Type of Tank: Horizontal Tank

Tank Length (ft): 8

Tank Diameter (ft): 3.25

Annual Net Throughput (gallon/year): 10000

7.3 Tank Formula(s)

- Vapor Space Volume

$VSV = (PI / 4) * D^2 * L / 2$

VSV: Vapor Space Volume (ft^3)

PI: PI Math Constant

D^2: Tank Diameter (ft)

L: Tank Length (ft)

2: Convertion Factor (Vapor Space Volume is assumed to be one-half of the tank volume)

- Vented Vapor Saturation Factor

VVSF = 1 / (1 + (0.053 * VP * L / 2))

VVSF: Vented Vapor Saturation Factor (dimensionless)

0.053: Constant

VP: Vapor Pressure (psia)

L: Tank Length (ft)

- Standing Storage Loss per Year

SSL_{VOC} = 365 * VSV * SVD * VSEF * VVSF / 2000

SSL_{VOC}: Standing Storage Loss Emissions (TONs)

365: Number of Daily Events in a Year (Constant)

VSV: Vapor Space Volume (ft^3)

SVD: Stock Vapor Density (lb/ft^3)

VSEF: Vapor Space Expansion Factor (dimensionless)

VVSF: Vented Vapor Saturation Factor (dimensionless)

2000: Conversion Factor pounds to tons

- Number of Turnovers per Year

NT = (7.48 * ANT) / ((PI / 4.0) * D * L)

NT: Number of Turnovers per Year

7.48: Constant

ANT: Annual Net Throughput

PI: PI Math Constant

D^2: Tank Diameter (ft)

L: Tank Length (ft)

- Working Loss Turnover (Saturation) Factor per Year

WLSF = (18 + NT) / (6 * NT)

WLSF: Working Loss Turnover (Saturation) Factor per Year

18: Constant

NT: Number of Turnovers per Year

6: Constant

- Working Loss per Year

WL_{VOC} = 0.0010 * VMW * VP * ANT * WLSF / 2000

0.0010: Constant

VMW: Vapor Molecular Weight (lb/lb-mole)

VP: Vapor Pressure (psia)

ANT: Annual Net Throughput

WLSF: Working Loss Turnover (Saturation) Factor

2000: Conversion Factor pounds to tons

8. Aircraft

8.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Tooele

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: BQM-167 and BQM-34 Operations

- Activity Description:

Up to 12 operations per day for up to 96 days annually

- Activity Start Date

Start Month: 1

Start Year: 2021

- Activity End Date

Indefinite: Yes

End Month: N/A

End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	15.701094
SO_x	2.341576
NO_x	14.409340
CO	57.248055
PM 10	1.391742

Pollutant	Emissions Per Year (TONs)
PM 2.5	1.297746
Pb	0.000000
NH_3	0.000000
CO_2e	5832.6

- Activity Emissions [Flight Operations (includes Trim Test & APU) part]:

Pollutant	Emissions Per Year (TONs)
VOC	13.661247
SO_x	1.930666
NO_x	8.539605
CO	53.668769
PM 10	0.786657

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.710756
Pb	0.000000
NH_3	0.000000
CO_2e	5523.6

- Activity Emissions [Aerospace Ground Equipment (AGE) part]:

Pollutant	Emissions Per Year (TONs)
VOC	2.039847
SO_x	0.410909
NO_x	5.869735
CO	3.579286
PM 10	0.605085

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.586989
Pb	0.000000
NH_3	0.000000
CO_2e	309.0

8.2 Aircraft & Engines

8.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine

Aircraft Designation: RA-5C

Engine Model: J79-GE-8C

Primary Function: Combat

Aircraft has After burn: Yes

Number of Engines: 2

- Aircraft & Engine Surrogate

Is Aircraft & Engine a Surrogate? No

Original Aircraft Name:

Original Engine Name:

8.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1000lb fuel)

	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
Idle	1325.00	16.14	1.07	2.36	55.59	0.44	0.40	3234
Approach	1550.00	4.20	1.07	2.97	30.55	0.90	0.81	3234
Intermediate	8310.00	0.12	1.07	8.44	2.56	0.15	0.14	3234
Military	9544.00	0.12	1.07	10.42	2.56	0.18	0.16	3234
After Burn	34647.00	0.19	1.07	4.71	8.14	0.56	0.50	3234

8.3 Flight Operations

8.3.1 Flight Operations Assumptions

- Flight Operations

Number of Aircraft: 10

Number of Annual LTOs (Landing and Take-off) cycles for all Aircraft: 1152

Number of Annual TGOs (Touch-and-Go) cycles for all Aircraft: 0

Number of Annual Trim Test(s) per Aircraft: 12

- Default Settings Used: Yes

- Flight Operations TIMs (Time In Mode)

Taxi/Idle Out [Idle] (mins): 18.5 (default)

Takeoff [Military] (mins): 0.2 (default)

Takeoff [After Burn] (mins): 0.2 (default)

Climb Out [Intermediate] (mins):	0.8 (default)
Approach [Approach] (mins):	3.5 (default)
Taxi/Idle In [Idle] (mins):	11.3 (default)

Per the Air Emissions Guide for Air Force Mobile Sources, the defaults values for military aircraft equipped with after burner for takeoff is 50% military power and 50% afterburner. (Exception made for F-35 where KARNES 3.2 flight profile was used)

- Trim Test

Idle (mins):	12 (default)
Approach (mins):	27 (default)
Intermediate (mins):	9 (default)
Military (mins):	9 (default)
AfterBurn (mins):	3 (default)

8.3.2 Flight Operations Formula(s)

- Aircraft Emissions per Mode for LTOs per Year

AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * LTO / 2000

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)

TIM: Time in Mode (min)

60: Conversion Factor minutes to hours

FC: Fuel Flow Rate (lb/hr)

1000: Conversion Factor pounds to 1000pounds

EF: Emission Factor (lb/1000lb fuel)

NE: Number of Engines

LTO: Number of Landing and Take-off Cycles (for all aircraft)

2000: Conversion Factor pounds to TONs

- Aircraft Emissions for LTOs per Year

$AE_{LTO} = AEM_{IDLE\_IN} + AEM_{IDLE\_OUT} + AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{LTO}: Aircraft Emissions (TONs)

AEM_{IDLE_IN}: Aircraft Emissions for Idle-In Mode (TONs)

AEM_{IDLE_OUT}: Aircraft Emissions for Idle-Out Mode (TONs)

$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)

$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)

$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for TGOs per Year

AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * TGO / 2000

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)

TIM: Time in Mode (min)

60: Conversion Factor minutes to hours

FC: Fuel Flow Rate (lb/hr)

1000: Conversion Factor pounds to 1000pounds

EF: Emission Factor (lb/1000lb fuel)

NE: Number of Engines

TGO: Number of Touch-and-Go Cycles (for all aircraft)

2000: Conversion Factor pounds to TONs

- Aircraft Emissions for TGOs per Year

AE_{TGO} = $AEM_{APPROACH}$ + $AEM_{CLIMBOUT}$ + $AEM_{TAKEOFF}$

AE_{TGO}: Aircraft Emissions (TONs)

$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)

$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)

$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for Trim per Year

$AEPS_{POL}$ = (TD / 60) * (FC / 1000) * EF * NE * NA * NTT / 2000

$AEPS_{POL}$: Aircraft Emissions per Pollutant & Power Setting (TONs)

TD: Test Duration (min)

60: Conversion Factor minutes to hours

FC: Fuel Flow Rate (lb/hr)

1000: Conversion Factor pounds to 1000pounds

EF: Emission Factor (lb/1000lb fuel)

NE: Number of Engines

NA: Number of Aircraft

NTT: Number of Trim Test

2000: Conversion Factor pounds to TONs

- Aircraft Emissions for Trim per Year

$AE_{TRIM} = AEPS_{IDLE} + AEPS_{APPROACH} + AEPS_{INTERMEDIATE} + AEPS_{MILITARY} + AEPS_{AFTERBURN}$

AE_{TRIM}: Aircraft Emissions (TONs)

$AEPS_{IDLE}$: Aircraft Emissions for Idle Power Setting (TONs)

$AEPS_{APPROACH}$: Aircraft Emissions for Approach Power Setting (TONs)

$AEPS_{INTERMEDIATE}$: Aircraft Emissions for Intermediate Power Setting (TONs)

$AEPS_{MILITARY}$: Aircraft Emissions for Military Power Setting (TONs)

$AEPS_{AFTERBURN}$: Aircraft Emissions for After Burner Power Setting (TONs)

8.4 Auxiliary Power Unit (APU)

8.4.1 Auxiliary Power Unit (APU) Assumptions

- Default Settings Used: Yes

- Auxiliary Power Unit (APU) (default)

Number of APU per Aircraft	Operation Hours for Each LTO	Exempt Source?	Designation	Manufacturer

8.4.2 Auxiliary Power Unit (APU) Emission Factor(s)

- Auxiliary Power Unit (APU) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e

8.4.3 Auxiliary Power Unit (APU) Formula(s)

- Auxiliary Power Unit (APU) Emissions per Year

$APU_{POL} = APU * OH * LTO * EF_{POL} / 2000$

APU_{POL}: Auxiliary Power Unit (APU) Emissions per Pollutant (TONs)

APU: Number of Auxiliary Power Units

OH: Operation Hours for Each LTO (hour)

LTO: Number of LTOs

EF_{POL}: Emission Factor for Pollutant (lb/hr)

2000: Conversion Factor pounds to tons

8.5 Aerospace Ground Equipment (AGE)

8.5.1 Aerospace Ground Equipment (AGE) Assumptions

- Default Settings Used: Yes

- AGE Usage

Number of Annual LTO (Landing and Take-off) cycles for AGE: 1152

- Aerospace Ground Equipment (AGE) (default)

Total Number of AGE	Operation Hours for Each LTO	Exempt Source?	AGE Type	Designation
1	0.33	No	Air Compressor	MC-1A - 18.4hp
1	1	No	Bomb Lift	MJ-1B
1	0.33	No	Generator Set	A/M32A-86D
1	0.5	No	Heater	H1
1	0.5	No	Hydraulic Test Stand	MJ-2/TTU-228 - 130hp
1	8	No	Light Cart	NF-2
1	0.33	No	Start Cart	A/M32A-60A

8.5.2 Aerospace Ground Equipment (AGE) Emission Factor(s)

- Aerospace Ground Equipment (AGE) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
MC-1A - 18.4hp	1.1	0.267	0.008	0.419	0.267	0.071	0.068	24.8
MJ-1B	0.0	3.040	0.219	4.780	3.040	0.800	0.776	141.2
A/M32A-86D	6.5	0.294	0.046	6.102	0.457	0.091	0.089	147.0
H1	0.4	0.100	0.011	0.160	0.180	0.006	0.006	8.9
MJ-2/TTU-228 - 130hp	7.4	0.195	0.053	3.396	0.794	0.089	0.086	168.8
NF-2	0.0	0.010	0.043	0.110	0.080	0.010	0.010	22.1
A/M32A-60A	0.0	0.270	0.306	1.820	5.480	0.211	0.205	221.1

8.5.3 Aerospace Ground Equipment (AGE) Formula(s)

- Aerospace Ground Equipment (AGE) Emissions per Year

AGE_{POL} = AGE * OH * LTO * EF_{POL} / 2000

AGE_{POL}: Aerospace Ground Equipment (AGE) Emissions per Pollutant (TONs)

AGE: Total Number of Aerospace Ground Equipment

OH: Operation Hours for Each LTO (hour)

LTO: Number of LTOs

EF_{POL}: Emission Factor for Pollutant (lb/hr)

2000: Conversion Factor pounds to tons

9. Emergency Generator

9.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Tooele

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Control Facility Emergency Generator

- Activity Description:

- Activity Start Date

Start Month: 1

Start Year: 2021

- Activity End Date

Indefinite: Yes

End Month: N/A

End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.005650
SO_x	0.004759
NO_x	0.023288
CO	0.015552
PM 10	0.005083

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.005083
Pb	0.000000
NH_3	0.000000
CO_2e	2.7

9.2 Emergency Generator Assumptions

- Emergency Generator

Type of Fuel used in Emergency Generator: Diesel

Number of Emergency Generators: 1

- Default Settings Used: Yes

- Emergency Generators Consumption

Emergency Generator's Horsepower: 135 (default)

Average Operating Hours Per Year (hours): 30 (default)

9.3 Emergency Generator Emission Factor(s)

- Emergency Generators Emission Factor (lb/hp-hr)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
0.00279	0.00235	0.0115	0.00768	0.00251	0.00251			1.33

9.4 Emergency Generator Formula(s)

- Emergency Generator Emissions per Year

AE_{POL}= (NGEN * HP * OT * EF_{POL}) / 2000

AE_{POL}: Activity Emissions (TONs per Year)

NGEN: Number of Emergency Generators

HP: Emergency Generator's Horsepower (hp)

OT: Average Operating Hours Per Year (hours)

EF_{POL}: Emission Factor for Pollutant (lb/hp-hr)

10. Emergency Generator

10.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Tooele

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Launch Facility Generator

- Activity Description:

100 kW diesel generator operated up to 12 hours 200 days annually = 2400 hrs annually

- Activity Start Date

Start Month: 1

Start Year: 2021

- Activity End Date

Indefinite: Yes

End Month: N/A

End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.451980
SO_x	0.380700
NO_x	1.863000
CO	1.244160
PM 10	0.406620

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.406620
Pb	0.000000
NH_3	0.000000
CO_2e	215.5

10.2 Emergency Generator Assumptions

- Emergency Generator

Type of Fuel used in Emergency Generator: Diesel

Number of Emergency Generators: 1

- Default Settings Used: No

- Emergency Generators Consumption

Emergency Generator's Horsepower: 135

Average Operating Hours Per Year (hours): 2400

10.3 Emergency Generator Emission Factor(s)

- Emergency Generators Emission Factor (lb/hp-hr)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
0.00279	0.00235	0.0115	0.00768	0.00251	0.00251			1.33

10.4 Emergency Generator Formula(s)

- Emergency Generator Emissions per Year

AE_{POL}= (NGEN * HP * OT * EF_{POL}) / 2000

AE_{POL}: Activity Emissions (TONs per Year)

NGEN: Number of Emergency Generators

HP: Emergency Generator's Horsepower (hp)

OT: Average Operating Hours Per Year (hours)

EF_{POL}: Emission Factor for Pollutant (lb/hp-hr)

11. Emergency Generator

11.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

- Activity Location

County: Tooele

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Maintenance Facility Generator

- Activity Description:

30 kW diesel generator operated up to 12 hours 96 days annually = 2400 hrs annually

- Activity Start Date

Start Month: 1

Start Year: 2021

- Activity End Date

Indefinite: Yes

End Month: N/A

End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.133920
SO_x	0.112800
NO_x	0.552000
CO	0.368640
PM 10	0.120480

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.120480
Pb	0.000000
NH_3	0.000000
CO_2e	63.8

11.2 Emergency Generator Assumptions

- Emergency Generator

Type of Fuel used in Emergency Generator: Diesel

Number of Emergency Generators: 1

- Default Settings Used: No

- Emergency Generators Consumption

Emergency Generator's Horsepower: 40

Average Operating Hours Per Year (hours): 2400

11.3 Emergency Generator Emission Factor(s)

- Emergency Generators Emission Factor (lb/hp-hr)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
0.00279	0.00235	0.0115	0.00768	0.00251	0.00251			1.33

11.4 Emergency Generator Formula(s)

- Emergency Generator Emissions per Year

AE_{POL}= (NGEN * HP * OT * EF_{POL}) / 2000

AE_{POL}: Activity Emissions (TONs per Year)

NGEN: Number of Emergency Generators

HP: Emergency Generator's Horsepower (hp)

OT: Average Operating Hours Per Year (hours)

EF_{POL}: Emission Factor for Pollutant (lb/hp-hr)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, Air Quality Compliance And Resource Management; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: HILL AFB

State: Utah

County(s): Tooele

Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: SUB-SCALE AERIAL TARGET LAUNCH, CONTROL AND RECOVERY AT THE UTAH TEST AND TRAINING RANGE

AIR CONFORMITY APPLICABILITY MODEL REPORT
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c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2021

e. Action Description:

The proposed action is the relocation of the UA launch and recovery system from the former GLCM site at DPG to the Wendover Site and the launch, control, recovery, and maintenance of UA from the Wendover Site.

The Wendover Site would be used to launch and recover UAs. The BQM-167 and BQM-34 are the SSATs that would be launched from this site. Three primary facilities would be required for this operation. These facilities consist of the launch, control, and maintenance facilities (Table 2-2). As described in Section 1.1, renovation of the control facility (Building 625) and partial construction of the maintenance and launch facilities was completed under a separate NEPA analysis using CATEXs.

f. Point of Contact:

Name:	Brad Boykin
Title:	CTR
Organization:	Leidos
Email:	boykinb@leidos.com
Phone Number:	7377178070

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 combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the “worst-case” and “steady state” (net gain/loss upon action fully implemented) emissions.

“Air Quality Indicators” were used to provide an indication of the significance of potential impacts to air quality. These air quality indicators are EPA General Conformity Rule (GCR) thresholds (de minimis levels) that are applied out of context to their intended use. Therefore, these indicators do not trigger a regulatory requirement; however, they provide a warning that the action is potentially significant. It is important to note that these indicators only provide a clue to the potential impacts to air quality.

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

Given the GCR de minimis threshold values are the maximum net change an action can acceptably emit in non-attainment and maintenance areas, these threshold values would also conservatively indicate an actions emissions within an attainment would also be acceptable. An air quality indicator value of 100 tons/yr is used based on the GCR de minimis threshold for the least severe non-attainment classification for all criteria pollutants (see 40 CFR 93.153). Therefore, the worst-case year emissions were compared against the GCR Indicator and are summarized below.

Analysis Summary:

2021

Pollutant	Action Emissions (ton/yr)	AIR QUALITY INDICATOR	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	18.556	100	No
NOx	26.837	100	No
CO	69.623	100	No
SOx	2.865	100	No
PM 10	7.376	100	No
PM 2.5	2.245	100	No
Pb	0.000	25	No
NH3	0.011	100	No
CO2e	8606.3		

2022 - (Steady State)

Pollutant	Action Emissions (ton/yr)	AIR QUALITY INDICATOR	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	16.383	100	No
NOx	16.925	100	No
CO	59.874	100	No
SOx	2.840	100	No
PM 10	1.926	100	No
PM 2.5	1.832	100	No
Pb	0.000	25	No
NH3	0.006	100	No
CO2e	6203.5		

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

None of estimated emissions associated with this action are above the GCR indicators, indicating no significant impact to air quality; therefore, no further air assessment is needed.

_____ __08/06/2020_____

Brad Boykin, CTR DATE

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