DRAFT

ENVIRONMENTAL ASSESSMENT

United States Space Command
Establishment of Permanent Headquarters

U.S. AIR FORCE | JULY 2022

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Privacy Advisory

Letters or other written comments provided may be published in the Final Environmental Assessment (EA). As required by law, substantive comments will be addressed in the Final EA and made available to the public. Any personal information provided will be kept confidential. 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 will be disclosed. Personal home addresses and phone numbers will not be published in the Final EA.

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COVER SHEET

ENVIRONMENTAL ASSESSMENT

ESTABLISHMENT OF PERMANENT UNITED STATES SPACE COMMAND HEADQUARTERS

a. Lead Agency: United States (U.S.) Department of the Air Force (DAF)

b. Cooperating Agency: U.S. Department of the Army (Army)

c. Proposed Action: Establish Permanent United States Space Command (USSPACECOM) Headquarters (HQ)

d. Comments and inquiries regarding this document should be directed to:
AFIMSC Public Affairs
2261 Hughes Ave.
JBSA-Lackland, Texas 78236
Email: afcec.czn.workflow@us.af.mil
Comments must be received within 30 days from the date the Notice of Availability is published (i.e., by August 12, 2022).

e. Designation: Draft Environmental Assessment (EA)

Abstract: The Department of Defense identified the need to standup a new combatant command for space (i.e., USSPACECOM) and designated the DAF as the Interim Combatant Command Support Agent for this command. To function efficiently, USSPACECOM must permanently establish a consolidated HQ facility. This EA evaluates the potential environmental impacts associated with establishing a permanent USSPACECOM HQ at one of six alternative sites in the United States (Proposed Action).

The Proposed Action includes construction and operation of a HQ facility that would be specifically designed to accommodate the functional requirements of USSPACECOM. Approximately 1,450 personnel would be assigned to the proposed HQ facility, although staffing levels could vary depending on mission and operational requirements. Should there be a validated requirement to base personnel beyond 1,450, separate basing actions and associated approvals may need to occur before such basing could be considered reasonably foreseeable. Additionally, USSPACECOM may support contractors and mission partners who would be co-located with the permanent HQ and, therefore, the impact of 1,800 personnel is included in this EA. The proposed HQ would consist of approximately 464,000 square feet of office, administrative, and functional interior space across multiple stories. The main HQ building would be supported by approximately 402,000 square feet of vehicle parking in surface lots and/or parking structures.

Under the No Action Alternative, a single, permanent USSPACECOM HQ facility would not be built.

The following environmental resources were analyzed in the EA: land use and zoning, noise, air quality and climate, earth resources, water resources, biological resources, cultural resources, socioeconomics and environmental justice, transportation, and hazardous and toxic materials and waste. Resources that would not be meaningfully or measurably affected by the Proposed Action, including occupational safety and health and utilities and infrastructure, were dismissed from detailed analysis. Based on the analysis presented in this EA, the DAF has determined that with implementation of regulatory compliance measures and other alternative-specific design commitments included in this EA, the Proposed Action would have no significant impacts on the human or natural environment.

This Draft EA, Draft Finding of No Significant Impact, and supporting documents are available on the project website at https://www.afcec.af.mil/Home/Environment/National-Environmental-Policy-Act-Center/.

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ABBREVIATIONS AND ACRONYMS

°F	Degree Fahrenheit
AADT	Average Annual Daily Traffic
ACAM	Air Conformity Applicability Model
ACM	Asbestos-Containing Material
ADEM	Alabama Department of Environmental Management
ADP	Area Development Plan
AFB	Air Force Base
AFCEC	Air Force Civil Engineer Center
AFI	Air Force Instruction
AFMAN	Air Force Manual
AFPD	Air Force Policy Directive
amsl	above mean sea level
APE	Area of Potential Effects
AQCR	Air Quality Control Region
Army	U.S. Department of the Army
AT/FP	Antiterrorism/Force Protection
BCC	Birds of Conservation Concern
BGEPA	Bald and Golden Eagle Protection Act
bgs	below ground surface
BMP	Best Management Practice
C.F.R.	Code of Federal Regulations
CAA	Clean Air Act
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health and Environment
CEQ	Council on Environmental Quality
CGP	Construction General Permit
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CRP	Compliance Restoration Program
CWA	Clean Water Act
DAF	U.S. Department of the Air Force
dB	Decibel
dBA	A-weighted Decibel
DoD	Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EISA	Energy Independence and Security Act
EJ	Environmental Justice
EO	Executive Order
ERP	Environmental Restoration Program
ESA	Endangered Species Act
EUL	Enhanced Use Lease
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FEMA	Federal Emergency Management Administration
FIRM	Flood Insurance Rate Map
FOC	Full Operational Capability
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FWC	Florida Fish and Wildlife Conservation Commission
GHG	Greenhouse Gas
HAP	Hazardous Air Pollutant
HQ	Headquarters
HTMW	Hazardous and Toxic Materials and Waste
HVAC	Heating, Ventilation, and Air Conditioning

HWMP	Hazardous Waste Management Plan
I	Interstate
ICP	Integrated Contingency Plan
INRMP	Integrated Natural Resources Management Plan
IPaC	Information for Planning and Consultation
IPMP	Integrated Pest Management Plan
IRP	Installation Restoration Program
JBSA	Joint Base San Antonio
LID	Low Impact Development
MDA	Missile Defense Agency
MMRP	Military Munitions Response Program
MS4	Municipal Separate Storm Sewer System
MSIC	Missile and Space Intelligence Center
N/A	Not Applicable
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NDEE	Nebraska Department of Environment and Energy
NDOT	Nebraska Department of Transportation
NEPA	National Environmental Policy Act
NH_3	Ammonia
NHPA	National Historic Preservation Act of 1966
NLEB	Northern Long-Eared Bat
NMDOT	New Mexico Department of Transportation
NMED	New Mexico Environment Department
NO_2	Nitrogen Dioxide
NOA	Notice of Availability
NO_x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O_3	Ozone
Pb	Lead
PCB	Polychlorinated Biphenyls
pCi/L	Picocuries per Liter
PFAS	Polyfluorinated Substances
$PM_{2.5}$	Particulate Matter with aerodynamic size less than or equal to 2.5 micrometers
PM_{10}	Particulate Matter with aerodynamic size less than or equal to 10 micrometers
PSD	Prevention of Significant Deterioration
RCM	Regulatory Compliance Measure
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
SCC	Social Cost of Carbon
SCM	Social Cost of Methane
SCN	Social Cost of Nitrous Oxide
SECDEF	Secretary of Defense
SFB	Space Force Base
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SJRWMD	St. Johns River Water Management District
SO_2	Sulfur Dioxide
SO_x	Sulfur Oxides
SPCCP	Spill Prevention, Control, and Countermeasure Plan
SR	State Road
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
TCAA	Titusville-Cocoa Airport Authority

TCEQ	Texas Commission on Environmental Quality
TMDL	Total Maximum Daily Load
TMP	Transportation Management Plan
TPDES	Texas Pollutant Discharge Elimination System
U.S.	United States
U.S.C.	United States Code
UFC	Unified Facilities Criteria
US	United States Route
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USSPACECOM	United States Space Command
VOC	Volatile Organic Compounds

1.0 PURPOSE AND NEED

1.1 INTRODUCTION

This environmental assessment (EA) evaluates the potential environmental impacts associated with the United States (U.S.) Department of Defense's (DoD) Proposed Action to establish a permanent headquarters (HQ) facility for the U.S. Space Command (USSPACECOM). The Proposed Action would be implemented at one of six Alternative sites in the U.S.: Huntsville, AL (Redstone Arsenal); Albuquerque, NM (Kirtland Air Force Base [AFB); Bellevue, NE (Offutt AFB); Colorado Springs, CO (Peterson Space Force Base [SFB]); San Antonio, TX (Port San Antonio); and Brevard County, FL (Space Coast Spaceport) (**Figure 1-1**).

The U.S. Department of the Air Force (DAF) prepared this EA in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code [U.S.C.] § 4321, et seq.); the Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA (40 Code of Federal Regulations [C.F.R.] Parts 1500-1508, [2022]); and the Air Force and U.S. Department of the Army (Army) Environmental Impact Analysis Processes (EIAP) (32 C.F.R. Part 989 and 32 C.F.R. Part 651, respectively).

To streamline this EA, the DAF established a project website to host supporting materials referenced throughout this EA: https://www.afcec.af.mil/Home/Environment/National-Environmental-Policy-Act-Center/.

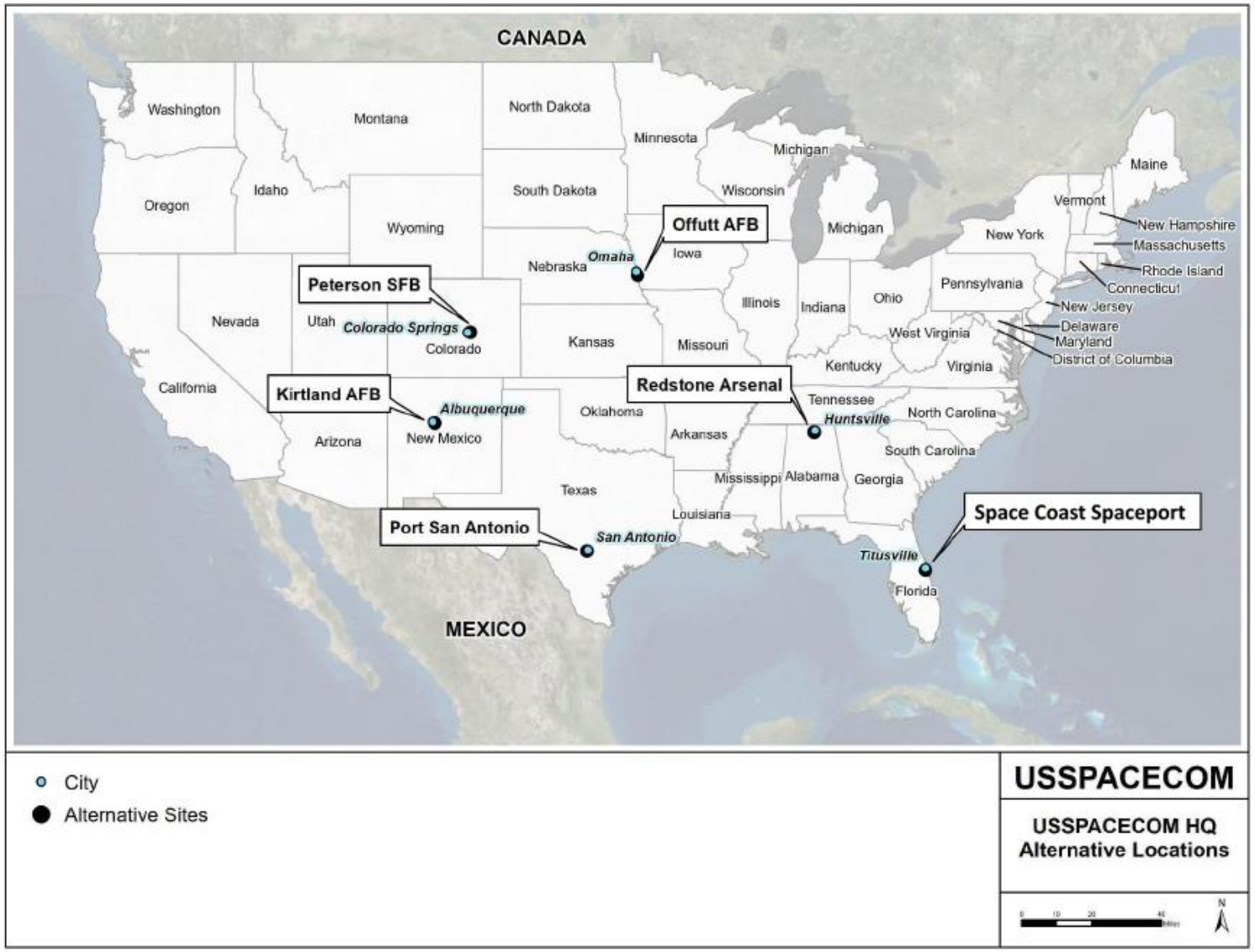
1.2 PURPOSE AND NEED

USSPACECOM was activated as the nation's eleventh Unified Combatant Command on August 29, 2019. Its mission is to command and control all U.S. military forces and operations in the domain 62.1 miles (100 kilometers) above the earth's surface and beyond to deter conflict and, if necessary, defeat aggression, deliver space combat power for the Joint/Combined Force, and defend the vital interests of the U.S. with allies and partners (USSPACECOM, 2021). However, a permanent, centralized USSPACECOM HQ facility from which to coordinate this mission has not been established.

Peterson SFB, Colorado currently serves as the provisional location for the USSPACECOM HQ pending selection of a permanent location (Air Force, 2020a). Personnel and operations are also hosted in interim facilities at other locations including four leased commercial facilities in Colorado Springs, Colorado, and various government facilities at DoD installations across the nation. These interim facilities distribute USSPACECOM functions across multiple sites, preventing operations from being fully consolidated and cohesive. They also consist of less functional workspaces (e.g., multiple personnel sharing a single-person workspace, and café-style workstations that do not provide standard workstation amenities such as designated telephones, file cabinet storage, semi-privacy, and desk space) that are not purpose-built to support a Unified Combatant Command. These current facilities are not conducive to efficient operations, lead to delays in response times, and lack adequate dedicated access to facilities allowing for processing of classified information. The lack of a permanent, purpose-built HQ facility prevents USSPACECOM from operating efficiently.

The *purpose* of the Proposed Action, therefore, is to establish a permanent operational USSPACECOM HQ facility to facilitate an operationally efficient combatant command. The Proposed Action is *needed* because USSPACECOM currently lacks a centralized, permanent, purpose-built HQ facility.

Figure 1-1: Permanent USSPACECOM HQ Alternative Sites



1.3 INTERAGENCY AND INTERGOVERNMENTAL COORDINATION/CONSULTATION

The DAF is the Interim Combatant Command Support Agent for this basing action. In that capacity, the DAF is the lead agency for this NEPA action and prepared this EA. The Army, which has jurisdiction over Redstone Arsenal, the Preferred Alternative (**Section 2.3.1**), is participating as a Cooperating Agency pursuant to a Memorandum of Agreement executed in 2021 between the DAF and Army (see project website).

The DAF coordinated with other federal agencies with jurisdiction by law or special expertise over the Proposed Action and Alternatives to inform the range of issues to be addressed in the EA. Coordination letters, and responses received, are consolidated in **Appendix A** and discussed in **Section 3.0,** as appropriate.

Consistent with National Historic Preservation Act (NHPA) of 1966 implementing regulations (36 C.F.R. Part 800), DoD Instruction 4710.02, *Interactions with Federally-Recognized Tribes*, Air Force Instruction (AFI) 90-2002, *Air Force Interaction with Federally-Recognized Tribes*, and Air Force Manual (AFMAN) 32-7003, *Environmental Conservation*, the DAF is also consulting with federally recognized tribes that are historically affiliated with the geographic region of each Alternative site being considered for the Proposed Action regarding the potential to affect properties of cultural, historical, or religious significance to the tribes (**Appendix B**).

1.4 PUBLIC AND AGENCY REVIEW OF THE EA

In accordance with CEQ, DAF, and Army NEPA regulations, the Draft EA and Draft Finding of No Significant Impact (FONSI) have been made available for a 30-day public review and comment period between July 13, 2022 and August 12, 2022. A Notice of Availability (NOA) for the Draft EA and Draft FONSI was published in the following newspapers serving the local communities near each Alternative site on July 13, 2022:

- Huntsville, AL (Redstone Arsenal): *Huntsville Times*
- Albuquerque, NM (Kirtland AFB): *Albuquerque Journal*[1]
- Bellevue, NE (Offutt AFB): *Omaha World-Herald*
- Colorado Springs, CO (Peterson SFB): *Colorado Springs Gazette*
- San Antonio, TX (Port San Antonio): *San Antonio Express-News*[1]
- Brevard County, FL (Space Coast Spaceport): *Florida Today*

The Draft EA, Draft FONSI, and supporting documents were published digitally on the project website at https://www.afcec.af.mil/Home/Environment/National-Environmental-Policy-Act-Center/. Printed copies of the Draft EA and Draft FONSI were also placed in the following local public libraries near each Alternative site for public review:

- Huntsville, AL (Redstone Arsenal): Huntsville-Madison County Public Library, Downtown Huntsville Branch
- Albuquerque, NM (Kirtland AFB): San Pedro Public Library
- Bellevue, NE (Offutt AFB): Bellevue Public Library
- Colorado Springs, CO (Peterson SFB): Pikes Peak Library District – Ruth Holley Library
- San Antonio, TX (Port San Antonio): Collins Garden Library
- Brevard County, FL (Space Coast Spaceport): Titusville Public Library

[1] Both English- and Spanish-language NOAs were published in the *Albuquerque Journal* and *San Antonio Express-News*.

During the Draft EA public review period, comments may be submitted to AFISMC Public Affairs by mail to 2261 Hughes Avenue, JBSA-Lackland, Texas 78236; or by email to afcec.czn.workflow@us.af.mil. The DAF will only respond to public comments during specified, formal public comment and review periods.

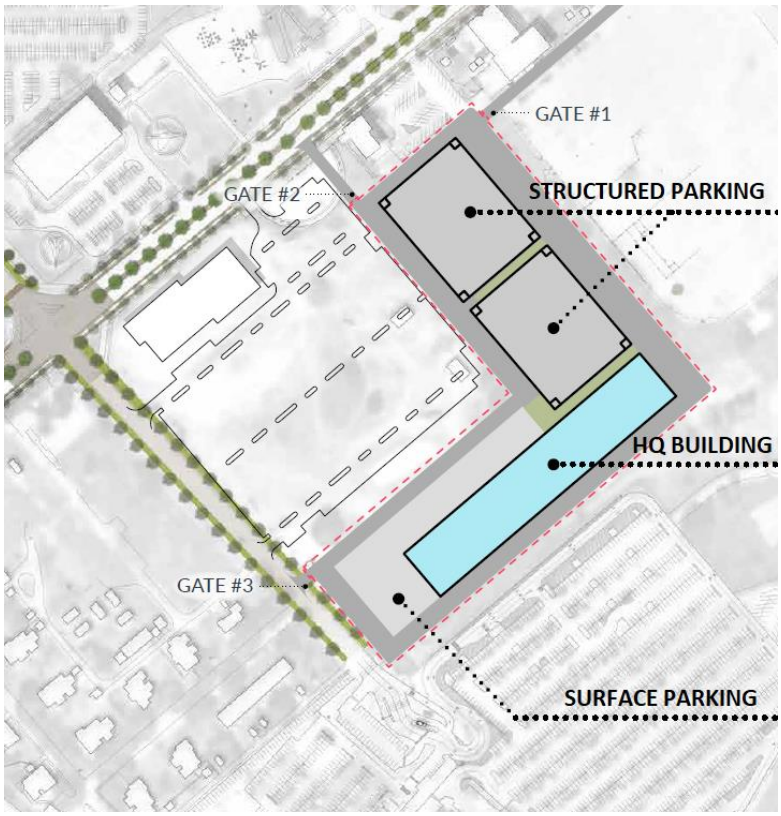
2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

2.1.1 Proposed USSPACECOM HQ Facility

The Proposed Action includes construction and operation of an HQ facility that would be specifically designed to accommodate the functional requirements of USSPACECOM. Approximately 1,450 personnel would be assigned to the proposed HQ facility, although staffing levels could vary depending on mission and operational requirements. This EA analyzes the environmental impacts associated with approximately 1,800 personnel to provide analysis for a potential but not yet approved number of National Agency Representatives and contractor personnel supporting USSPACECOM missions who might be co-located with the permanent HQ. This number is used to provide for potential future personnel growth. Should there be a validated requirement to base personnel beyond 1,450, separate basing actions and associated approvals may need to occur before such basing could be considered reasonably foreseeable. The proposed HQ would consist of 464,000 square feet of office, administrative, and functional interior space across multiple stories. The main HQ building would be supported by 402,000 square feet of vehicle parking in surface lots and/or parking structures. For both the main building and potential parking structures, stories may be constructed above and/or below ground. A conceptual layout of the site development is provided in **Figure 2-1** as an illustrative example; the final site layout would be determined according to site-specific characteristics during the design process. The facility would meet administrative space standards in accordance with AFMAN 32-1084, *Facility Requirements*.

Figure 2-1: Conceptual Site Layout for Proposed USSPACECOM HQ Facility



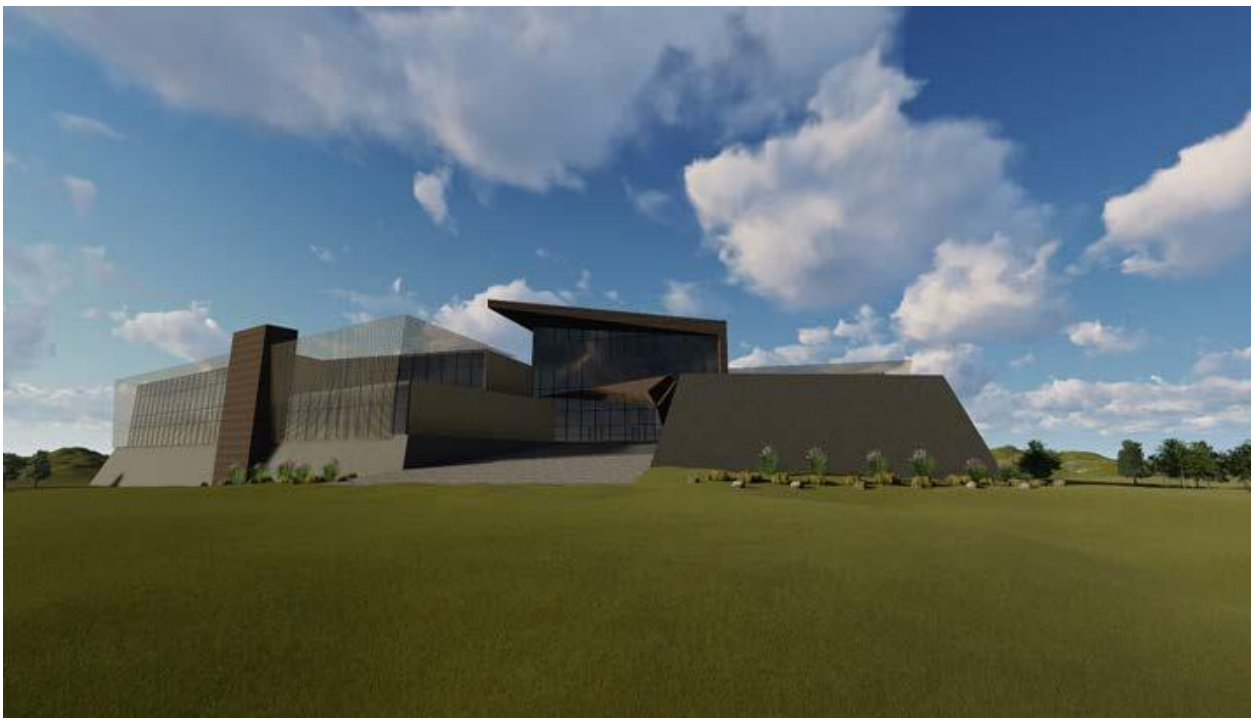
Functions and components of the proposed HQ facility would include the following:

- Operations center(s)
- Associated offices, conference rooms, and administrative areas
- Training and exercise space
- Sensitive Compartmented Information Facility space
- Communications and infrastructure equipment
- Kitchen and dining area
- Loading dock and shipping/receiving areas

The proposed HQ facility would be served by redundant and resilient utility infrastructure including electricity; natural gas; heating, ventilation, and air conditioning (HVAC); water/sewer; communications/data; fire protection and life safety; and stormwater management. These systems would be designed, operated, and maintained in accordance with applicable DoD Unified Facilities Criteria (UFC).

The aesthetic design of the proposed HQ facility would display a dignified architectural character without excessive ornamentation and convey the importance of the USSPACECOM mission, while maintaining compatibility with installation design criteria or other design guidelines applicable to the selected site. A conceptual rendering of the proposed facility is shown in **Figure 2-2**; the facility's final design and appearance would be dependent on conditions at the selected site and other relevant factors. At approximately 100,000 square feet per story, the footprint of the main building would be approximately 2.3 acres.

Figure 2-2: Conceptual Rendering of Proposed USSPACECOM HQ Facility



Vehicle parking would be provided for approximately 1,100 vehicles, based on 60 percent of staffing, comprising approximately 9.2 acres if constructed as surface lots and less if constructed in the form of parking structures. Vehicle access to the proposed facility for construction and operation would be provided via existing roads adjacent to the Alternative sites; on-site, a new access driveway would lead from existing

adjacent roads to a drop-off area near the proposed building entrance and to the parking lot. Additional roadway improvements necessary for this Proposed Action could include creating an intersection from the existing adjacent road to the new access driveway, widening roads for turn lanes into and from the new access driveway, adding or adjusting traffic signals on route to the access driveway, and reconstructing deteriorating pavement for an increased traffic load.

Due to the critical nature of the proposed HQ facility, it would require Level 2 Force Protection. As such, it would be built within a secure, fenced perimeter at one of the six Alternative sites being considered (**Figure 1-1**). Access to the facility would be limited to authorized personnel and visitors, and would be continuously managed by DAF, DoD, or other federal security personnel. Four of the six Alternative sites (Redstone Arsenal, Kirtland AFB, Offutt AFB, and Peterson SFB) are on active DoD military installations with existing secure perimeters; the Port San Antonio and Space Coast Spaceport sites are not on DoD property and would require greater security measures, including a security fence and access control gate, be included in the project design within the defined site boundary. New security personnel required to staff either of these two sites would not substantially change the total number of personnel on-site during operation (i.e., up to approximately 1,800). The proposed facility would be designed and built in accordance with applicable DoD antiterrorism/force protection (AT/FP) requirements specified in UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings* (December 2018) and UFC 4-023-03, *Design of Buildings to Resist Progressive Collapse* (Change 3, November 2016).

The Proposed Action would comply with all federal and state laws and regulations, including consultation, permitting, and design requirements. For example, the project would comply with applicable requirements of Section 438 of the Energy Independence and Security Act (EISA) of 2007, which requires federal projects to incorporate into the design, to the maximum extent technically feasible, low impact development (LID) measures to maintain the pre-development hydrology of a site. Such measures could include, but would not be limited to, permeable pavement, rain gardens, water retention areas, and enhancement of riparian buffers. Construction activities would also conducted in accordance with the applicable requirements of the U.S. Environmental Protection Agency's (USEPA) National Pollutant Discharge Elimination System (NPDES) and associated permits to manage the quantity and quality of stormwater discharged from the project site and minimize the pollution and sedimentation of receiving water bodies. These "regulatory compliance measures" (RCMs) and other design commitments applicable to this Proposed Action, including Alternative-specific requirements, are discussed throughout the resource-specific impact analyses in **Section 3.0** and summarized thereafter in **Table 3-25**. As the DAF would comply with each of these requirements if it selects one of the Action Alternatives for implementation, the analysis assumes compliance with these measures when assessing the impacts.

2.1.2 Facility Construction

Construction of the proposed facility would include site preparation (e.g., vegetation clearing; soil excavation, filling, grading, and leveling; trenching or directional boring to install/extend utilities); identification and extension of utility and infrastructure systems; installation of foundation piles and concrete foundation slab; erection of structural steel; establishment of vehicle parking areas; and modification or extension of existing roads and pedestrian sidewalks to the new facility. The amount of land disturbance and excavation would depend on the site selected for implementation. Construction is expected to begin in fiscal year 2025 and take approximately 2 years to complete.

Temporary laydown areas and storage areas would be established prior to construction. Site preparation would include the installation of erosion and sediment control best management practices (BMPs) and the clearing and grubbing of existing vegetation on the site, as needed. Once the site is prepared, excavation would begin for foundation footings and utilities using heavy excavation equipment. Communication, electricity, potable water, sanitary sewer, and stormwater utilities, which are all proximal to the potential

sites, would be extended from existing utility infrastructure while excavations are open. Once complete, excavations outside the foundation would be backfilled and compacted to create the designed ground contours around the building.

Vertical construction of the facility would occur after the foundation is complete. Construction contractors would complete the superstructure, exterior finishes, utilities work, and interior finishes of the facility. Construction materials would be delivered via a designated construction traffic route from off-site vendors. Construction of exterior paved areas (e.g., sidewalks, plazas, parking areas) and exterior perimeter security measures would occur during this time. Materials such as concrete, steel, and asphalt would be recycled or otherwise diverted from landfills to the extent practicable. Machinery such as mobile cranes, loaders, tractors, forklifts, air compressors, and welding equipment may be used during this phase. Finally, final grading and landscaping would occur.

2.1.3 Facility Operation

Once completed, USSPACECOM personnel and operations would be consolidated to the proposed HQ facility from the provisional HQ location at Peterson SFB and other interim locations throughout the country. Activities at the proposed facility would generally include office and administrative work to accomplish the USSPACECOM mission. The facility would operate 24 hours per day, 7 days per week, although staffing levels would likely be highest during normal working hours (i.e., Monday through Friday, 8:00 a.m. to 5:00 p.m. local time).

2.2 EVALUATION OF ALTERNATIVES

In March 2020, the Secretary of Defense (SECDEF) directed a “different approach” to the USSPACECOM HQ basing action. The SECDEF directed the different approach to expand the number of candidate locations that could participate in the USSPACECOM HQ basing action, as was done in the 2018 Army Futures Command basing action. The Army Futures Command basing action used a phased approach with objective site selection criteria for narrowing the list of candidate locations. The SECDEF’s testimony indicated that he believed that the Army Futures Command’s basing action was “iterative” and transparent.

This approach expanded the number of locations eligible for consideration by inviting communities across the U.S. to self-nominate one location each to host the new facility (USSPACECOM, 2021).

Threshold screening criteria were used to establish minimum eligibility requirements for communities to self-nominate as potential hosts for the permanent USSPACECOM HQ site. The screening criteria were: 1) be within one of the 150 largest Metropolitan Statistical Areas in the US, based on US Census Bureau 2019 population estimates; 2) be within 25 miles or less of a military base, using straight line distance; and 3) have a Livability Index score of at least 50 out of 100 points, as determined by the American Association of Retired Persons Public Policy Institute.

Fifty (50) self-nominated communities satisfied the threshold screening criteria as possible locations for the USSPACECOM HQ. Each proposed location was quantitatively evaluated using 21 additional criteria organized into 4 decision factors: mission, infrastructure capacity, community support, and costs to the DoD. The evaluation criteria reflect USSPACECOM’s mission requirements for a permanent HQ, costs to the DoD, as well as community services desired to support the command’s employees and families. The mission factor included the available qualified workforce, proximity to mutually supporting space entities, emergency and incident response, and capabilities to enable mobility. The infrastructure capacity factor included facility and parking space, communications bandwidth and redundancy, AT/FP and security requirements, energy resilience, and support services from the nearest DoD installation, including childcare, military housing, medical support, and transportation. The community factor included the area’s

cost of living, housing affordability, access to military and veteran support, and support available to military families including the quality of schools and professional licensure portability. The costs to the DoD included one-time infrastructure costs, area construction cost factors, the basic allowance for housing provided to military personnel, and the area locality pay provided to civilian personnel.

Self-nominees and supporting DoD installations were provided with evaluation phase instructions and a questionnaire. The instructions contained an overview of the evaluation phase, instructions, suspense dates, detailed descriptions of each criterion, and its relative importance. The questionnaires contained instructions and requests for detailed information that were used to augment data from publicly available authoritative sources. Subject matter experts from across the DAF HQ staff evaluated proposed locations with respect to each criterion.

At the conclusion of this evaluation, the Secretary of the Air Force eliminated 44 locations from further consideration and carried the top six community proposals locations forward for further analysis, as candidates, during the selection phase. The 44 alternative locations dismissed were distinguished from the six remaining locations based on a significant break in the evaluation scores between the two groups, which indicated the top six best aligned with the USSPACECOM mission requirements. This process for consideration of a range of alternatives is consistent with the DAF EIAP.

The six candidates and supporting DoD installations were provided with selection phase instructions. The instructions contained an overview of the selection phase, instructions, suspense dates, and descriptions of each criterion within four decision factors. Candidates provided project proposals, supported site visits, and participated in virtual visits with senior leaders from the Department of the Air Force. Supporting DoD installations were provided with questionnaires and supported site visits. The questionnaires contained instructions and requests for detailed information that were used to augment data from the evaluation phase, government databases, and publicly available authoritative sources. Subject matter experts from across the DAF, and a communications expert from USSPACECOM HQ, evaluated proposals with respect to each criterion.

During the final stages of the selection phase, the importance of quickly reaching Full Operational Capability (FOC) was discussed by senior leaders and considered as a fifth decision factor by the Secretary of the Air Force when identifying the preferred and reasonable alternatives. Discussions captured the Combatant Commander's assessment of the mission impacts due to the time required for each proposed location to reach FOC. USSPACECOM focused its five high-level criteria on "being able to execute [its] mission on the worst day, when needed most." These criteria are (1) being able to accomplish its Unified Campaign Plan missions alongside global campaigning, exercising, and responding to crisis; (2) having the right numbers and skills across its human capital; (3) having the infrastructure needed to support command and control across its mission and business functions; (4) having the necessary command processes and functions in place; and (5) having the ability set conditions and requirements for the future fight.

In total five decision factors were considered: mission, infrastructure capacity, community support, Costs to the DoD, and Mission Impacts to FOC. *"Huntsville compared favorably across more of these factors than any other community, providing a large, qualified workforce, quality schools, superior infrastructure capacity, and low initial and recurring costs. Additionally, the Huntsville community, with Redstone Arsenal coordination, offered a facility to support the headquarters, at no cost, while the permanent facility is being constructed."* (Air Force, 2021a). On January 12, 2021, the Secretary of the Air Force selected Redstone Arsenal in Huntsville, Alabama, as the Preferred Alternative and the five remaining candidates as reasonable alternatives.

Following the selection phase, the preferred and reasonable alternatives were carried forward for further analysis of potential environmental effects of the Proposed Action; the locations are: Huntsville, Alabama

(Redstone Arsenal); Albuquerque, New Mexico (Kirtland AFB); Bellevue, Nebraska (Offutt AFB); Colorado Springs, Colorado (Peterson SFB); San Antonio, Texas (Port San Antonio); and Brevard County, Florida (Space Coast Spaceport). These Alternative sites represent a "reasonable range of alternatives" for detailed analysis in this EA; they are described in **Section 2.3**.

2.3 ALTERNATIVES ANALYZED IN THE EA

The six Alternative sites for implementation of the Proposed Action are described below and shown on **Figure 2-3** through **Figure 2-8**. To varying degrees, each of the sites are previously disturbed but currently vacant and available for development of the proposed USSPACECOM HQ. The No Action Alternative is also analyzed in this EA to describe the anticipated future condition if the Proposed Action is not implemented.

The sites being analyzed at Redstone Arsenal (**Section 2.3.1**) and Peterson SFB (**Section 2.3.4**) are substantially the same as sites analyzed at those installations in the 2019 USSPACECOM EA. As such, this EA incorporates by reference the 2019 USSPACECOM EA (Air Force, 2019a), which is available for review on the project website. This EA provides a high level summary of relevant information from the 2019 USSPACECOM EA where appropriate, and refers the reader to the 2019 USSPACECOM EA for further detail.

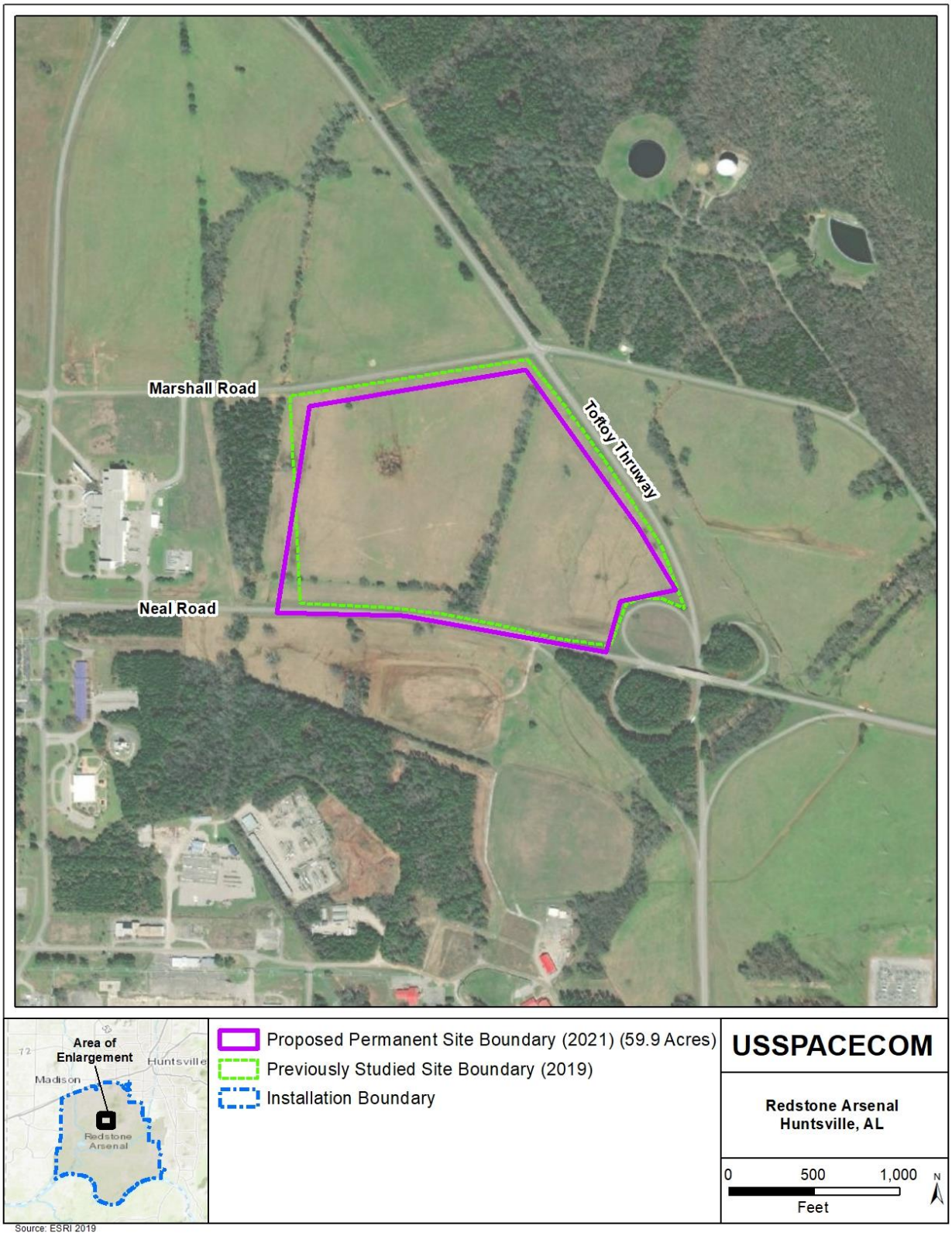
2.3.1 Alternative 1 – Huntsville, AL (Redstone Arsenal) (Preferred Alternative)

The Alternative 1 site in Huntsville, AL is located at Redstone Arsenal and covers approximately 60 acres in the central portion of the installation (**Figure 2-3**). The site is similar to Permanent Site Alternative 1 that was evaluated in the 2019 USSPACECOM EA (Air Force, 2019a). The site is currently undeveloped, and is leased by the U.S. Army Corps of Engineers (USACE) Real Estate Division for livestock grazing. Vegetation consists of tall grasses that are periodically mowed. A narrow wooded area running approximately north to south centrally bisects the site into nearly equal eastern and western halves. Unlike the alternative analyzed in 2019, Alternative 1 would be fully contained within the site; no interior renovations or use of existing buildings at Redstone Arsenal is included.

Redstone Arsenal is a U.S. Army Garrison in Madison County in the 13-county region in northern Alabama and Tennessee referred to as the Tennessee Valley. The City of Huntsville borders Redstone Arsenal on the north, east, and west, with the Tennessee River forming the installation's southern boundary. Redstone Arsenal covers 38,162 acres and contains substantial existing infrastructure. Approximately 800 military personnel, 17,500 civilian employees, and 22,200 contractors are assigned to the installation, approximately 85 percent of which are associated with the Army and DoD, while the remainder support civilian agencies. In total, Redstone Arsenal hosts 72 tenant organizations that support its four synergies: Logistics Services; Research, Development, Test, and Engineering; Intelligence and Homeland Defense; and Space Operations and Missile Defense.

The Redstone Arsenal site is the DAF's **Preferred Alternative** for implementation of the Proposed Action. "*Huntsville compared favorably across more of these factors than any other community, providing a large, qualified workforce, quality schools, superior infrastructure capacity, and low initial and recurring costs. Additionally, the Huntsville community, with Redstone Arsenal coordination, offered a facility to support the headquarters, at no cost, while the permanent facility is being constructed.*" (Air Force, 2021a).

Figure 2-3: Alternative 1 Site (Preferred Alternative) – Huntsville, Alabama (Redstone Arsenal)



2.3.2 Alternative 2 – Albuquerque, NM (Kirtland AFB)

The Alternative 2 site in Albuquerque, New Mexico is located at Kirtland AFB and covers approximately 59 acres along the west side of Pennsylvania Street SE in the northwestern corner of the installation (**Figure 2-4**). The site has been completely disturbed in the past; it previously contained a base housing neighborhood. No buildings or structures are present on the site, although the road network, laid out in a general north-south and east-west grid pattern, remains. Ground cover on the site between the existing roads consists of exposed dirt and scrub-shrub vegetation. The site is adjacent to existing base facilities to the north, east, and south. Conditions similar to those on the site are present immediately to the west. Facilities associated with the Albuquerque International Sunport (i.e., airport) are approximately 0.25 mile west of the site.

Kirtland AFB covers approximately 51,558 acres immediately southeast of Albuquerque in Bernalillo County, New Mexico. Approximately 22,000 personnel are assigned to Kirtland AFB, including active duty, civilians, contractors, Air National Guard, and Air Reserve. The 377th Air Base Wing is the installation's host organization. Kirtland AFB's primary missions include research, development and testing; readiness and training; munitions maintenance; and support to base operations for more than 100 associate units. The installation is a center for research, development and testing of non-conventional weapons, space and missile technology, laser warfare, and similar types of equipment and resources.

2.3.3 Alternative 3 – Bellevue, NE (Offutt AFB)

The Alternative 3 site is located in Bellevue, Nebraska at Offutt AFB and covers approximately 11 acres along the southeast side of Nelson Drive in the northeast corner of the installation (**Figure 2-5**). Previous disturbance on the site consists of four baseball fields and a paved area used for outdoor parking and storage of vehicles and equipment. Existing vegetation consists of maintained grass and a small number of ornamental trees. No buildings or structures are present on the site. Existing base facilities are present to the northeast and northwest of the site, and vehicle, material, and equipment storage and lay-down areas (unrelated to the Proposed Action) are present to the southeast and southwest of the site.

Offutt AFB covers approximately 4,041 acres in eastern Sarpy County, Nebraska, approximately 10 miles south of Omaha and adjacent to the City of Bellevue. Approximately 7,000 personnel are assigned to the installation. The 55th Wing, the largest wing in the Air Combat Command and the second largest in the Air Force, is the installation's host organization. The mission of the 55th Wing is to provide dominant intelligence, surveillance and reconnaissance, electronic attack, and nuclear command and control to national leadership and warfighters anytime, anyplace (Air Force, n.d.; Offutt AFB, 2020a).

2.3.4 Alternative 4 – Colorado Springs, CO (Peterson SFB)

The Alternative 4 site at Colorado Springs, Colorado is located on Peterson SFB and covers approximately 12.9 acres along the east side of Vandenberg Street in the installation's Command Complex (**Figure 2-6**). The site is similar to Interim Site Alternative 1 and Interim Site Alternative Parking that were analyzed in the 2019 USSPACECOM EA (Air Force, 2019a). Previous development on the site consists of a soft-surface running track. No buildings or structures are present on the parcel. Ground cover on the site primarily consists of maintained grass.

Figure 2-4: Alternative 2 Site – Albuquerque, New Mexico (Kirtland AFB)

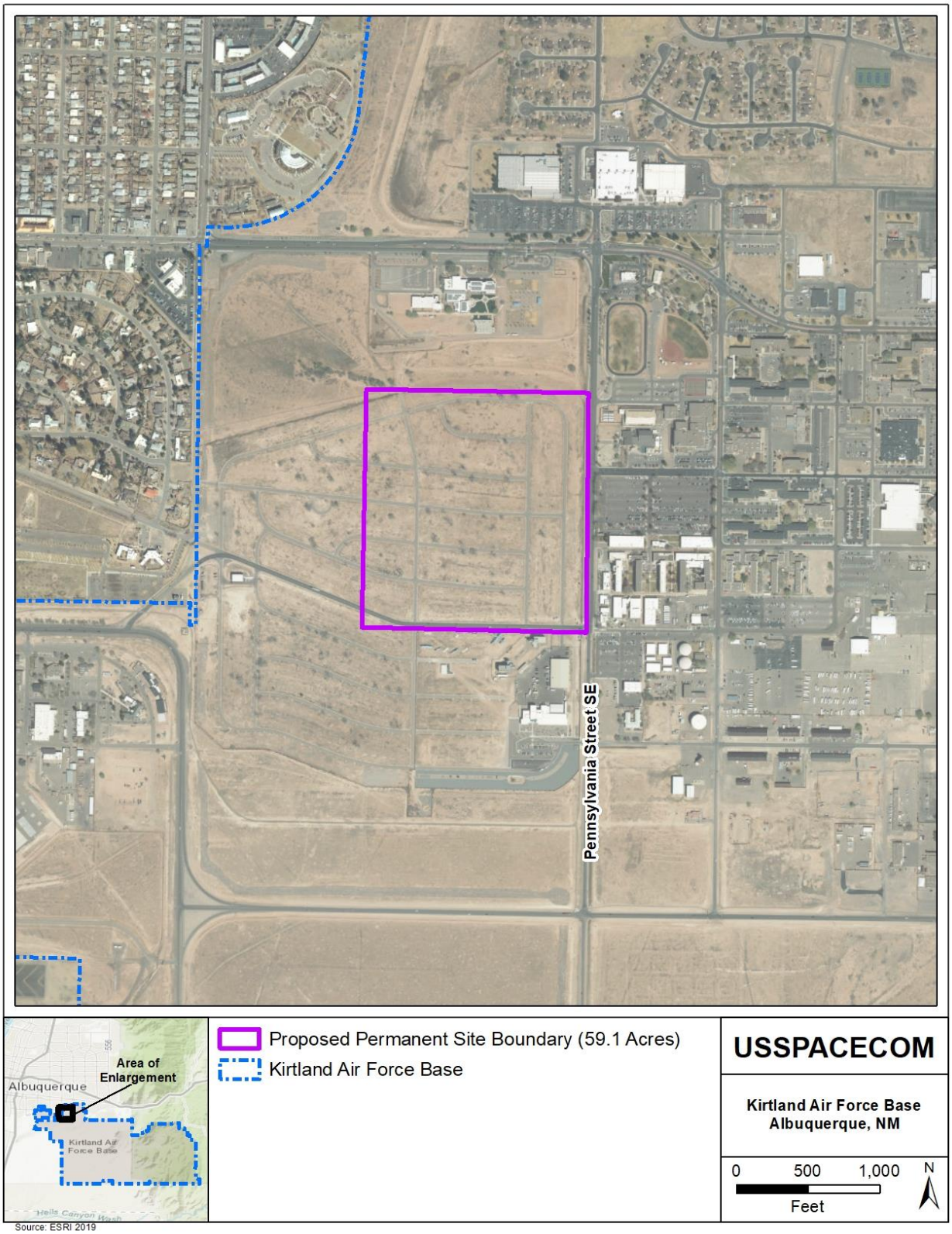


Figure 2-5: Alternative 3 Site – Bellevue, Nebraska (Offutt AFB)

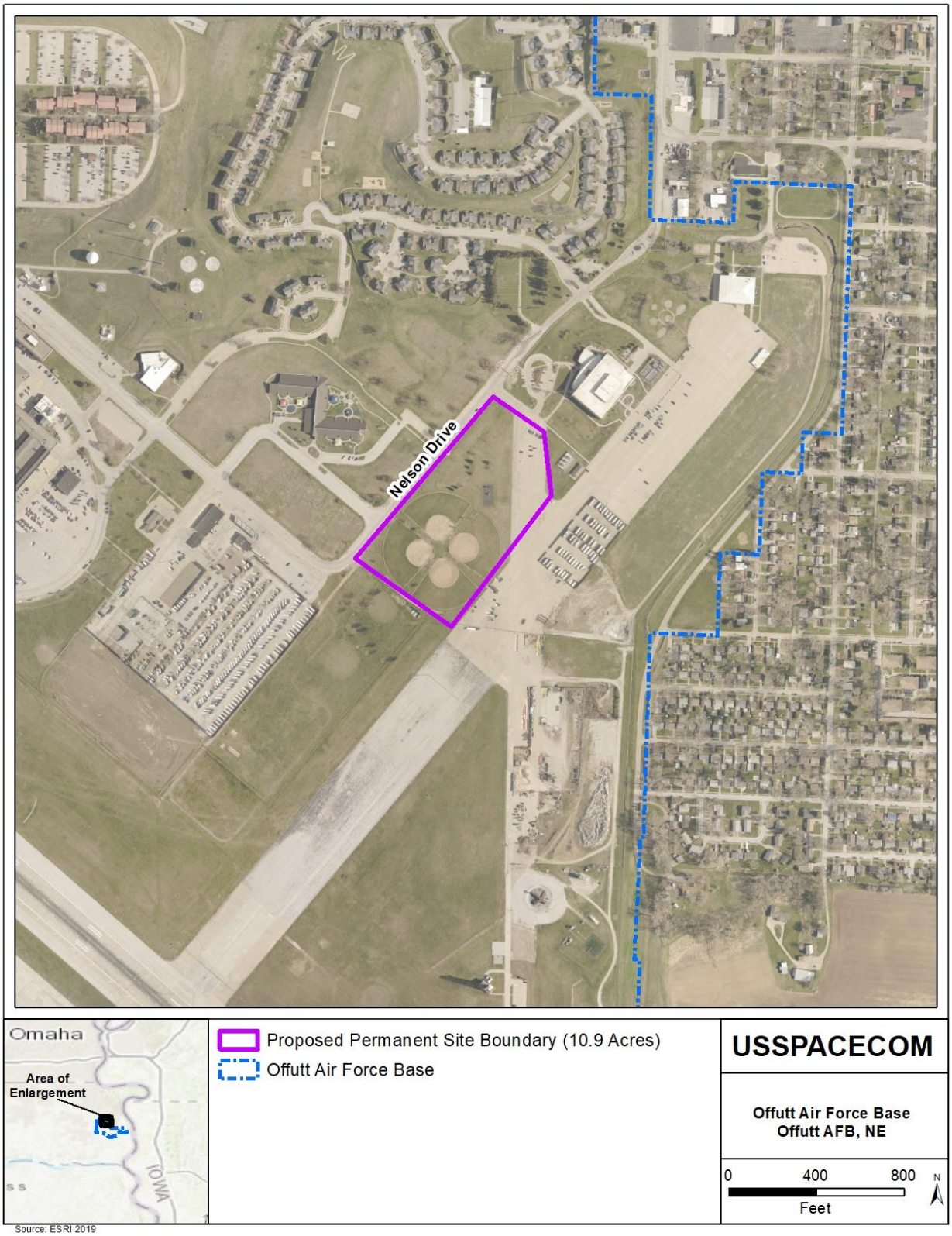
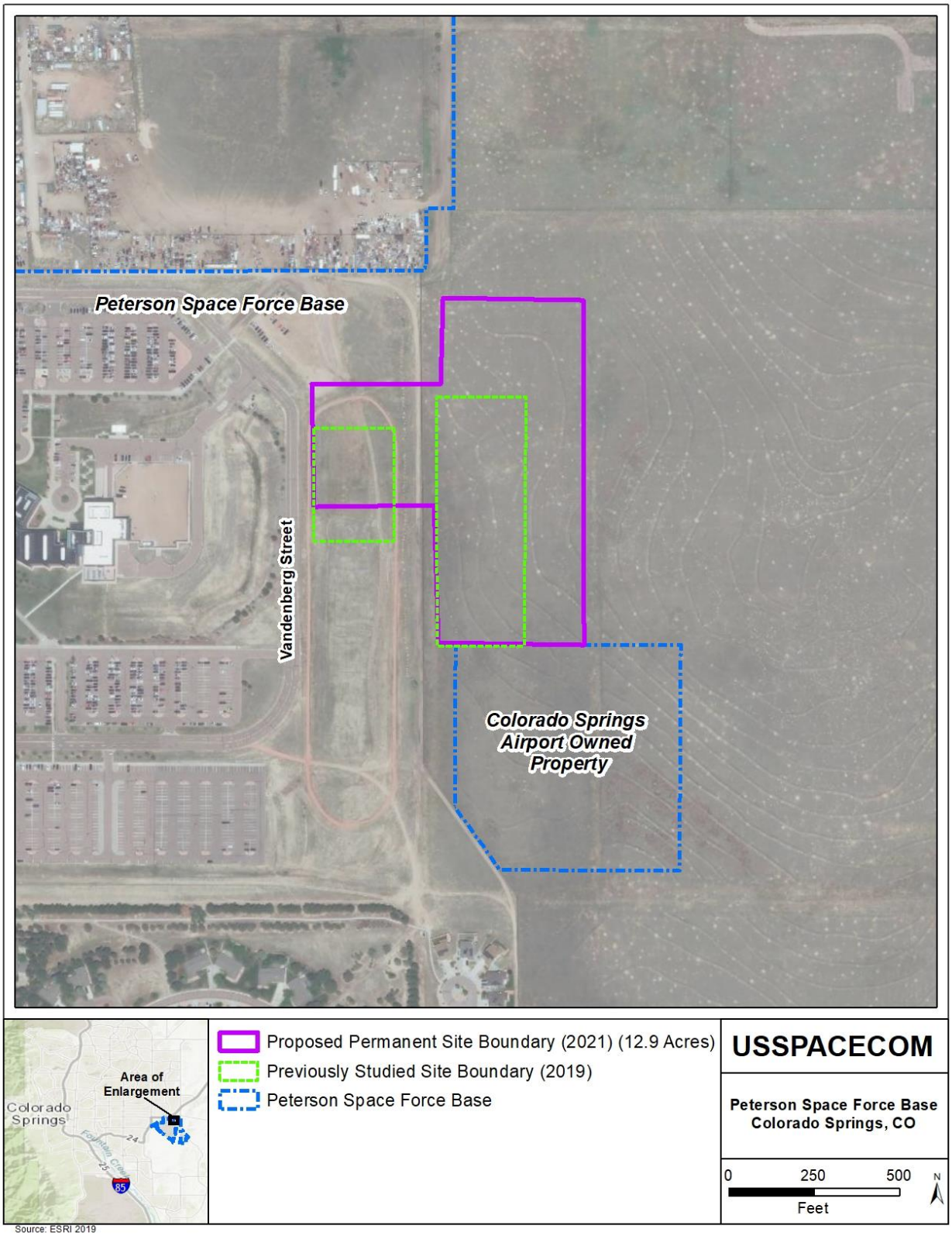


Figure 2-6: Alternative 4 Site – Colorado Springs, Colorado (Peterson SFB)



Peterson SFB covers approximately 1,385 acres immediately north of the Colorado Springs Municipal Airport in El Paso County, Colorado, approximately 7 miles east of downtown Colorado Springs. Approximately 200 acres of the installation are federally owned, with the remaining 1,185 acres leased from the City of Colorado Springs. The 21st Space Wing is the host unit providing missile warning and space control to North American Aerospace Defense Command and U.S. Strategic Command through a network of command and control units and ground and space-based sensors operated by geographically separated units around the world. Approximately 5,800 military personnel and 4,500 civilians are assigned to Peterson SFB (Air Force, 2018a).

2.3.5 Alternative 5 – San Antonio, TX (Port San Antonio)

The Alternative 5 site covers approximately 32.5 acres in San Antonio, TX located on the east side of Port San Antonio, an approximately 1,900-acre office, technology, and industrial campus that occupies the former Kelly AFB. Port San Antonio is approximately 5 miles southwest of downtown San Antonio (**Figure 2-7**). The site is bounded by General Hudnell Drive to the northwest, paved parking and storage areas to the north and south, and an existing rail yard outside Port San Antonio to the east. Previous disturbance on-site includes an existing multistory building on the west side of the site and an adjacent surface parking lot; the Proposed Action would avoid disturbance to the multistory building. The central and eastern portions of the site are currently undeveloped and consist of maintained grass and scattered ornamental trees.

Port San Antonio is managed by a special redevelopment authority created by the San Antonio City Council prior to the base's closure in 2001. The campus hosts more than 80 private- and public-sector tenants, including the DoD as well as aviation, technology, and advanced manufacturing companies that occupy hangar and workshop facilities associated with the former AFB. Approximately 14,000 workers are directly employed by the port's tenants. The Air Force Medical Readiness Agency, Air Force Civil Engineer Center (AFCEC), and the 24th Air Force occupy facilities at the Port comprising more than 750,000 square feet of space (Port San Antonio, 2021). Port San Antonio is approximately 7.5 miles southwest of Joint Base San Antonio (JBSA), which is administered by the Air Force and encompasses JBSA-Fort Sam Houston, JBSA-Lackland, JBSA-Randolph, and more than 200 mission partners (Air Force, 2014).

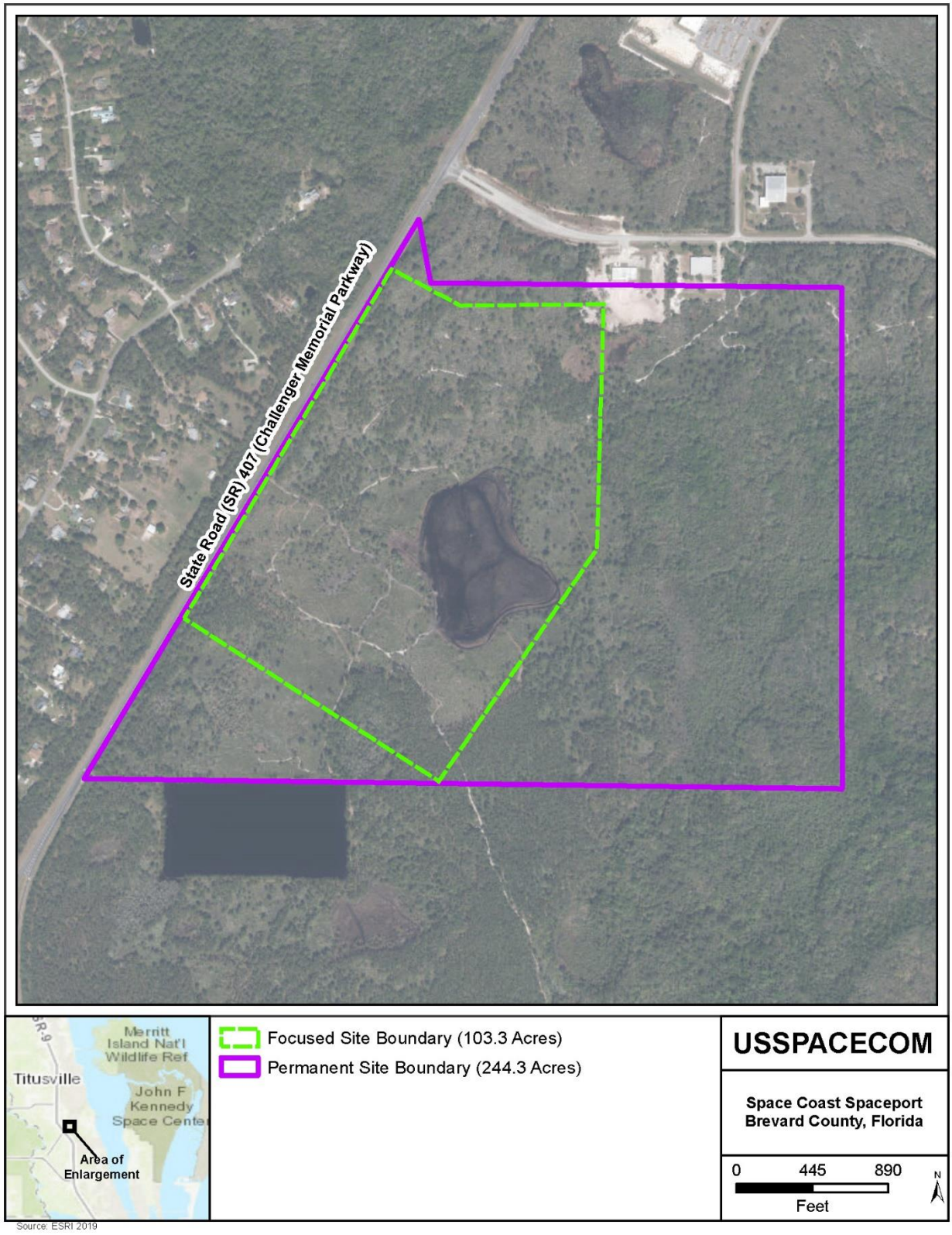
2.3.6 Alternative 6 – Brevard County, FL (Space Coast Spaceport)

The Alternative 6 site is located in Brevard County, Florida and covers approximately 244 acres currently owned by Space Coast Regional Airport near Titusville, Florida (**Figure 2-8**). The site is bounded by State Road (SR) 407 (Challenger Memorial Parkway) to the west and by predominantly undeveloped, densely vegetated land within the airport property to the north, east, and south. A one-story commercial building is adjacent to the northern boundary of the site. Previous disturbance consists of multiple dirt roads and trails throughout the site. Except for these trails, the site is almost entirely vegetated with a variety of trees, shrubs, and grasses. A large wetland is present in the center of the site. Existing development near the site includes buildings associated with Space Commerce Park to the north and residential development on the opposite side of SR 407 to the west.

Due to the size of this site, the DAF has identified a smaller, 103-acre area in the western portion of the overall site (adjacent to SR 407) that would contain all Proposed Action-related activities (i.e., a focused site boundary; **Figure 2-8**). The DAF has focused its Alternative 6 analysis within this EA on this smaller, 103-acre focused site boundary; future use of the Alternative 6 site outside this focused site boundary would require supplemental NEPA documentation.

Figure 2-7: Alternative 5 Site – San Antonio, Texas (Port San Antonio)

Figure 2-8: Alternative 6 Site – Brevard County, Florida (Space Coast Spaceport)



Of note, Alternative 6 is the only Alternative site considered in this EA that contains wetlands. If this site is selected, the DAF would exclude all wetlands from the limits of disturbance. The DAF would design the site layout to avoid all temporary and permanent impacts to wetlands in accordance with Executive Order (EO) 11990, *Protection of Wetlands*.

Space Coast Regional Airport is a general aviation airport covering approximately 1,100 acres owned and operated by the Titusville-Cocoa Airport Authority (TCAA) (TCAA, 2005). The Space Coast Spaceport site is approximately 5 miles west of the Kennedy Space Center complex, 15 miles west of Cape Canaveral Space Force Station, and approximately 23 miles northwest of Patrick SFB.

2.3.7 No Action Alternative

Under the No Action Alternative, a single, permanent USSPACECOM HQ facility would not be built. The USSPACECOM HQ would continue to operate in interim facilities at Peterson SFB and other installations across the nation for the foreseeable future. The lack of a purpose-built HQ facility would prevent USSPACECOM from operating efficiently. The six Alternative sites being considered for the Proposed Action would continue under their respective existing conditions as discussed in **Section 3.0**.

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3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 INTRODUCTION

This chapter describes the affected environment and potential environmental consequences for resource areas that could be affected by the Proposed Action. Resources dismissed from detailed analysis in the EA, and the justification for their dismissal, are presented in **Table 3-1**.

Table 3-1: Resources Dismissed from Detailed Analysis in the EA

Environmental Resource	Justification
Safety and Occupational Health	• Construction activities associated with the Proposed Action would be conducted in accordance with applicable federal, state, DAF, and local worker safety and regulatory requirements and guidelines, including those established by the Occupational Safety and Health Administration. Adherence to these requirements would substantially minimize the potential for severe worker injuries during construction. • Operational activities would largely consist of office and administrative duties, and would have little potential to result in severe worker injuries. • Adherence to established safety requirements, practices, and guidelines would apply, and further minimize the potential for worker injury.
Utilities and Infrastructure	• The DAF has determined existing electrical, water, sewer, and stormwater management utilities and infrastructure at or surrounding the Alternative sites have sufficient capacity to accommodate the Proposed Action. • Utility and infrastructure improvements or upgrades would consist of trenching, directional boring, or similar activities to install service connections between the new HQ facility and existing distribution infrastructure. • Construction and operation of the Proposed Action would have no potential to interrupt or degrade utility service to existing facilities or customers outside the Alternative sites.

3.2 LAND USE AND ZONING

The DAF retained land use and zoning for detailed analysis under Alternatives 5 and 6, as the Port San Antonio and Space Coast Spaceport sites are not on established DoD installations. The DAF dismissed land use and zoning from detailed analysis for Alternatives 1, 2, 3, and 4 because the Proposed Action would have no potential to affect land use or zoning outside the established DoD installation associated with each of those Alternatives.

The Region of Influence (ROI) for land use and zoning is a 0.5-mile radius around each Alternative site.

3.2.1 Affected Environment

3.2.1.1 Alternative 5 – San Antonio, TX (Port San Antonio)

The Alternative 5 site is located in Bexar County within the City of San Antonio on land formerly occupied by Kelly AFB. The site is managed by Port San Antonio, a special redevelopment authority created by the City of San Antonio to redevelop the former Kelly AFB to maintain and grow quality jobs in the San Antonio area (Port San Antonio, 2021). Existing land use on the proposed site includes a recently constructed multi-story office building and adjacent parking on the west side (**Figure 2-7**). The central and eastern portions of the site are currently open park space with maintained grass, ornamental trees, and park pavilions. Off-

site land use in the ROI primarily consists of office, manufacturing, and industrial uses. Notably, a rail yard owned by Union Pacific borders the site to the east. Residential areas in the ROI consist of an apartment complex located approximately 630 feet north of the proposed site, and single-family homes located approximately 800 feet northeast and 1,300 feet southeast of the site. Land use planning in the City of San Antonio is guided by the city's Comprehensive Plan (City of San Antonio, 2021a).

The site is zoned under the City of San Antonio's "General Commercial" zoning category; permitted uses under this zoning category include public parks, retail stores, and office/professional uses (City of San Antonio, 2021b). Overall, Port San Antonio is predominantly zoned with commercial and industrial designations (City of San Antonio, 2021c; City of San Antonio, 2020).

3.2.1.2 Alternative 6 – Brevard County, FL (Space Coast Spaceport)

The Alternative 6 site is located in Brevard County within the City of Titusville on land currently owned by the TCAA. The site is currently undeveloped, consisting of forests, scrub and brushland, and freshwater marshes (**Figure 2-8**) (FDEP, 2021a). Off-site land use in the ROI includes low density dwellings and forests to the west and north, commercial buildings associated with the Spaceport Commerce Park and forested areas to the northeast, and undeveloped forested/marsh areas to the east and south. An undeveloped area directly south of the site is zoned as "Planned Residential" and homebuilder KB Homes has plans to develop this area into a residential community (KB Home, 2021). The TCAA's Space Coast Regional Airport is located approximately 1.1 mile east of the site. Land use planning in the City of Titusville is guided by the city's Comprehensive Plan (City of Titusville, 2018).

The City of Titusville zoning ordinance maps the majority of the Alternative 6 site (i.e., the focused site boundary) as "Planned Industrial Development" (57 acres) with portions of the eastern section of the site zoned as "Heavy Industrial" (10 acres), "Single-Family Medium Density" (15 acres), and "Open Space & Recreation" (17 acres) (City of Titusville, 2021a) (**Figure 3-1**). The proposed site is owned by the TCAA and is part of the Space Coast Regional Airport property; much of this overall airport property is zoned as "Public" (**Figure 3-1**), although no "Public" zoning currently exists on the Alternative 6 site (City of Titusville, 2021b). The "Public" zoning designation is designed to protect the substantial public interest of real property owned and used by any governmental entity (City of Titusville, 2021a).

3.2.2 Environmental Consequences

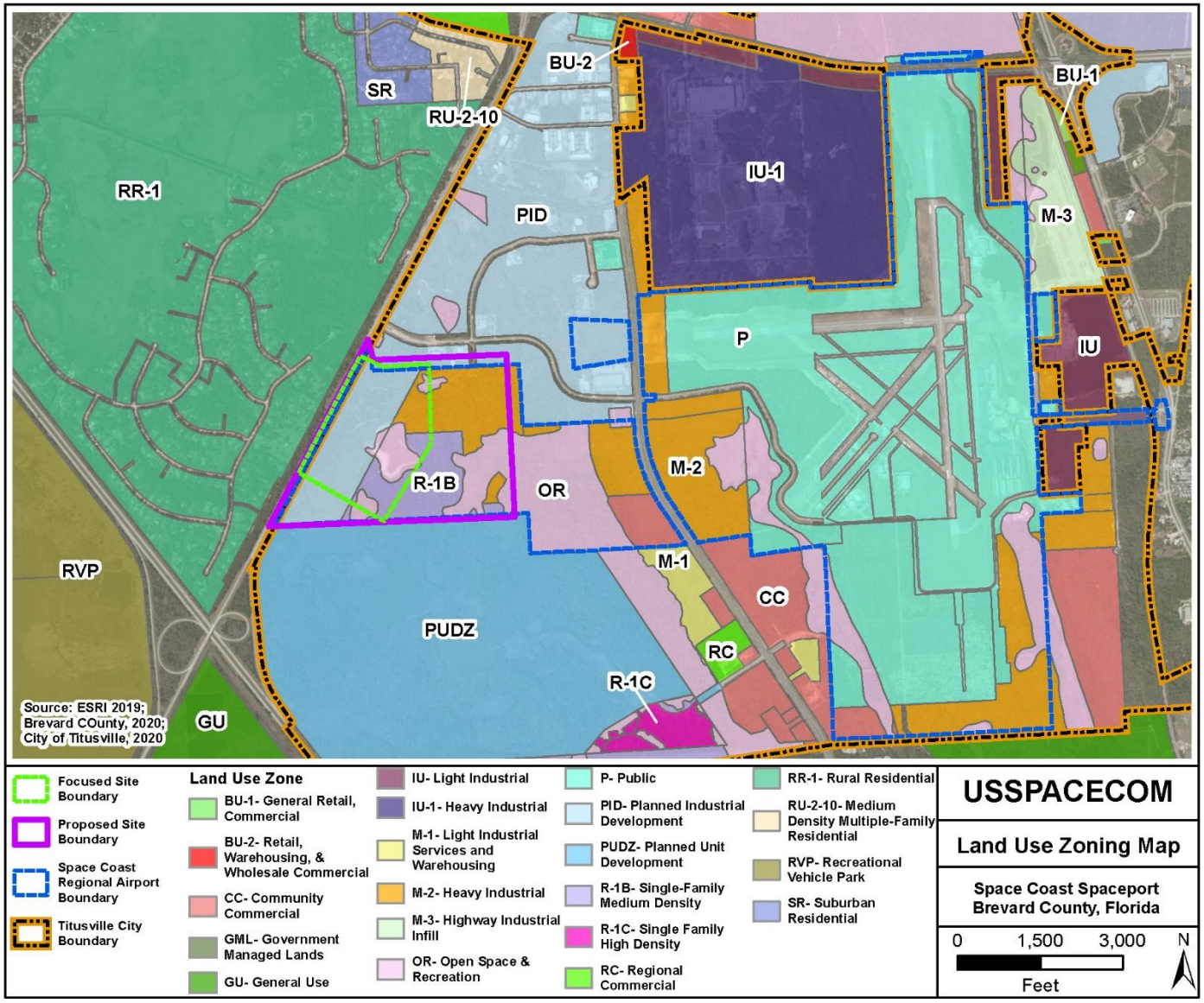
A land use or zoning impact would be significant if it would 1) be incompatible with an adjacent or nearby land use to the extent that public health or safety would be endangered; or 2) be substantially inconsistent or non-compliant with applicable land use plans or policies (e.g., zoning regulations).

As described in the subsections below, the Proposed Action would have *no significant impact* on land use under any Alternative.

3.2.2.1 Alternative 5 – San Antonio, TX (Port San Antonio)

Alternative 5 would directly support the City of San Antonio and Port San Antonio mission by repurposing the site in a manner that creates up to approximately 1,800 permanent jobs. If selected, the site would be developed in a manner consistent and compatible with Port San Antonio's plans and policies. Operation of the HQ facility would be consistent with adjacent land uses in the ROI, which include similar office/administrative uses. Furthermore, the proposed HQ facility would be compatible with the site's current zoning designation, because office buildings are a permitted use under the "General Commercial" zoning designation, and there are other nearby areas on Port San Antonio in this zoning category currently occupied by the DAF. Therefore, Alternative 5 would have *no impact* on land use and zoning.

Figure 3-1: Existing Zoning Designations at Alternative 6 Site (Space Coast Spaceport)



3.2.2.2 Alternative 6 – Brevard County, FL (Space Coast Spaceport)

Under Alternative 6, the DAF would petition the City of Titusville to re-zone the 103-acre focused site to "Public." The property is currently owned and operated by the TCAA, a publicly owned entity, and proximal to the "Public"-zoned airport. Use of the site for an HQ facility would be functionally consistent with existing "Planned Industrial Development" zoning because professional offices are a permitted use under this designation (City of Titusville, 2021c). Additionally, the Proposed Action would be consistent and compatible with existing land uses in the ROI. As such, Alternative 6 would have *no significant adverse impacts* on land use and zoning due to zoning changes that would conflict with 15 acres of land currently zoned "Single-Family Medium Density," 10 acres currently zoned "Heavy Industrial," and 17 acres currently zoned "Open Space & Recreation." The Proposed Action would not meaningfully impact existing zoning on a regional scale, as adequate areas with these affected zoning designations exist proximal to the site (**Figure 3-1**).

3.2.2.3 No Action Alternative

Under the No Action Alternative, the DAF would not construct the Proposed Action, resulting in *no impacts* to land use or zoning. USSPACECOM operations would continue at the existing Peterson SFB facilities; no changes would occur to land use or zoning on or off the installation. Implementation of the No Action Alternative would not preclude future redevelopment of either the Alternative 5 or Alternative 6 sites.

3.3 NOISE

Noise is any sound that is undesirable to the receptor because it interferes with communication, is intense enough to damage hearing, or is otherwise intrusive. Noise may be intermittent or continuous, steady or impulsive. Human response to noise varies depending on the sound pressure level, type of noise, distance from the noise source, sensitivity, and time of day. Sound within the range of human hearing is measured on a logarithmic scale, known as the decibel (dB). The human ear does not hear all frequencies equally; the A-weighted decibel scale (dBA) is used to reflect the selective sensitivity of human hearing to higher frequency sounds such as aircraft and ground transportation.

The ROI for noise is a 0.5-mile radius of the identified site boundaries.

3.3.1 Affected Environment

3.3.1.1 Alternative 1 – Huntsville, AL (Redstone Arsenal)

Existing noise sources within the ROI include vehicle traffic on the surrounding adjacent roadways and ground/vehicle maintenance at facilities to the south and west of the site. In addition, aircraft operations associated with the Redstone Army Airfield, approximately 1.3 miles northwest, can occasionally be heard (USACE, 2020a).

Noise-sensitive receptors in the ROI on Redstone Arsenal include the Marshall Child Development Center approximately 0.3 mile southwest of the site, and the Marshall Space Flight Center Occupational Health Clinic approximately 0.2 mile west of the site. As the ROI is contained entirely within Redstone Arsenal, no off-base sensitive receptors occur in the ROI.

The Madison County Noise Ordinance prohibits making or causing any noise exceeding 85 dBA during the hours of 7:00 a.m. to 11:00 p.m. or 75 dBA from 11:00 p.m. to 7:00 a.m.[2] Noise associated with construction

[2] 85 dBA in an outdoor setting would be similar to the noise experienced while in heavy traffic. 75 dBA in an outdoor setting would be similar to the noise experienced standing 50 feet away from a highway.

activities occurring between the hours of 7:00 a.m. and 9:00 p.m. are exempt from the noise ordinance (Madison County, 2019).

3.3.1.2 Alternative 2 – Albuquerque, NM (Kirtland AFB)

Existing noise sources within the ROI include DAF and civilian aircraft operations associated with Albuquerque's International Sunport, a joint-use airport operated by Kirtland AFB and the City of Albuquerque, located approximately 0.7 mile from the site, and vehicle traffic on Pennsylvania Street SE. While noise emanating from the Sunport may be heard on-site, this noise is typically below 65 dB[3] (Air Force, 2016).

Noise-sensitive receptors in the ROI on Kirtland AFB include Wherry Elementary School approximately 500 feet north, and approximately 55 on-base housing units located 0.4 mile northeast. Off-base sensitive receptors in the ROI include the New Mexico Veterans Memorial and Museum approximately 0.3 mile northwest, Christ United Methodist Church approximately 0.5 mile northwest, and approximately 135 homes located in the Siesta Hills and Elder Homestead communities 1,300 feet west and 0.3 mile northwest of the site, respectively.

The City of Albuquerque Noise Ordinance mandates that noise emanating from industrial/manufacturing and public premises and received by residential areas may not exceed 60 indoor dBA[4] during the daytime and 55 indoor dBA at night (10:00 p.m. to 7:00 a.m.). Construction equipment can only be operated between 6:00 a.m. and 10:00 p.m. Monday through Saturday. The Noise Ordinance also prohibits operation of construction equipment on holidays. The city can grant a temporary construction noise permit exempting certain construction projects from the noise ordinance (City of Albuquerque, 2021).

3.3.1.3 Alternative 3 – Bellevue, NE (Offutt AFB)

The primary source of noise in the ROI is the Offutt AFB airfield, located 0.3 mile southwest of the site. The proposed site may experience airfield noise in excess of 70 dB (AFCEC, 2021b). Other sources of noise include vehicle traffic from the surrounding adjacent roadways, as well as ground/building maintenance at adjacent buildings north and west of the site.

Noise-sensitive receptors in the ROI on Offutt AFB include the Offutt Child Development Center approximately 500 feet west, and approximately 100 on-base housing units located 500 feet north of the site. Off-base sensitive receptors in the ROI exist in the form of residential communities to the north and east of the site. Sensitive receptors in these communities include several schools, churches, and homes. The nearest sensitive receptors are base housing units 500 feet north of the site. The nearest off-base sensitive receptors are private homes located approximately 900 feet east of the site.

Offutt AFB is located directly adjacent to the City of Bellevue. The City of Bellevue Noise Ordinance prohibits construction noise outside the hours of 7 a.m. to 6 p.m. on week days (City of Bellevue, 2021). Sarpy County does not have an applicable noise ordinance addressing construction-related noise.

3.3.1.4 Alternative 4 – Colorado Springs, CO (Peterson SFB)

Existing noise sources within the ROI include vehicle traffic from Vandenburg Street and Interstate (I)-24. The Colorado Springs Airport, which is jointly operated by DAF and the City of Colorado Springs, is

[3] 65 dB in an outdoor setting would be slightly louder than a normal conversation.
[4] 60 dBA in an indoor setting would be similar to the noise experienced standing 20 feet from an air conditioning unit.

located approximately 1.3 miles from the site. Airport noise is typically below 65 dB at the site (City of Colorado Springs, 2013).

Noise-sensitive receptors in the ROI include approximately 130 on-base housing units to the south and southwest of the site, the nearest being 0.2 mile south of the site. No off-base sensitive receptors occur in the ROI.

The City of Colorado Springs Noise Ordinance mandates that construction noise may not exceed 80 dBA[5] during daytime hours (7:00 a.m. to 7:00 p.m.) and 75 dBA during nighttime hours (7:00 p.m. to 7:00 a.m.) (City of Colorado Springs, 2021).

3.3.1.5 Alternative 5 – San Antonio, TX (Port San Antonio)

Existing noise sources within the ROI include vehicle traffic from General Hudnell Drive to the north, the rail yard to the east, and ground/building maintenance at office buildings to the southwest and storage facilities to the northeast. Much of Port San Antonio is available for commercial development, and noise associated with new construction is not uncommon within the ROI. An industrial airport (Kelly Field) is located approximately 1 mile west of the site. While airfield noise may be heard at the site, this noise is typically below 65 dB (Port San Antonio, 2008).

Noise-sensitive receptors in the ROI include St. Philips College Southwest Campus approximately 0.3 mile east of the site and residential communities (apartments and neighborhoods) approximately 630 feet north, 800 feet northeast, and 1,300 feet southeast of the site. The National Register of Historic Places (NRHP)-listed Bungalow Colony Historic District is also located immediately southwest of the proposed site (see **Section 3.8.1.5**).

The City of San Antonio Noise Ordinance mandates that construction noise may not annoy, distress, or disturb the quiet at times other than during the daytime on week days (6:00 a.m. to 10:00 p.m.) and that the sound level at or across a real property boundary may not exceed 80 dBA. The Noise Ordinance includes an exception for sound produced by any governmental body in the performance of a governmental function (City of San Antonio, 2001).

3.3.1.6 Alternative 6 – Brevard County, FL (Space Coast Spaceport)

Existing noise sources within the ROI primarily include vehicle traffic from SR 407, occasional ground maintenance associated with the commercial buildings to the northwest, and noise associated with the operation of Space Coast Regional Airport. Airport noise does not typically exceed 65 dBA at the site (FAA, 2020).

The only noise-sensitive receptors in the ROI include a residential community located approximately 550 feet northwest of the proposed site opposite SR 407. This community includes approximately 90 homes.

The City of Titusville Noise Ordinance mandates that activities at commercial use sites not exceed 60 dBA. Construction activities occurring during the daytime (7:00 a.m. and 7:00 p.m.) Monday through Saturday are exempt from the city's Noise Ordinance (City of Titusville, 2017).

[5] 80 dBA in an outdoor setting would be similar to the noise experienced in a busy city center.

3.3.2 Environmental Consequences

A noise impact would be significant if it would 1) violate applicable noise regulations, 2) cause unsafe noise conditions for nearby receptors during construction, or 3) substantially affect normal operations of noise-sensitive receptors during operation of the Proposed Action.

As described in the subsections below, the Proposed Action would have *no significant impact* on noise under any Alternative.

3.3.2.1 Proposed Action – All Alternatives

Construction of the Proposed Action would generate noise that may cause annoyance to sensitive receptors within the ROI. Noise created during construction would be typical of other similar construction projects and associated primarily with heavy construction equipment. Peak noise levels within 50 feet of active construction areas and material transportation routes would most likely be considered "striking" or "very loud," comparable to peak crowd noise at an indoor sports arena. At approximately 200 feet, peak noise levels would be loud, approximately comparable to a garbage disposal or vacuum cleaner at 10 feet. At 0.25 mile (1,300 feet), construction noise levels would generally not be intrusive or annoying, although transient noise levels may be noticeable at times. Areas that would be most affected by construction noise are those closest to the selected site footprint; they include the residential dwellings near Alternatives 2, 3, 4, 5, and 6; Marshall Space Flight Center Occupational Health Clinic near Alternative 1; Wherry Elementary School near Alternative 2; and the Offutt Child Development Center near Alternative 3. Remaining sensitive receptors that are 0.25 mile or greater from the selected site would likely experience some construction noise, particularly during outdoor activities. However, indoor noise levels would be 10-28 dBA lower than outdoor levels (Locher, et al., 2018). Further, noise quickly attenuates at distances greater than 0.25 mile from the source.

Construction workers commuting and material transport to the selected site would slightly increase ambient noise levels in the ROI, however this increase would be temporary and restricted to daytime hours, to the extent practicable. Although noise levels would be quite loud in the immediate vicinity of the proposed development site, the intermittent nature of peak construction noise levels would not create unsafe noise conditions. Construction-related noise impacts would occur sporadically and would not be expected to substantially affect the normal operations of sensitive receptors in the ROI of the selected site. The DAF anticipates that it would adhere to stipulations included in the local noise ordinance, such as limiting construction to daytime hours and avoiding construction on weekends and holidays. If during the course of construction planning the DAF determines it would not be able to comply with the selected site's local noise ordinance, the DAF would consult with the local authorities regarding potential noise violations, and if necessary seek an exemption from the local noise ordinance along with recommended noise-reduction measures. The Alternative sites all already experience slightly elevated ambient noise levels associated with operation of nearby airfields, and construction activities similar to the Proposed Action are not uncommon. Overall, the Proposed Action would have *short-term, not significant adverse impacts* on noise.

Noise generated during operation of the proposed HQ facility would be primarily associated with vehicle traffic to and from the site, as well as occasional grounds maintenance. Overall, operational noise would be indiscernible from ambient levels. Therefore, operation of the proposed HQ facility would have *no or negligible adverse impacts* on noise.

3.3.2.2 No Action Alternative

Under the No Action Alternative, the proposed USSPACECOM HQ facility would not be constructed and there would be *no impacts* to noise at any of the Alternative sites. Implementation of the No Action

Alternative would not preclude future redevelopment, and associated noise, of any of the Alternative sites. USSPACECOM operations would continue at Peterson SFB, resulting in continued noise levels consistent with administrative/office facilities that would continue to be managed as under current conditions.

3.4 AIR QUALITY AND CLIMATE

Air quality conditions at a given location are a function of several factors including the quantity and type of pollutants emitted locally and regionally, as well as the dispersion rates of pollutants in the region. Primary factors affecting pollutant dispersal include wind speed and direction, atmospheric stability, climate and temperature, and topography.

The ROI for air quality is the air quality control region (AQCR) for each Alternative site. Air quality and climate conditions within the ROI are described in terms of the DAF's attainment list maintained by AFCEC and the relationship to air quality standards.

3.4.1 Affected Environment

3.4.1.1 Criteria Pollutants

National Ambient Air Quality Standards (NAAQS) are provided for six "criteria pollutants" (as listed under Section 108 of the Clean Air Act [CAA] of 1970): carbon monoxide (CO); lead (Pb); nitrogen oxides (NO_x); ozone (O_3); particulate matter, divided into two size classes of 1) aerodynamic size less than or equal to 10 micrometers (PM_{10}), and 2) aerodynamic size less than or equal to 2.5 micrometers ($PM_{2.5}$); and sulfur dioxide (SO_2).

The ambient air quality in an area is characterized in terms of whether it complies with the NAAQS. Areas where monitored outdoor air concentrations are within an applicable NAAQS are considered in *attainment* of that NAAQS. If sufficient ambient air monitoring data are not available to make a determination, the area is instead deemed as *attainment/unclassifiable*. Areas where monitored outdoor air concentrations exceed the NAAQS are designated by the USEPA as *nonattainment*. Nonattainment designations for some pollutants (e.g., O_3) can be further classified based on the severity of the NAAQS exceedances. Lastly, areas that have historically exceeded the NAAQS but have since instituted controls and programs that have successfully remedied these exceedances are known as *maintenance* areas.

The General Conformity Rule of the federal CAA mandates that the federal government abide by approved State Implementation Plans (SIP) (i.e., air quality control plans). Air Force Policy Directive (AFPD) 32-70, *Environmental Considerations in Air Force Programs and Activities,* mandates that the Air Force comply with all federal, state, and local environmental laws and standards. In accordance with AFPD 32-70, AFMAN 32-7002*, Environmental Compliance and Pollution Prevention*, explains responsibilities and specific details on how to comply with the CAA and other federal, state, and local air quality regulations. This AFMAN provides further and more specific instruction on the requirements of the DAF's EIAP for air quality promulgated at 32 C.F.R. 989.30, which mandates that EIAP documents, such as this EA, address General Conformity.

According to the DAF's attainment list provided by AFCEC, the Alternative 2, 3, and 6 sites are considered in *attainment/unclassifiable*. Alternative 1, an Army installation, is not at a location on DAF's attainment list. However, 40 C.F.R. Part 81, Subpart C, lists Madison County, Alabama as *attainment/unclassifiable*. Therefore, the General Conformity Rule *does not apply* to Alternative 1, 2, 3, and 6. The Alternative 4 site is in *maintenance* for CO, and the Alternative 5 site is in marginal nonattainment for O_3; the General Conformity Rule *does apply* to these sites (Air Force, 2019b).

Table 3-2 summarizes the regulatory authority for air quality, the ROI, and the NAAQS attainment status at each of the Alternative sites.

Table 3-2: Air Quality Conditions at the Alternative Sites

Alternative Site	Regulatory Authority	Air Quality ROI	NAAQS Attainment Status
Alternative 1 – Huntsville, AL (Redstone Arsenal)	USEPA Region 4; Alabama Department of Environmental Management (ADEM)	Columbus (Georgia)-Phenix City (Alabama) Interstate AQCR	Attainment/Unclassifiable
Alternative 2 – Albuquerque, NM (Kirtland AFB)	USEPA Region 6; City of Albuquerque Environmental Health Department	Albuquerque-Mid Rio Grande Intrastate AQCR	Attainment/Unclassifiable
Alternative 3 – Bellevue, NE (Offutt AFB)	USEPA Region 7; Nebraska Department of Environment and Energy (NDEE)	Metropolitan Omaha-Council Bluffs Interstate (Iowa, Nebraska) AQCR	Attainment/Unclassifiable
Alternative 4 – Colorado Springs, CO (Peterson SFB)	USEPA Region 6; Colorado Department of Public Health and Environment (CDPHE)	San Isabel Intrastate AQCR	Located within Colorado Springs maintenance area for CO
Alternative 5 – San Antonio, TX (Port San Antonio)	USEPA Region 6; Texas Commission on Environmental Quality (TCEQ)	Metropolitan San Antonio Intrastate AQCR	Located within San Antonio nonattainment area for O_3; Bexar County marginal nonattainment of 2015 eight-hour O_3
Alternative 6 – Brevard County, FL (Space Coast Spaceport)	USEPA Region 4; Florida Department of Environmental Protection (FDEP)	Central Florida Intrastate AQCR	Attainment/Unclassifiable

3.4.1.2 Greenhouse Gas Emissions

The primary long-lived greenhouse gases (GHGs) directly emitted by human activities are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. **Table 3-3** summarizes baseline GHG emissions and existing climate conditions for each of the Alternative sites.

Table 3-3: Climate Conditions at the Alternative Sites

Climate Feature	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6
General Climate Description	Humid Subtropical	Cold Desert	Hot-summer Humid Continental	Warm-summer Humid Continental	Humid Subtropical	Humid Subtropical
Average Annual Precipitation (Inches)	54.3	8.3	36.5	20.9	34.9	40.0
Wettest Month / Average Monthly Precipitation (inches)	March 5.7	July 1.0	May 5.6	July 3.1	May 4.3	September 6.1
Driest Month / Average Monthly Precipitation (inches)	August 3.1	June 0.3	January 1.1	December 0.6	August 2.0	November 1.9
Annual Mean Temperature (°F)	61.3	57.8	52.3	46.5	69.8	72.5
Warmest Month / Average Temperature (°F)	August 79.3	July 79.7	July 78.0	July 70.6	August 85.6	August 80.9
Coolest Month / Average Temperature (°F)	January 40.9	January 35.5	January 24.4	December 24.7	January 52.5	January 61.6
County[1] Baseline GHG Emissions (Metric Tons CO_2e)	2,881,604	5,356,338	1,019,125	7,090,753	22,570,322	5,981,534

1. County baseline GHG emissions determinations use the following counties: Alternative 1 – Madison County, Alabama; Alternative 2 – Bernalillo County, New Mexico; Alternative 3 – Sarpy County, Nebraska; Alternative 4 – El Paso County, Colorado; Alternative 5 – Bexar County, Texas; Alternative 6 – Brevard County, Florida.
°F = degrees Fahrenheit, CO_2e = Carbon Dioxide Equivalent.
Sources: (Climate Data, 2021a; Climate Data, 2021b; Climate Data, 2021c; Climate Data, 2021d; Climate Data, 2021e; Climate Data, 2021f; USEPA, 2017)

3.4.1.3 Severe Weather and Climate Hazard Assessment

The DAF also evaluated the primary aspects of climate resiliency relevant to each Alternative. The DAF has developed Severe Weather Playbooks for each Alternative location (or a proxy installation, as needed). These playbooks identify which severe weather and climate phenomena pose the highest potential risks to the DAF based on site-specific circumstances. The current climate risks considered high or extremely high, based on a standard risk analysis matrix that considers the severity of damage and probability of the event, are listed for these sites in **Table 3-4**.

Table 3-4: Climate Risks Identified for Each Alternative Site

Alternative Site	Severe Weather / Climate Phenomenon	Current Risk	Future Risk
Alternative 1 – Huntsville, AL (Redstone Arsenal)[1]	None	N/A	N/A
Alternative 2 – Albuquerque, NM (Kirtland AFB)	High Winds	High	High
Alternative 3 – Bellevue, NE (Offutt AFB)	Snow	Significant	Significant
Alternative 4 – Colorado Springs, CO (Peterson SFB)	Tornado	High	High
Alternative 5 – San Antonio, TX (Port San Antonio)[2]	Extreme Heat	Extremely High	Extremely High
	Drought	High	High
	Wildland Fires / Wildfires	High	High
	Precipitation Changes	High	High
	Annual Average Temperature Increase	N/A	High
Alternative 6 – Brevard County, FL(Space Coast Spaceport)[3]	Storm Surge Flooding	Medium	High
	Non-Storm Surge Flooding	Medium	High
	Hurricane/Typhoon	High	Extremely High
	Sea Level Change	High	High

Notes:
1. Arnold AFB was the proxy installation used for Redstone Arsenal.
2. JBSA was the proxy installation used for Port San Antonio.
3. Patrick SFB was the proxy installation used for Space Coast Spaceport.
N/A = Not Applicable
Sources: (Arnold AFB, 2019; Arnold AFB, 2020; Kirtland AFB, 2020a; Offutt AFB, 2020b; Peterson AFB, 2020; Joint Base San Antonio, 2020; Patrick AFB, 2020)

3.4.1.4 Other Air Quality Considerations

In addition to the criteria pollutants discussed above, Hazardous Air Pollutants (HAPs) also are regulated under the CAA. The USEPA has identified 187 HAPs that are known or suspected to cause health effects in small concentrations. HAPs are emitted by a wide range of man-made and naturally occurring sources, including combustion mobile and stationary sources. However, unlike the NAAQS for criteria pollutants,

federal ambient air quality standards do not exist for non-criteria pollutants. Therefore, HAPs are generally regulated through specific air emission permit provisions for stationary sources and HAP emission limits for mobiles sources.

Special goals for visibility in many "Class I Federal areas" were also established by the CAA; these areas generally include national parks, wilderness areas, and international parks. The Regional Haze Rule (40 C.F.R. Part 51) was subsequently enacted in 1999, and requires states to establish goals for improving visibility in national parks and wilderness areas and to develop long-term strategies for reducing emissions of air pollutants that cause visibility impairment. Visibility-impairing pollutants can be transported over great distances; therefore, states are encouraged to work together to develop regional visibility goals and strategies. Visibility-impairing pollutants are emitted by a wide variety of activities and sources, including mobile source fuel combustion, agriculture, and manufacturing. Emissions of these pollutants are regulated by complying with NAAQS, through state-specific programs, and through specific air emission permit provisions.

The current level of air emissions from all natural and human activities within a region represent the baseline emissions for that area. The National Emissions Inventory, updated every 3 years by the USEPA, can be used to identify the baseline emissions. It contains estimates of annual air emissions by county within the U.S. The most recent publicly available inventory data is for calendar year 2017. **Table 3-3** presents the baseline GHG emission levels obtained from the 2017 National Emissions Inventory for the county in which each Alternative is located. Nationally, the baseline GHG emission level is 6,588 million metric tons of carbon dioxide equivalent (CO_2e).

3.4.2 Environmental Consequences

Air quality is affected by stationary sources (e.g., boilers, emergency generators, and industrial processes), mobile sources (e.g., motor vehicles, construction equipment, and aircraft), and area sources (e.g., vehicle and aircraft fuel transfer, storage, and dispensing). The nature and magnitude of this Proposed Action are expected to create only localized air quality impacts to the area surrounding each Alternative site within its ROI. The air quality impact analysis follows the EIAP Air Quality Guidelines for criteria pollutants and GHG emissions (Solutio Environmental, 2017). The DAF used the Air Conformity Applicability Model (ACAM)[6] to analyze the potential air quality impacts associated with the Proposed Action, in accordance with AFMAN 32-7002, the EIAP, and the General Conformity Rule (40 C.F.R. 93 Subpart B). The General Conformity Rule applies to the Proposed Action only at Peterson SFB (*maintenance* for 1971 CO NAAQS) and Port San Antonio (*marginal nonattainment* for 2015 8-hour O_3 NAAQS). The ACAM report for each Alternative is available in **Appendix C**.

Construction and operational ("steady state") emissions resulting from the Proposed Action were calculated using ACAM. These emissions are "netted" on an annual basis. The impact analysis must consider the greatest annual emissions associated with each Alternative. Construction activities for each Alternative are expected to occur in 2025 and 2026, while steady state, long-term emissions are expected to begin in 2027.

Current DAF guidance provides methodology for performing an Air Quality EIAP Level II, Quantitative Assessment, which is an insignificance assessment that can determine if an action poses an insignificant impact on air quality (Solutio Environmental Inc., 2020).[7] An air quality impact is considered insignificant if

[6] ACAM requires designation of a specific DAF facility to perform emissions estimates and General Conformity analysis. Redstone Arsenal, Port San Antonio, and Space Coast Spaceport are not included in ACAM, so "Generic Base", set to Madison County, Alabama; Joint Base San Antonio – Lackland AFB, located in the immediate vicinity of Port San Antonio; and Cape Canaveral Space Force Station, respectively, were used as surrogates.

[7] A Level III, Advanced Assessment, is required to define significant impacts.

the action does not cause or contribute to exceedance of one or more of the NAAQS. The DAF defines "insignificance indicators" for each criteria pollutant according to current air quality conditions.

For *nonattainment* or *maintenance areas* (i.e., Peterson SFB and Port San Antonio), the General Conformity Rule formally defines *de minimis* (insignificant) levels that must be used as insignificance indicators. However, General Conformity Rule *de minimis* levels have not been established for *attainment* criteria pollutant emissions. In areas the DAF considers *clearly attainment* (i.e., where all criteria pollutant concentrations are currently less than 95 percent of applicable NAAQS, including Redstone Arsenal, Offutt AFB, and Space Coast Spaceport), the insignificance indicators are 250 tons per year (i.e., the USEPA's Prevention of Significant Deterioration [PSD] threshold), except for Pb, which is 25 tons per year. In areas the DAF considers to be *near nonattainment* for certain pollutants (i.e., where criteria pollutant concentrations are currently within 5 percent of applicable NAAQS), the insignificance indicators are the General Conformity *maintenance area de minimis* levels for those pollutants (i.e., volatile organic compounds [VOC], NO_x, and PM_{10} at Kirtland AFB) and PSD thresholds for all other pollutants, except for Pb, which is 25 tons per year.

The change in climate conditions caused by GHGs is a global effect. The Proposed Action would have no impact on overall global or regional GHG emissions and global climate. For comparative purposes, however, this EA analyzes the potential GHG emissions, as calculated by the ACAM, anticipated under each Alternative. Additionally, per EO 13990, EO 14008, and the Deputy Assistant Secretary of the Army for Environment, Safety, and Occupational Health's memorandum, *Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in Army National Environmental Policy Act Reviews*, dated March 4, 2021,[8] the DAF has captured the full costs of GHG emissions from the Proposed Action, as identified in terms of the social cost of carbon (SCC), social cost of nitrous oxide (SCN), and social cost of methane (SCM). These costs are estimates of the monetized damages associated with incremental increases in these emissions.

As described in the subsections below, the Proposed Action would have *no significant impact* on air quality under any Alternative.

3.4.2.1 Proposed Action – All Alternatives

Criteria Pollutants: Construction of each Alternative would result in *short-term, insignificant impacts* on air quality. Construction activities would temporarily generate fugitive dust from grading and clearing, and criteria pollutant emissions (e.g., VOCs and NO_X [as precursors of O_3], CO, PM_{10}, and $PM_{2.5}$ [including its precursor SO_2], and GHG emissions) from the use of diesel-powered and gasoline-powered equipment. The construction workforce commute would also contribute to a short-term increase in emissions. Construction period emissions typically depend on expected material quantities, such as clean fill import and off-site disposal of excess excavated material, and equipment/vehicle utilization requirements for each project component. The peak emissions construction year for each Alternative is expected to be 2025 for all pollutants, with the exception of VOCs (peak construction year 2026). The majority of air emissions associated with each Alternative would be temporary in nature (limited to the duration of construction activities) and would be caused by fuel combustion in vehicles and construction equipment, and by dust generated from grubbing, clearing, grading, and vehicle travel over unpaved areas. Further, the DAF would consider options to have construction contractors implement standard construction BMPs to minimize emissions, such as reducing diesel emissions through use of cleaner fuels and not idling engines, and reducing fugitive dust emissions by using appropriate dust suppression methods (e.g., application of water) and promptly removing spilled or tracked dirt.

[8] The Army is a Cooperating Agency for this EA and has developed its own guidance for complying with EO 13990.

During operation of the proposed facility, “steady state” emissions would result from employee commutes, facility space HVAC use, and emergency generator operation. Emissions from these activities are expected to be minor and would not represent a significant increase from the current conditions. In the long term, only *insignificant impacts* on air emissions are anticipated. New stationary sources (e.g., HVAC and emergency generators) would be permitted sources and either the installation’s air emissions permit would be updated accordingly (i.e., for Alternative 1, 2, 3, or 4), or the DAF would obtain a new permit (i.e., for Alternative 5 or 6).

Table 3-5 depicts annual netted emissions for each construction year (2025 and 2026) and for the steady state (i.e., operation) condition (2027) for each Alternative. All attainment criteria pollutants for each Alternative are below the insignificance indicators.

A General Conformity applicability analysis was performed for the Alternative 4 and 5 sites. The Peterson SFB ROI is designated as *maintenance* for the 1971 CO NAAQS; the CO *de minimis* level is 100 tons per year. As the peak construction year for CO (2025) at Peterson SFB is expected to produce approximately 1.793 tons of additional CO emissions, and the annual steady state emissions of CO are expected to be approximately 45.874 tons, both well below the *de minimis* threshold, no additional General Conformity analysis is required for Alternative 4.

The Alternative 5 ROI is designated as *marginal nonattainment* for the 2015 8-hour O_3 NAAQS; the VOC and NO_x (precursors to O_3) *de minimis* thresholds are both 100 tons per year. As the peak construction years (2026 for VOC and 2025 for NO_x) are expected to produce approximately 5.504 additional tons of VOCs and 1.693 additional tons of NO_x emissions, and annual steady state emissions are expected to be approximately 3.778 tons of VOCs and 6.504 tons of NO_x, all well below the *de minimis* thresholds, no additional General Conformity analysis is required for Alternative 5.

Therefore, construction and steady state emissions would not exceed regulatory or insignificance thresholds under any Alternative, and the potential air quality impact from all criteria pollutants is insignificant.

Greenhouse Gas Emissions: As further shown in **Table 3-5**, CO_2e emissions from construction would be similar for each of the Alternatives, with Alternative 5 producing the least (772.0 metric tons) and Alternative 2 producing the most (814 metric tons). Although the operational activities and sizes of the facilities are the same for each Alternative, steady state CO_2e emissions vary somewhat between Alternatives. Alternative 5 would produce the most steady state CO_2e emissions, while Alternatives 2 and 4 would produce the least and second-least steady state CO_2e emissions, respectively. Steady state CO_2e emissions produced by Alternatives 1, 3, and 6 would all be similar to each other. The differences in steady state CO_2e emissions are primarily attributed to the presumed use of fuel oil No. 2 for space heating for Alternative 5, and to regional differences in space heating energy intensity values for the remaining Alternatives. Regional differences in employee vehicle CO_2e emissions rates also account for a much smaller difference in CO_2e emissions between Alternatives.

Table 3-6 and **Table 3-7** depict each Alternative’s annual construction (2025 and 2026) and annual operational (2027) GHG emissions increases over the appropriate county and national baselines. Although construction and steady state GHG emissions are similar between Alternatives, each would occur in counties with different levels of existing (baseline) GHG emissions. For both construction and operation, Alternative 5 would result in the smallest increase, and Alternative 3 would result in the largest increase, over county baseline GHG emissions. When compared to the national GHG emissions baseline, which is the same for each Alternative, peak construction year GHG emissions for each Alternative would result in an increase of approximately 0.000009 percent above the national baseline.

Table 3-5: Projected Annual Emissions from Proposed Action

Alternative	Pollutant	Proposed Action Emissions in 2025 (tons)[1]	Proposed Action Emissions in 2026 (tons)[1]	Proposed Action Emissions in 2027 (tons)[1]	NEPA Insignificance Indicator (ton/year)	General Conformity De Minimis Threshold (ton/year)	General Conformity Applicability (Yes or No)
Alternative 1[2] Huntsville, AL (Redstone Arsenal)	VOC	0.266	5.505	4.176	250	N/A	No
	NO_x	1.755	0.689	5.685	250		
	CO	1.803	0.848	47.708	250		
	SO_x	0.006	0.002	0.045	250		
	PM_{10}	8.433	0.025	0.252	250		
	$PM_{2.5}$	0.061	0.025	0.245	250		
	Pb	0.000	0.000	0.000	25		
	NH_3	0.005	0.002	0.252	250		
	CO_2e	573.5	212.1	6,648.6	--		
	CO_2	573.5	212.1	6,648.4	--		
	CH_4	0.0132	0.0049	0.1529	--		
	N_2O	0.0017	0.0006	0.0199	--		
Alternative 2[2] Albuquerque, NM (Kirtland AFB)	VOC	0.295	4.765	4.204	100	N/A	No
	NO_x	2.041	0.707	5.484	100		
	CO	1.880	0.849	47.082	250		
	SO_x	0.006	0.002	0.042	250		
	PM_{10}	8.992	0.025	0.226	100		
	$PM_{2.5}$	0.065	0.024	0.215	250		
	Pb	0.000	0.000	0.000	25		
	NH_3	0.006	0.001	0.252	250		
	CO_2e	608.0	206.0	5,997.7	--		
	CO_2	608.0	206.0	5,997.5	--		
	CH_4	0.0140	0.0047	0.1379	--		
	N_2O	0.0018	0.0006	0.0180	--		

Alternative	Pollutant	Proposed Action Emissions in 2025 (tons)[1]	Proposed Action Emissions in 2026 (tons)[1]	Proposed Action Emissions in 2027 (tons)[1]	NEPA Insignificance Indicator (ton/year)	General Conformity De Minimis Threshold (ton/year)	General Conformity Applicability (Yes or No)
Alternative 3[2] Bellevue, NE (Offutt AFB)	VOC	0.286	5.511	4.398	250	N/A	No
	NO_x	1.897	0.730	6.270	250		
	CO	1.852	0.866	51.194	250		
	SO_x	0.006	0.002	0.047	250		
	PM_{10}	7.876	0.026	0.301	250		
	$PM_{2.5}$	0.061	0.025	0.291	250		
	Pb	0.000	0.000	0.000	25		
	NH_3	0.005	0.002	0.252	250		
	CO_2e	570.3	212.3	6,876.9	--		
	CO_2	570.3	212.3	6,876.7	--		
	CH_4	0.0131	0.0049	0.1582	--		
	N_2O	0.0017	0.0006	0.0206	--		
Alternative 4[3] Colorado Springs, CO (Peterson SFB)	VOC	0.267	5.510	4.080	250	N/A	No
	NO_x	1.809	0.727	5.355	250	N/A	
	CO	1.793	0.879	45.874	N/A	100	
	SO_x	0.006	0.002	0.042	250	N/A	
	PM_{10}	7.670	0.026	0.246	250		
	$PM_{2.5}$	0.061	0.026	0.235	250		
	Pb	0.000	0.000	0.000	25		
	NH_3	0.005	0.002	0.252	250		
	CO_2e	566.2	216.9	6,055.6	--		
	CO_2	566.2	216.9	6,055.4	--		
	CH_4	0.0130	0.0050	0.1393	--		
	N_2O	0.0017	0.0007	0.0182	--		

Alternative	Pollutant	Proposed Action Emissions in 2025 (tons)[1]	Proposed Action Emissions in 2026 (tons)[1]	Proposed Action Emissions in 2027 (tons)[1]	NEPA Insignificance Indicator (ton/year)	General Conformity De Minimis Threshold (ton/year)	General Conformity Applicability (Yes or No)
Alternative 5[4] San Antonio, TX (Port San Antonio)	VOC	0.259	5.504	3.778	N/A	100	No
	NO_x[5]	1.693	0.686	6.504	N/A	100	
	CO	1.798	0.845	44.627	250	N/A	
	SO_x[5]	0.005	0.002	7.184	250		
	PM_{10}	8.176	0.025	0.289	250		
	$PM_{2.5}$	0.059	0.025	0.149	250		
	Pb	0.000	0.000	0.000	25		
	NH_3	0.005	0.002	0.252	250		
	CO_2e	559.4	212.6	7748.2	--		
	CO_2	559.4	212.6	7,748.0	--		
	CH_4	0.0129	0.0049	0.1782	--		
	N_2O	0.0017	0.0006	0.0232	--		
Alternative 6[2] Brevard County, FL (Space Coast Spaceport)	VOC	0.261	5.504	4.197	250	N/A	No
	NO_x	1.704	0.675	5.514	250		
	CO	1.805	0.849	48.518	250		
	SO_x	0.006	0.002	0.045	250		
	PM_{10}	8.765	0.026	0.246	250		
	$PM_{2.5}$	0.062	0.025	0.235	250		
	Pb	0.000	0.000	0.000	25		
	NH_3	0.005	0.002	0.251	250		
	CO_2e	586.4	215.1	6,846.2	--		
	CO_2	586.4	215.1	6,846.0	--		
	CH_4	0.0135	0.0049	0.1575	--		
	N_2O	0.0018	0.0006	0.0205	--		

Notes:
1. 2025 and 2026 represent construction years, 2027 represents steady state.
2. Regulatory Area: N/A
3. Regulatory Area: Colorado Springs, Colorado – Maintenance: 1971 CO NAAQS
4. Regulatory Area: San Antonio, Texas – Marginal Nonattainment: 2015 8-hour O_3 NAAQS
5. Steady state NO_x and SO_x emissions would be relatively higher for Alternative 5 because building heating may be required to use boilers or furnaces that use fuel oil No. 2; natural gas would be used for the other Alternatives.

NO_x = nitrogen oxides, SO_x = sulfur oxides, NH_3 = ammonia, CO_2e = Carbon Dioxide Equivalent, N/A = Not Applicable
Source: ACAM version 5.0.17b, run on 24 June 2022 (**Appendix C**).

Table 3-6: Proposed Action GHG Emissions Increase Over County Baseline

Alternative	2025	2026	2027 (Steady State)
Alternative 1 – Huntsville, AL (Redstone Arsenal)	0.020%	0.007%	0.231%
Alternative 2 – Albuquerque, NM (Kirtland AFB)	0.011%	0.004%	0.112%
Alternative 3 – Bellevue, NE (Offutt AFB)	0.056%	0.021%	0.675%
Alternative 4 – Colorado Springs, CO (Peterson SFB)	0.008%	0.003%	0.085%
Alternative 5 – San Antonio, TX (Port San Antonio)	0.002%	0.001%	0.034%
Alternative 6 – Brevard County, FL (Space Coast Spaceport)	0.010%	0.004%	0.114%

Notes:
County baseline GHG emissions determinations use the following counties: Alternative 1 – Madison County, Alabama; Alternative 2 – Bernalillo County, New Mexico; Alternative 3 – Sarpy County, Nebraska; Alternative 4 – El Paso County, Colorado; Alternative 5 – Bexar County, Texas; Alternative 6 – Brevard County, Florida.
Sources: (USEPA, 2017); ACAM version 5.0.17b, run on 24 June 2022 (**Appendix C**).

Table 3-7: Proposed Action GHG Emissions Increase Over National Baseline

Alternative	2025	2026	2027 (Steady State)
Alternative 1 – Huntsville, AL (Redstone Arsenal)	0.000009%	0.000003%	0.000101%
Alternative 2 – Albuquerque, NM (Kirtland AFB)	0.000009%	0.000003%	0.000091%
Alternative 3 – Bellevue, NE (Offutt AFB)	0.000009%	0.000003%	0.000105%
Alternative 4 – Colorado Springs, CO (Peterson SFB)	0.000009%	0.000003%	0.000092%
Alternative 5 – San Antonio, TX (Port San Antonio)	0.000009%	0.000003%	0.000118%
Alternative 6 – Brevard County, FL (Space Coast Spaceport)	0.000009%	0.000003%	0.000104%

Notes:
Annual national GHG emissions = 6,588 million metric tons of CO_2e.
Sources: (USEPA, 2017); ACAM version 5.0.17b, run on 24 June 2022 (**Appendix C**).

CO_2e emissions from the Proposed Action are calculated using ACAM. CO_2e includes emissions of CO_2, CH_4, and N_2O. The DAF determined that CO_2 represents approximately 99.9974 percent of potential GHG emissions from the Proposed Action, CH_4 represents approximately 0.0023 percent, and N_2O represents approximately 0.0003 percent (based on weighted averages of USEPA emission factors for natural gas, gasoline, and diesel in 40 CFR Appendix Tables C-1 and C-2 to Subpart C of Part 98). The annual social costs per metric ton of these three GHGs are determined by multiplying the annual emissions of each GHG (metric tons, shown in **Table 3-5**), by the social cost (dollars per metric ton) for each GHG. Based on the EO 13990 technical support document Tables A-1 through A-3, the social costs per metric ton are $83 for

CO_2, $2,200 for CH_4, and $30,000 for N_2O, based on Emissions Year 2025 and 2.5 percent Average Discount Rate and Statistic. Applying these costs to each Alternative's projected total construction and annual steady state (i.e., operational) GHG emissions yields the social costs. **Table 3-8** summarizes both construction social costs and steady state social costs for each Alternative, and provides a sum of these costs for a total social cost for each Alternative. The social cost of each Alternative increases according to the total GHG emissions anticipated.

Table 3-8: Social Cost of Greenhouse Gases

Alternative	Greenhouse Gas	Price Per Ton ($)	Total Construction Emissions (tons)	Social Cost – Construction	Steady State Emissions (tons)	Social Cost – Steady State
Alternative 1 Huntsville, AL (Redstone Arsenal)	CO_2	$83	785.6	$65,203	6648.4	$551,819
	CH_4	$2,200	0.0181	$40	0.1529	$336
	N_2O	$30,000	0.0024	$71	0.0199	$598
	Total	N/A	N/A	$65,314	N/A	**$552,754**
Alternative 2 Albuquerque, NM (Kirtland AFB)	CO_2	$83	814.0	$67,559	5997.5	$497,796
	CH_4	$2,200	0.0187	$41	0.1379	$303
	N_2O	$30,000	0.0024	$73	0.0180	$540
	Total	N/A	N/A	$67,673	N/A	**$498,639**
Alternative 3 Bellevue, NE (Offutt AFB)	CO_2	$83	782.6	$64,954	6876.7	$570,768
	CH_4	$2,200	0.0180	$40	0.1582	$348
	N_2O	$30,000	0.0023	$70	0.0206	$619
	Total	N/A	N/A	$65,064	N/A	**$571,735**
Alternative 4 Colorado Springs, CO (Peterson SFB)	CO_2	$83	783.1	$64,996	6055.4	$502,602
	CH_4	$2,200	0.0180	$40	0.1393	$306
	N_2O	$30,000	0.0023	$70	0.0182	$545
	Total	N/A	N/A	$65,106	N/A	**$503,453**
Alternative 5 San Antonio, TX (Port San Antonio)	CO_2	$83	772.0	$64,074	7748.0	$643,084
	CH_4	$2,200	0.0178	$39	0.1782	$392
	N_2O	$30,000	0.0023	$69	0.0232	$697
	Total	N/A	N/A	$64,183	N/A	**$644,173**
Alternative 6 Brevard County, FL (Space Coast Spaceport)	CO_2	$83	801.5	$66,523	6846.0	$568,220
	CH_4	$2,200	0.0184	$41	0.1575	$346
	N_2O	$30,000	0.0024	$72	0.0205	$616
	Total	N/A	N/A	$66,635	N/A	**$569,182**

Source: (Interagency Working Group on Social Cost of Greenhouse Gases, 2021)
NOTE: The estimates in this table are not being relied on as a matter of absolute science, but instead being used as good faith estimates of the social cost of greenhouse gasses; the same conclusion would be reached even in the absence of the Interim Estimates or if required to use the numbers from the previous administration.

Severe Weather and Climate Hazard Assessment: The DAF addresses the potential future impacts of severe weather and climate hazards to both current and future DAF facilities by assessing site-specific potential impacts as part of long-range planning, project design, and permitting activities. Relevant long-term climate areas of concern for the Alternative sites are discussed in **Section 3.4.1.3**. The DAF has determined that these areas of concern would have little to no impact on the new facilities and related operations included in each Alternative.

However, because of the inherent uncertainty of projecting future climate impacts, the DAF would design the proposed HQ facility to have enhanced resiliency to long-term climate impacts. The DAF would participate in or lead, as appropriate, master planning activities at the selected location to ensure that climate impacts to the facility are minimized to the extent practicable and consistent with installation, local, or regional climate plans (e.g., the Naval Facilities Engineering Command's *Climate Change Planning Handbook for Installation Adaptation and Resilience*). Depending on the Alternative selected, examples of resiliency measures could include, but would not be limited to, redundant and hardened electrical and water systems to withstand storm damage and higher demand on hot days (all Alternatives), storm shelters and appropriate structural construction measures to withstand tornadoes/hurricanes (Alternatives 1, 4, and 6), elevated construction and on-site water management to withstand flooding and sea level rise (including potential increases in the groundwater table) (Alternative 6), and adequate setbacks from potential fuel sources to mitigate the risk from wildfires (Alternative 5).

Other Air Quality Considerations: Federal ambient air quality standards do not exist for non-criteria pollutants; therefore, the DAF has not established HAPs insignificance indicators. The DAF would be required under any Alternative to obtain air emissions permits or modify existing permits to include newly constructed stationary emission sources (e.g., space heating equipment) according to state regulations and/or existing permit provisions. Stationary source permits would regulate HAPs emissions through specified emission limits and/or other requirements such as New Source Performance Standards written into the permit.

Similarly, there is no specific insignificance indicator established for assessing an Alternative's impact on visibility in Class I Federal areas. However, many pollutants responsible for impairing visibility are regulated by NAAQS either directly (e.g., $PM_{2.5}$) or indirectly (e.g., nitrogen dioxide [NO_2] and SO_2 emissions, which can form visibility-impairing nitrates and sulfates, respectively, once emitted). Because each Alternative would result in insignificant increases in criteria pollutants, it is unlikely that any Alternative would result in a notable impact on visibility in Class I Federal areas.

3.4.2.2 No Action Alternative

Under the No Action Alternative, there would be *no impact* to air quality as air emissions in and surrounding the six Alternative sites would remain the same. Existing air quality conditions and emission levels at the provisional USSPACECOM location would continue, and would remain below the applicable *de minimis* levels. Operational activities would continue to contribute to GHG emissions at Peterson SFB, but would not result in an increase in baseline GHG emissions or SCC, SCM, or SCN.

3.5 EARTH RESOURCES

Earth resources include geology, topography, and soils. Geological resources consist of surface and subsurface materials and their properties. Principal geologic factors influencing the ability to support structural development are seismic properties (i.e., potential for subsurface shifting, faulting, or crustal disturbance), soil stability, and topography. Potential exposure to hazardous levels of radon is also discussed. Radon is a naturally occurring radioactive gas that can build up to unacceptable levels in indoor air. The USEPA assigns counties a Radon Zone between 1 and 3, with Zone 1 indicating average indoor

radon levels greater than 4 picocuries per liter (pCi/L), Zone 2 indicating average levels between 2 and 4 pCi/L, and Zone 3 indicating average levels less than 2 pCi/L (USEPA, 2021). The USEPA recommends mitigation (i.e., site-specific design measures) if indoor radon levels are at or above 4 pCi/L (i.e., Zone 1) (USEPA, 2016).

The Farmland Protection Policy Act (FPPA) (7 U.S.C. 4201 et seq.) of 1981 states that federal agencies must "minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses." The resources protected by the FPPA include prime and unique farmland, which are categorized by the Natural Resources Conservation Service (NRCS) based on underlying soil characteristics.

Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part. Under natural conditions, these soils are able to support growth and reproduction of hydrophytic vegetation. Presence of hydric soils is one of the criteria used to identify and delineate wetlands (**Section 3.6**).

The ROI for earth resources is the boundary of each Alternative site.

3.5.1 Affected Environment

3.5.1.1 Alternative 1 – Huntsville, AL (Redstone Arsenal)

Geology: Most of Redstone Arsenal, including the Alternative 1 site, is underlain by Tuscumbia Limestone, which is the uppermost formation for most of Madison County. This bedrock is approximately 150 feet thick and consists of fossiliferous limestone. The Tuscumbia Limestone is underlain by Fort Payne Chert, which is generally 154 to 184 feet thick and consists of alternating beds of chert and fossiliferous limestone. Depth to bedrock on Redstone Arsenal ranges from very shallow on the mountains to much deeper along the floodplains of larger waterways (US Army Garrison - Redstone, 2017). The U.S. Geological Survey (USGS) 2018 Seismic Hazard Map shows the site is at moderate risk of seismic hazard (i.e., hazard level 3 out of 7) (USGS, 2018). Madison County is located in USEPA Radon Zone 1 (USEPA, 2021).

Topography: Topography at Redstone Arsenal is gently rolling, sloping gently towards the Tennessee River. Elevations range from 560 feet above mean sea level (amsl) in the valleys to 1,239 feet amsl on Mount Madkin, with most areas between 600 to 650 feet amsl (US Army Garrison - Redstone, 2017). Topography at the Alternative 1 site is generally flat, ranging from approximately 620 to 635 feet amsl (USGS, 2021).

Soils: Eight soil map units are identified on the Alternative 1 site (**Table 3-9**). Five soil map units (79.0 percent of the site) are designated as prime farmland by the NRCS. One soil, Ooltewah silt loam, is hydric and occurs on 0.7 percent of the site.

Table 3-9: Select Soil Characteristics for Alternative 1 Site (Redstone Arsenal)

Map Unit Name	Acres	Prime / Unique Farmland	Farmland of Statewide Importance	Hydric	Landform / Description
Abernathy-Emory silt loams, 0 to 2 percent slopes	14.8	Prime Farmland	No	No	Drainageways, depressions; well drained soils, depth to water table is 60-72 inches. Depth to restrictive feature is 63 to 72 inches (fragipan).
Captina and capshaw silt loams, undulating	3.7	Prime Farmland	No	No	Stream terraces; moderately well drained soils; depth to water table is about 24 to 42 inches. Depth to

Map Unit Name	Acres	Prime / Unique Farmland	Farmland of Statewide Importance	Hydric	Landform / Description
					restrictive feature is 40 to 80 inches (lithic bedrock).
Cookeville silt loam, eroded, undulating	0.5	Prime Farmland	No	No	Ridges; well drained soils; depth to water table is more than 80 inches. Depth to restrictive feature is more than 80 inches.
Cumberland loam eroded, undulating	26.0	Prime Farmland	No	No	Ridges; well drained soils; depth to water table is more than 80 inches. Depth to restrictive feature is more than 80 inches.
Decatur silty clay loam, 2 to 6 percent slopes, eroded	2.3	Prime Farmland	No	No	Interfluves; well drained soils; depth to water table is more than 80 inches. Depth to restrictive feature is more than 80 inches.
Ooltewah silt loam	0.4	No	Yes	Yes	Depressions; somewhat poorly drained soils; depth to water table is about 0 to 18 inches. Depth to restrictive feature is more than 80 inches.
Pits, clay	5.0	No	No	No	Hillslopes; drainage class, depth to water table, and depth to restrictive feature not listed.
Tupelo silt loam	7.1	No	Yes	No	Stream terraces; somewhat poorly drained soils; depth to water table is about 12 to 24 inches. Depth to restrictive feature is more than 80 inches.

Source: (NRCS, 2021a)

3.5.1.2 Alternative 2 – Albuquerque, NM (Kirtland AFB)

Geology: Kirtland AFB is located near the east-central edge of the Albuquerque Basin, between the Sandia and Manzanita Mountains. The portion of the Albuquerque Basin underlying Kirtland AFB is primarily composed of poorly consolidated sediments that eroded from the surrounding mountains. Depth to bedrock varies greatly in the region; bedrock is shallow in the eastern portion of the installation nearer the mountains, but deeper to the west where the proposed site is located (Air Force, 2018b). The USGS 2018 Seismic Hazard Map shows the site is at moderate risk of seismic hazard (i.e., hazard level 3 out of 7) (USGS, 2018). Bernalillo County is located in USEPA Radon Zone 1 (USEPA, 2021).

Topography: Topography at Kirtland AFB ranges from mountainous terrain of the Manzanita Mountains in the east to the relatively flat mesas in the west. The Alternative 2 site is generally flat, sloping gently from southeast to northwest with elevations ranging between approximately 5,354 and 5,386 feet amsl (USGS, 2021).

Soils: The NRCS has mapped five soil map units on the Alternative 2 site (**Table 3-10**). Soils present on the site are all well drained, with depth to water table and restrictive features being greater than 80 inches. No prime/unique farmland, farmland of statewide importance, or hydric soils are present on the site (NRCS, 2021b).

Table 3-10: Select Soil Characteristics for Alternative 2 Site (Kirtland AFB)

Map Unit Name	Acres	Prime / Unique Farmland	Farmland of Statewide Importance	Hydric	Landform / Description
Latene sandy loam, 1 to 5 percent slopes	0.3	No	No	No	Stream terraces, alluvial fans; well drained soils; depth to water table is more than 80 inches Depth. to restrictive feature is more than 80 inches.
Madurez-Wink association, gently sloping	33.5	No	No	No	Alluvial fans, fan piedmonts; well drained soils; depth to water table is more than 80 inches. Depth to restrictive feature is more than 80 inches.
Tijeras gravelly fine sandy loam, 1 to 5 percent slopes	22.3	No	No	No	Fan remnants, alluvial fans; well drained soils; depth to water table is more than 80 inches. Depth to restrictive feature is more than 80 inches.
Wink fine sandy loam, 0 to 5 percent slopes	3.0	No	No	No	Fan piedmonts, alluvial fans; well drained soils; depth to water table is more than 80 inches. Depth. to restrictive feature is more than 80 inches
Wink-Embudo complex, 0 to 5 percent slopes	0.1	No	No	No	Fan piedmonts, alluvial fans; well drained soils; depth to water table is more than 80 inches. Depth to restrictive feature is more than 80 inches.

Source: (NRCS, 2021b)

3.5.1.3 Alternative 3 – Bellevue, NE (Offutt AFB)

Geology: Bedrock in eastern Sarpy County consists of limestone and shale of the Lansing and Kanas City Groups (Missouri Series of the Pennsylvania System). Depth to bedrock varies between 30 and 124 feet below ground surface (bgs). Pennsylvanian rocks below Offutt AFB are gently folded (Air Force, 2020b). The USGS 2018 Seismic Hazard Map shows the site is at the lowest risk of seismic hazard (i.e., hazard level 1 out of 7) (USGS, 2018). Sarpy County is located in USEPA Radon Zone 1 (USEPA, 2021).

Topography: Topography on Offutt AFB is characterized by rolling hills and bluffs extending west from the Missouri River. Elevations on the installation range from 1,220 feet amsl near the Missouri River bluffs to 950 feet amsl in the southeast corner (Air Force, 2020b). Topography on the Alternative 3 site is generally flat, sloping gently to the south with elevation ranging from approximately 1,048 feet amsl in the north and northeast to 1,035 feet amsl in the south (USGS, 2021).

Soils: The Alternative 3 site is mapped entirely as Urban Land – Udarents complex, 0 to 16 percent slopes. These soils are not considered to be prime/unique farmlands or farmlands of statewide importance and are composed entirely of placed cut and fill associated with prior construction on the site. No hydric soils occur on the proposed site. Depth to soil restrictive feature and depth to water table both exceed 80 inches (NRCS, 2021c).

3.5.1.4 Alternative 4 – Colorado Springs, CO (Peterson SFB)

Geology: Peterson SFB is predominantly underlain by formations comprised of Cretaceous and Tertiary rocks, including Pierre Shale, Fox Hills Sandstone, Laramie, and Dawson-Arkose formations. These formations are covered by alluvium ranging from about 50 to 100 feet deep (Air Force, 2020c). The USGS

2018 Seismic Hazard Map shows the site is at moderate risk of seismic hazard (i.e., hazard level 3 out of 7) (USGS, 2018). El Paso County is located in USEPA Radon Zone 1 (USEPA, 2021).

Topography: Peterson SFB is marked by flat plains gently sloping at about 2 percent grades to the south and southwest. Elevations range from approximately 6,135 feet amsl in the southeastern corner of the installation to approximately 6,276 feet amsl in the northeastern corner (Air Force, 2020c). The Alternative 4 site is flat: the elevation ranges from approximately 6,275 feet amsl to 6,265 feet amsl (USGS, 2021).

Soils: Soils on Peterson SFB are generally sandy, consisting of weathered feldspar-rich sediments. The site is mapped entirely as Blakeland loamy sand, 1 to 9 percent slopes. This soil is considered somewhat excessively well drained and is not a hydric soil. These soils are not considered to be prime/unique farmland or farmland of statewide importance. Depth to soil restrictive feature and depth to water table both exceed 80 inches (NRCS, 2021d).

3.5.1.5 Alternative 5 – San Antonio, TX (Port San Antonio)

Geology: Port San Antonio is underlain by Quaternary Fluviatile Terrace Deposits consisting of gravel, sand, silt, and clay from the Pleistocene period. These deposits are the result of water-born deposition and are generally found associated with ancient floodplains. During a recent geotechnical engineering study conducted on-site, geologists did not encounter bedrock after boring 50 feet bgs (Port Authority of San Antonio, 2019). The USGS 2018 Seismic Hazard Map shows the site is at the lowest risk of seismic hazard (i.e., hazard level 1 out of 7) (USGS, 2018). Bexar County is located in USEPA Radon Zone 3 (USEPA, 2021).

Topography: Topography around Port San Antonio is characterized as a gentle rolling plain. Topography on the Alternative 5 site is flat, sloping gently to the east with the elevation ranging between approximately 672 feet amsl and 688 feet amsl (USGS, 2021).

Soils: Soils on the Alternative 5 site consist of clays of stiff to hard consistency/density (Port Authority of San Antonio, 2019). NRCS has mapped only one soil type on the site: Lewisville silty clay, 0 to 1 percent slopes. This soil occurs on stream terraces, is well drained, and is considered prime farmland. These soils are not hydric. Depth to soil restrictive feature and depth to water table both exceed 80 inches (NRCS, 2021e). In a letter dated June 16, 2021 (**Appendix A**), the NRCS advised the DAF that approximately 90 percent of the soils on the proposed site have high shrink-swell characteristics resulting in very limited development suitability ratings.

3.5.1.6 Alternative 6 – Brevard County, FL (Space Coast Spaceport)

Geology: The Alternative 6 site is underlain by Shelley sediments of the Plio-Pleistocene age, which typically consist of fine to medium quartz sand with variable amounts of calcilutite, shell, and clay (FDEP, 1993; FDEP, 2013). The USGS 2018 Seismic Hazard Map shows the site is at the lowest risk of seismic hazard (i.e., hazard level 1 out of 7) (USGS, 2018). Brevard County is located in USEPA Radon Zone 3 (USEPA, 2021).

Topography: Topography at the site is mostly flat, with elevations at approximately 20 feet amsl. Generally, the site slopes gently towards depressions in the southern and eastern portions of the site (USGS, 2021).

Soils: Soils on the site are generally described as sandy and wet. The NRCS has mapped six soil map units on the site (**Table 3-11**). Four soils, comprising 20.2 percent of the site, are hydric. One soil, Myakka sand, 0 to 2 percent slopes, is a farmland of unique importance and makes up 62.7 percent of the site (NRCS, 2021f).

Table 3-11: Select Soil Characteristics for Alternative 6 Site (Space Coast Spaceport)

Map Unit Name	Acres	Prime / Unique Farmland	Farmland of Statewide Importance	Hydric	Landform / Description
Anclote sand, frequently ponded, 0 to 1 percent slopes	14.0	No	No	Yes	Depressions on marine terraces; very poorly drained soil; depth to water table is 0 inches. Depth to restrictive feature is more than 80 inches.
Anclote sand, frequently flooded	0.1	No	No	Yes	Floodplains on marine terraces; very poorly drained soil; depth to water table is about 0 inches. Depth to restrictive feature is more than 80 inches.
Basinger sand, depressional	4.6	No	No	Yes	Depressions on marine terraces; very poorly drained soil; depth to water table is 0 inches. Depth to restrictive feature is more than 80 inches.
Myakka sand, 0 to 2 percent slopes	64.8	Unique Farmland	No	No	Flatwoods on marine terraces; poorly drained soil; depth to water table about 6 to 18 inches. Depth to restrictive feature is more than 80 inches.
Pomello sand, 0 to 5 percent slopes	17.7	No	No	No	Ridges on marine terraces, knolls on marine terraces; somewhat poorly drained soils; depth to water table about 18 to 42 inches. Depth to restrictive feature is more than 80 inches.
St. Johns sand, depressional	2.2	No	No	Yes	Depressions on marine terraces; very poorly drained soils; depth to water table is about 0 inches. Depth to restrictive feature is more than 80 inches.

Source: (NRCS, 2021f)

3.5.2 Environmental Consequences

An earth resources impact would be significant if it would 1) expose people or structures to major geological hazards; 2) substantially increase potential occurrences of erosion or sedimentation; or 3) violate the FPPA.

As described in the subsections below, the Proposed Action would have *no significant impact* on earth resources.

3.5.2.1 Proposed Action – All Alternatives

Construction of the Proposed Action could affect geology if the selected site requires a deep foundation. The extent and nature of these effects would be determined by site-specific soil properties and depth to bedrock. Geotechnical studies would be conducted following selection of the site, and as design of the facility continues, to determine the extent of foundation support required. Even if a deep foundation is required, foundation elements would not be expected to penetrate unique or noteworthy geologic strata, because none are present under any of the Alternative sites. The facility would be designed to applicable, location-specific standards to be resilient to geological hazards (e.g., susceptibility to seismic events and potential for indoor buildup of radon to unacceptable levels) and on-site soil characteristics (e.g., high

shrink-swell potential at the Alternative 5 site). As noted above, the Alternative 1, 2, and 4 sites are more susceptible to seismic events than the Alternative 3, 5, and 6 sites. However, seismic events are not expected to interfere with construction, nor would construction exacerbate the local risk of a seismic event occurring. The Alternative 1, 2, 3, and 4 sites are more prone to buildup of unacceptable indoor levels of radon than the Alternative 5 and 6 sites, which would be accounted for in the facility design. Overall, the Proposed Action would have *no or negligible adverse impacts* on geology.

Ground-disturbing activities would alter existing topography to provide generally level construction surfaces; however, all of the proposed sites are relatively flat, and do not contain unique, pristine, or noteworthy topographic features. Generally, changes to existing topography from construction of the Proposed Action would be minimal, and no potential topographic hazards (e.g., steep slopes) would be present. Therefore, the Proposed Action would have *negligible impacts* on topography.

Ground disturbance associated with construction of the Proposed Action would range between 11 and 74 acres, depending on the site (**Section 3.6.2.1**); no ground disturbance would occur off-site. Ground-disturbing activities would remove vegetation and increase the potential for erosion of exposed soils by wind and water. To minimize these impacts, BMPs would be used to prevent and reduce potential erosion and sedimentation during construction. Since all Alternatives would exceed 1 acre of land disturbance, a NPDES Construction General Permit (CGP) would be obtained for the selected site pursuant to the Clean Water Act (33 U.S.C. 1251 et seq; CWA) of 1972. Coverage under the CGP would require development of a Stormwater Pollution Prevention Plan (SWPPP), which would identify potential sources of pollutants, describe all pollution prevention activities that would be implemented on the site, and establish erosion and sediment controls to manage stormwater discharges and minimize sedimentation to the extent practicable. The Alternative 1, 2, 4, and 5 sites already maintain site-specific SWPPPs or similar plans, and would update these plans as necessary in accordance with the CGP. Construction crews would adhere to BMPs outlined in the SWPPP, and the erosion and sediment controls would be implemented prior to land-disturbing activities and maintained in good working order for the duration of construction. **Section 3.6** contains additional information regarding existing stormwater plans and potential impacts to surface water resulting from stormwater runoff. Following construction, soils would be revegetated according to the landscape plan to stabilize them for the long term. Therefore, the Proposed Action would result in *short-term, insignificant adverse impacts* on soils from erosion and sedimentation.

No FPPA-protected farmland exists on the Alternative 2, 3, or 4 sites. While prime farmland is present on the Alternative 1 and 5 sites, the NRCS confirmed that the FPPA does not apply to the Alternative 1 site due to the exemption for construction for national defense purposes (**Appendix A**). The FPPA further does not apply to the Alternative 5 site because Port San Antonio is within the U.S. Census Bureau San Antonio, Texas Urbanized Area (US Census Bureau, 2019a).

Because farmland of unique importance comprises 62.7 percent of the Alternative 6 site, the DAF would consult with the NRCS if Alternative 6 is selected for implementation to confirm the applicability of the FPPA to that site and complete a Farmland Conversion Impact Rating Form (U.S. Department of Agriculture Form AD-1006). If the Proposed Action receives a rating of less than 160 points, no further consideration for farmland protection would be required; a rating of 160 points or more would require the DAF to incorporate project modifications that provide greater consideration to farmland protection.

Therefore, the Proposed Action would have *no effect* on FPPA-protected farmland under Alternatives 2, 3, and 4, and *long-term, insignificant adverse impacts* on FPPA-protected farmland under Alternatives 1, 5, and 6 due to direct conversion/loss.

Operation of the proposed HQ facility would not involve ongoing disturbance to geology, topography, or soils. Any areas on the selected Alternative site that may be disturbed during the operational phase would be revegetated or otherwise stabilized according to the facility's landscape plan to minimize or prevent erosion. Operation of the Proposed Action would have *no effect* on earth resources.

3.5.2.2 No Action Alternative

Under the No Action Alternative, the proposed permanent USSPACECOM HQ facility would not be constructed, and would have *no impact* on earth resources at any of the six Alternative sites, as no land-disturbing activities would occur. USSPACECOM operations would continue at Peterson SFB, and earth resources within that installation would continue to be managed as under current conditions, including maintenance of permeable areas and vegetated or landscaped areas to minimize soil erosion. Ongoing operational activities would not affect underlying geology or topography, and would not include any new ground disturbance.

3.6 WATER RESOURCES

Water resources analyzed in this EA include surface water (including stormwater), wetlands and floodplains, and groundwater. Additionally, this EA analyzes the consistency of the Proposed Action with the Coastal Zone Management Act for the site at Space Coast Spaceport, the only site located within the coastal zone.

The ROI for surface waters, wetlands, and floodplains includes the boundaries of the site Alternatives, as well as the down-gradient streams receiving stormwater runoff within 0.5 mile of the sites. The ROI for groundwater includes the portion of the groundwater basin that underlies each Alternative site.

3.6.1 Affected Environment

3.6.1.1 Alternative 1 – Huntsville, AL (Redstone Arsenal)

Surface Water: Redstone Arsenal is located within the Huntsville Spring Branch-Indian Creek Watershed, and surface waters on and surrounding the installation drain to either Indian Creek or the Huntsville Spring Branch, which is a tributary of Indian Creek. Ultimately, surface waters at Redstone Arsenal drain to the Tennessee River, located south of the installation. No surface waters are located at the Alternative 1 site within Redstone Arsenal. Two unnamed streams running north-to-south are located on either side of the proposed site; one is located approximately 150 feet west of the western site boundary, and the second is located approximately 250 feet east of the eastern site boundary. Four freshwater ponds are located approximately 0.5 mile east and northeast of the proposed site, on the far side of Marshall Road. No other surface waters are located within 0.5 mile of the site.

Stormwater runoff generated on Redstone Arsenal is conveyed through a network of inlets, ditches, and culverts that connect to streams draining toward the Tennessee River (Air Force, 2019a). Tributaries to Indian Creek receive stormwater runoff from the proposed site. Redstone Arsenal maintains both a municipal separate storm sewer system (MS4) permit under the federal NPDES program, and a General Industrial NPDES permit (ADEM, 2014; 2016). The State of Alabama administers the NPDES program through ADEM. Overall stormwater management on Redstone Arsenal adheres to guidance in the *Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas* (Alabama Soil and Water Conservation Committee, 2018). The installation also maintains a Stormwater Management Plan (SWMP), BMP Plan, and Erosion Control Plan to manage the quantity and quality of stormwater generated on and discharged from Redstone Arsenal (Air Force, 2019a; US Army Garrison - Redstone, 2017).

There are no surface waters within 0.5 mile, or downstream, of the site listed as impaired under Section 303(d) of the CWA.

Wetlands and Floodplains: No wetlands are located in or adjacent to the proposed Alternative 1 site (USFWS, 2021a). Additionally, no 100- or 500-year floodplains occur at the proposed site (see Federal Emergency Management Administration [FEMA] Flood Insurance Rate Map [FIRM] panel 01089C0320F) (FEMA, 2021a). Therefore, these resources are dismissed from analysis for this site.

Groundwater: Groundwater at Redstone Arsenal is contained within distinct hydrogeological units: unconfined layers of clay and gravel, underlying limestone and chert, and shale. Groundwater flow is primarily from north to south/southwest toward the Tennessee River. Depth to groundwater typically ranges between 20 and 125 feet bgs, although some areas have a shallow water table at 2 feet bgs (Air Force, 2019a). Groundwater quality degradation is a concern due to impacts from industrial and military practices occurring on the installation. Currently, the installation implements enforceable land use controls to prevent the extraction and use of groundwater for drinking water purposes, and to provide management control for non-potable uses (US Army Garrison - Redstone, 2017).

3.6.1.2 Alternative 2 – Albuquerque, NM (Kirtland AFB)

Surface Water: Kirtland AFB is located within the Rio Grande Watershed. Waters on and surrounding the installation drain to Tijeras Arroyo, an ephemeral channel that is dry for most of the year, which ultimately drains to the Rio Grande. No surface waters are present on, or within 0.5 mile of, the Alternative 2 site at Kirtland AFB.

Stormwater runoff generated on Kirtland AFB, including on the Alternative 2 site, is generally conveyed through ephemeral drainage channels, including the Tijeras Arroyo. Most runoff flowing through these channels evaporates before reaching the Rio Grande, although some runoff contributes to groundwater recharge in the area (Air Force, 2018c). A stormwater retention basin and drainage channel are located immediately northwest of the Alternative 2 site. Kirtland AFB maintains both an MS4 permit under the federal NPDES program for residential areas of the installation, and a General Industrial NPDES permit (Air Force, 2018b). The State of New Mexico does not have an authorized NPDES program; the USEPA administers this program in the state (USEPA, 2019). Kirtland AFB maintains a SWPPP to manage stormwater quality as part of the requirements of the NPDES program (Air Force, 2018b).

The portion of Tijeras Arroyo located on Kirtland AFB is listed by the New Mexico Environment Department (NMED) as impaired for nutrients. A total maximum daily load (TMDL)[9] for this stream was completed in 2017 (NMED, 2020).

Wetlands and Floodplains: No wetlands are located on or adjacent to the proposed Alternative 2 site (Air Force, 2021b). While the site is located within an area of undetermined flood hazard according to FEMA (see FEMA FIRM panels 35001C0362H and 35001C0366H) (FEMA, 2021a), the Kirtland AFB Integrated Natural Resources Management Plan (INRMP) notes that Tijeras Arroyo and Arroyo del Coyote are the only arroyos on the installation with floodplains. The floodplains can extend up to 0.5 mile across (Air Force, 2018b); however, the Alternative 2 site is located 1.6 mile away from Tijeras Arroyo (and further from Arroyo del Coyote) at its closest point and would not be subject to associated flooding. Therefore, wetlands and floodplains are dismissed from analysis for this site.

Groundwater: Groundwater at Kirtland AFB is supplied by the Albuquerque Basin Regional Aquifer, which is located within the Santa Fe Formation (Kirtland AFB, 2021). This formation is primarily composed of sand and silt, with smaller amounts of clay and gravel, and is primarily recharged east of the installation (Air Force, 2018b; USGS, 2002). The average depth to groundwater ranges between 450 and 500 feet bgs (Air Force, 2018b). The installation draws water for potable and non-potable uses from six wells connected to

[9] A TMDL must be established for impaired waters to specify the maximum amount of a pollutant that can be received by a water body while still meeting applicable water quality standards.

this aquifer, which may be susceptible to contamination from activities occurring on the installation, due to their location near industrial operation and materials. In order to prevent pollutant migration into groundwater in the event of an accidental spill or discharge, Kirtland AFB implements a Spill Prevention, Control, and Countermeasure Plan (SPCCP) (Air Force, 2018c). Currently, no contaminants have been detected in groundwater that exceed federal standards (Kirtland AFB, 2021).

3.6.1.3 Alternative 3 – Bellevue, NE (Offutt AFB)

Surface Water: Offutt AFB is located within the Mud Creek-Papillon Creek Watershed, and surface waters on the installation drain to Papillon Creek, the Platte River, or directly to the Missouri River (Offutt AFB, 2020a). No surface waters are present within the Alternative 3 site; an unnamed tributary of the Missouri River extends to approximately 0.3 mile southeast of the proposed site, although surface water is only seasonally present (USFWS, 2021a). The only permanent surface water body within Offutt AFB is the Base Lake, which is approximately 113 acres in size, and is located approximately 1.4 miles southeast of the proposed site (Air Force, 2020b).

Stormwater at Offutt AFB flows to numerous outfalls located throughout the installation that drain to Bellevue Drain, Papillon Creek, Quail Creek, and the Offutt Base Lake (Offutt AFB, 2021). Offutt AFB maintains both a small MS4 permit under the federal NPDES program, and a General Industrial NPDES permit (Offutt AFB, 2020a). The State of Nebraska administers the NPDES program through the NDEE. Offutt AFB maintains a SWMP to comply with stormwater management requirements included as part of the NPDES permit (Offutt AFB, 2018a).

The Offutt Base Lake is listed as impaired for aquatic life under Section 303(d) by the NDEE. An advisory has been issued for the lake, but a TMDL has not yet been established (NDEE, 2018).

Wetlands and Floodplains: No wetlands are located within the Alternative 3 site, but one approximately 8.3-acre wetland is located approximately 0.5 mile southeast of the site (Air Force, 2021c; USFWS, 2021a). As the Proposed Action would not dredge or fill off-site wetlands, this resource is dismissed from analysis for this site.

The Alternative 3 site at Offutt AFB is not located within a 100- or 500-year floodplain, as it is protected within the levee system R-616-613 located along the Missouri River and Papillion Creek (FEMA, 2021b). However, flood risk at the installation still remains (Offutt AFB, 2020a). Within the past decade, two significant flood events have impacted the installation as a whole, with a flood in 2019 inundating the lower one-third of the base (Air Force, 2021c). This most recent flooding event, caused by the confluence of snowmelt, ice storms, and heavy rainfall, resulted in the failure of the Missouri River levee R-616 protecting Offutt AFB (Offutt AFB, 2020a). This event has been estimated to be larger than a 500-year event, and it did not impact the Alternative 3 site. Following this unprecedented flooding, standards requiring non-mission critical and critical facilities to be raised 2 feet and 3 feet, respectively, above the base flood elevation were established to protect the infrastructure from any potential future events (Offutt AFB, 2020a). Therefore, due to the minimal potential for a similar major flooding event to impact the Alternative 3 site, floodplains are dismissed from analysis for this site.

Groundwater: Groundwater at Offutt AFB is located within secondary aquifers that are confined by bedrock and are generally of poor quality (Divine & Sibray, 2017). Depth to groundwater at the installation may be as shallow as 5 feet bgs, while at higher elevations within the installation groundwater is located 70 feet bgs or more (Offutt AFB, 2020a). Due to the shallow water table, groundwater may be vulnerable to contamination.

3.6.1.4 Alternative 4 – Colorado Springs, CO (Peterson SFB)

Surface Water: Peterson SFB is located within the Middle Fountain Creek Watershed, which drains to the Arkansas River (Air Force, 2019a). Natural surface waters on the installation are limited to the East Fork of Sand Creek, an intermittent stream located in the northwest corner of the property approximately 0.8 mile from the proposed site. Multiple surface water impoundments used for sewage treatment, water retention, potable water, and stormwater are located adjacent to and within Peterson SFB (Air Force, 2019a). No natural or man-made surface waters are located within, or within 0.5 mile of, the Alternative 4 site.

Stormwater at Peterson SFB drains to a mix of inlets and underground pipes, and is discharged from stormwater outfalls to East Fork of Sand Creek and to the stormwater detention pond. In the vicinity of the proposed site, runoff flows into inlets and then infiltrates into the ground. Peterson SFB maintains both a SWMP and SWPPP to manage stormwater on the installation (Peterson AFB, 2016a; 2016b).

Portions of the main stem of Sand Creek, which is located approximately 1.2 mile from the Alternative 4 site, have been included on the Section 303(d) list maintained by the CDPHE; however, these segments are categorized as having insufficient data to make a determination of impairment. The East Fork of Sand Creek, as a tributary of Sand Creek on Peterson SFB, may also receive future monitoring, although this specific portion is not currently included on the CDPHE's 303(d) list (CDPHE, 2020).

Wetlands and Floodplains: No wetlands are located in or adjacent to the proposed Alternative 4 site (USFWS, 2021a). Additionally, no 100- or 500-year floodplains occur at the proposed site (see FEMA FIRM panel 08041C0754G) (FEMA, 2021a); Peterson SFB contains only 3.5 acres of floodplain along the East Fork of Sand Creek in the northwestern portion of the installation (Air Force, 2020c). Therefore, these resources are dismissed from analysis for this site.

Groundwater: Peterson SFB is located at the southern edge of the Denver Aquifer system, and a portion of the Laramie-Fox Hills Aquifer within this system underlies the installation. Groundwater in this aquifer is located at a depth between 600 and 700 feet bgs. There is a shallower, unconfined aquifer also located in the surrounding area that is part of the Fountain Creek Valley, and which ranges in depth from 0.8 foot to over 100 feet bgs (Air Force, 2019a).

3.6.1.5 Alternative 5 – San Antonio, TX (Port San Antonio)

Surface Water: Port San Antonio is located within the San Antonio River Watershed, and surrounding surface waters drain to Leon Creek. No surface waters are present on, or within 0.5 mile of, the Alternative 5 site. Leon Creek is the closest surface water to the site, located approximately 2 miles southwest.

Stormwater runoff at Port San Antonio flows toward the south into storm drainage systems located along South General McMullen Drive and General Hudnell Drive (ALEO Environmental Enterprises, Inc., 2019). The current property owner of the proposed site has obtained a Texas Pollutant Discharge Elimination System (TPDES) CGP, and has also developed a SWPPP for compliance with this permit and to manage stormwater runoff from the construction site (Environmental Allies GP, Inc., 2019).

Leon Creek is listed as impaired under Section 303(d) by the TCEQ for polychlorinated biphenyls (PCBs) in edible tissue. The creek was first listed in 2004, and a TMDL has not yet been established (TCEQ, 2020).

Wetlands and Floodplains: No wetlands are located in or adjacent to the proposed Alternative 5 site (Air Force, 2021d). Additionally, no 100- or 500-year floodplains occur at the proposed site (see FEMA FIRM panel 48029C0395G) (FEMA, 2021a). Therefore, these resources are dismissed from analysis for this site.

Groundwater: Groundwater at Port San Antonio is located within the artesian zone of the Edwards Aquifer, a deep limestone aquifer with water typically located 1,000 feet bgs. Groundwater flow through this aquifer is primarily south/southeast (ALEO Environmental Enterprises, Inc., 2019). Port San Antonio is not located within the recharge zone for the Edwards Aquifer, and the Edwards Aquifer is not susceptible to contaminants due to its depth (Air Force, 1997). A shallow, local aquifer is also located in the vicinity of the proposed site, with water depths ranging from 3 to 37 feet bgs. This aquifer is recharged via infiltration and with water from Leon Creek. Due to its shallow, unconfined nature, this local aquifer is vulnerable to contamination and is not used for withdrawals (Air Force, 1997).

3.6.1.6 Alternative 6 – Brevard County, FL (Space Coast Spaceport)

Surface Water: Space Coast Spaceport is located within the Upper St. Johns Watershed, and is also part of the St. Johns River Water Management District (SJRWMD), a regulatory authority that works in conjunction with the FDEP to manage surface waters and wetlands (FDEP, 2021b). No surface waters are present within the proposed site, but a small unnamed stream is located approximately 0.3 mile southwest in the neighborhood on the opposite site of SR 407. A stormwater retention pond is located outside the proposed site, adjacent to the southern boundary.

Stormwater runoff at Space Coast Spaceport drains to the Upper St. Johns Watershed, infiltrates into the ground, and is collected in stormwater ponds located throughout the airport property. Stormwater at the proposed site would likely flow into the southern stormwater pond or wetlands on-site, or infiltrate into the ground outside of the focused site boundary. Space Coast Spaceport does not currently have a SWMP or SWPPP (FAA, 2020).

No surface waters near the proposed site are listed as impaired by the FDEP (FAA, 2020).

Wetlands and Floodplains: Six wetlands were delineated within the Alternative 6 focused site boundary, totaling 29.4 acres (see **Table 3-12** and **Figure 3-2**) (Air Force, 2021e). In addition, substantial wetland mosaics are present in the areas surrounding the proposed site, including elsewhere on Space Coast Spaceport (USFWS, 2021a). Florida Statutes Section 373.414 gives the state jurisdiction over delineated wetlands, including isolated wetlands. FDEP and the SJRWMD regulate impacts to wetlands, including filling and dredging, through the Environmental Resource Permit program, and have established permitting and mitigation requirements for these impacts (SJRWMD, 2021).

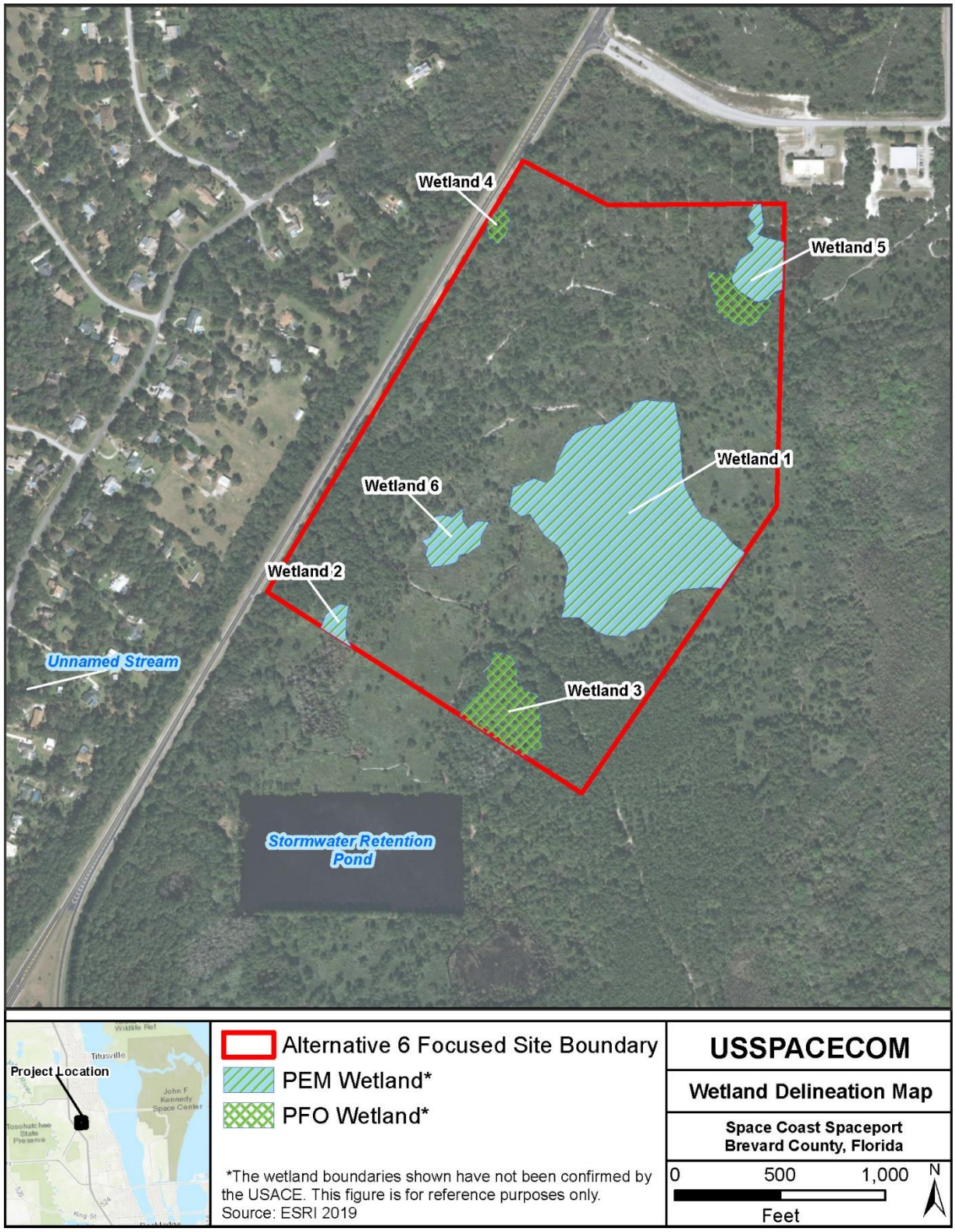
Table 3-12: Delineated Wetlands at Alternative 6 – Space Coast Spaceport

Wetland	Classification[1]	Acreage
Wetland 1	PEM1F	20.61
Wetland 2	PEM1E	0.46
Wetland 3	PFO2/4E	3.25
Wetland 4	PFO7E	0.40
Wetland 5	PEM1F/PFO7E	3.21
Wetland 6	PEM1E	1.44

1. Wetland classifications derived from Cowardin et al (1979), and include information identifying the water regime, class, and subclass of the wetland.

No 100- or 500-year floodplains occur at the proposed site (see FEMA FIRM panel 12009C0215G) (FEMA, 2021a). Therefore, floodplains are dismissed from analysis for this site.

Figure 3-2: Delineated Wetlands on Alternative 6 Site (Space Coast Spaceport)



Groundwater: Groundwater at Space Coast Spaceport is contained within a surficial aquifer and the underlying Floridan Aquifer. Depth to the Floridan Aquifer is relatively shallow, with the upper confining unit extending to approximately 100 feet bgs (USGS, 2020). The proposed site is located within an aquifer recharge zone (FAA, 2020). Due to the shallow depth of the aquifer and porosity of overlying confining materials, groundwater in the area of the proposed site is vulnerable to contamination from industrial activities and potential spills.

Coastal Zone: The Alternative 6 site is located within Florida's designated coastal zone and must comply with the enforceable policies established under Florida's Coastal Management Program. Federal Consistency Determinations are submitted to the FDEP for state review (FDEP, 2021c).

3.6.2 Environmental Consequences

A water resources impact would be significant if it would 1) substantially reduce water availability or interfere with the water supply to existing users; 2) create or contribute to the overdraft of groundwater basins or exceed decreed annual yields of water supply sources; 3) substantially adversely affect surface or groundwater quality; 4) degrade unique hydrologic characteristics; or 5) violate established water resources laws or regulations.

As described in the subsections below, the Proposed Action would have *no significant impact* on water resources under any Alternative.

3.6.2.1 Proposed Action – All Alternatives

Surface Water: No surface waters occur on the proposed Alternative sites. However, proposed construction activities would disturb the soil and could result in increased runoff from the sites, consequently increasing pollution, sedimentation, and turbidity to nearby surface waters. The DAF would obtain a NPDES CGP and develop or update a SWPPP, which would identify erosion controls and BMPs to manage stormwater discharges (**Section 3.5.2.1**). Additional site-specific details regarding construction impacts to surface water are described in **Table 3-13**.

The Proposed Action would have *no effect* on impaired streams, as none are within the ROIs, and impaired streams downstream of the ROIs are not listed for sediment loads or turbidity.

During operation of the Proposed Action, no industrial or substantial ground-disturbing activities would occur that would have the potential to impact nearby surface water resources. The permanent increase in impervious surfaces at the site could increase runoff, as stormwater would not be able to infiltrate into the ground. However, the site would be designed in compliance with Section 438 of the EISA to restore the pre-development hydrology of the site to the maximum extent technically feasible, such as through use of green infrastructure/LID features to minimize stormwater runoff and improve absorption. Therefore, operation of the Proposed Action would have *long-term, negligible adverse impacts* to surface water resources and stormwater.

Wetlands and Floodplains: There would be *no impacts* to wetlands under any Alternative. Alternative 6 is the only site that contains wetlands; however, as noted in **Section 2.3.6**, the DAF would design the Alternative 6 site layout to exclude all wetlands from the limits of disturbance. The DAF would avoid any temporary or permanent impacts to wetlands in accordance with EO 11990. Additionally, no 100-year or 500-year floodplains are present on any of the Alternative sites, so the Proposed Action would have *no impact* on floodplains under any Alternative.

Table 3-13: Surface Water Impacts at the Alternative Sites during Construction

Alternative Site	Disturbed Area (acres)	Potential Impacts
Alternative 1 – Huntsville, AL (Redstone Arsenal)	59.9	Potential for increased sedimentation in two unnamed, nearby streams. With adherence to the installation's existing SWMP and guidance within the *Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas*, impacts would remain *short-term, not significant adverse*.
Alternative 2 – Albuquerque, NM (Kirtland AFB)	59.1	No surface waters present within 0.5 mile. With adherence to the installation's existing SWPPP, there would be *no impacts* to surface waters.
Alternative 3 – Bellevue, NE (Offutt AFB)	10.9	Potential for increased runoff in the seasonal unnamed tributary of the Missouri River. With adherence to the installation's existing small MS4 permit, NPDES industrial permit, and SWMP, impacts would remain *short-term, not significant adverse*.
Alternative 4 – Colorado Springs, CO (Peterson SFB)	12.9	No surface waters present within 0.5 mile. With adherence to the installation's existing SWMP and SWPPP, there would be *no impacts* to surface waters.
Alternative 5 – San Antonio, TX (Port San Antonio)	32.5	No surface waters present within 0.5 mile. With adherence to the site's existing SWPPP and receipt of applicable TPDES construction permits, there would be *no impacts* to surface waters.
Alternative 6 – Brevard County, FL (Space Coast Spaceport)	73.9[1]	Potential for increased runoff in the nearby unnamed stream. The nearby stormwater retention pond may collect additional runoff. The DAF would develop and implement a site-specific SWPPP to control stormwater discharges. Impacts to surface waters would remain *short-term and not significant adverse*.

Notes:
1. Acreage reflects total acreage of focused site boundary minus total area of on-site wetlands, which would not be impacted.

Groundwater: Construction of the Proposed Action would not involve groundwater withdrawals or the intentional release or injection of pollutants or contaminants into groundwater resources and aquifers. Potential impacts to groundwater may still occur, however, from the accidental spill or release of petroleum products or other liquids used during construction activities. Groundwater degradation is an existing concern at the proposed Alternative 1, 3, 5, and 6 sites, and proposed construction activities have the potential to increase the risk of contamination. With implementation of BMPs, such as performing routine inspections of equipment, maintaining spill-containment materials on-site, and adhering to site-specific hazardous and toxic materials and waste (HTMW) plans, the potential for impacts to groundwater would be minimized, resulting in *short-term, not significant adverse* impacts to groundwater at the Alternative 1, 3, 4, 5, and 6 sites. Potential adverse groundwater impacts at the Alternative 2 site would be *short-term and negligible*, as the site is not located within the aquifer recharge zone and Kirtland AFB maintains an SPCCP to manage accidental releases and further minimize impacts.

Operational activities of the Proposed Action would be primarily administrative in nature, and would not be likely to generate substantial industrial contaminants or potentially release contaminants into groundwater. The HQ facility would either develop and maintain a site-specific SPCCP or operate under an existing SPCCP through its host installation. Therefore, long-term impacts to groundwater would be *negligible*.

Coastal Zone: There would be *no impacts* to the coastal zone under Alternatives 1, 2, 3, 4, or 5.

Proposed construction activities under Alternative 6 may disturb coastal resources from onshore ground and soil disturbances, which could lead to increased erosion and sedimentation. However, the Proposed Action would be consistent to the maximum extent practicable with Florida's enforceable policies with compliance with applicable regulations and appropriate agency coordination. Implementation of Alternative 6 would avoid impacts to the state coastal zone to the maximum extent practicable, resulting in *short-term, insignificant adverse impacts* on Florida's coastal zone and coastal resources. The DAF submitted its Federal Consistency Determination for implementation of the Proposed Action at Space Coast Spaceport to the FDEP on August 10, 2021 (**Appendix D**). In an email dated August 10, 2021, the FDEP determined the Proposed Action would be consistent with Florida's Coastal Management Program.

3.6.2.2 No Action Alternative

Under the No Action Alternative, the proposed permanent USSPACECOM HQ facility would not be constructed, and there would be *no impact* on water resources at any of the six Alternative sites. USSPACECOM operations would continue at Peterson SFB, and water resources would continue to be managed as under current conditions. The existing SWPPP and SWMP for Peterson SFB would continue to guide stormwater management and runoff at the interim USSPACECOM facility, and the installation's SPCCP would continue to be implemented to minimize potential impacts from spills or HTMW releases. Ongoing operations would include no additional ground disturbance and are not anticipated to contaminate or impair nearby water resources.

3.7 BIOLOGICAL RESOURCES

Biological resources addressed in this EA consist of vegetation, wildlife, and special status species. Special status species relevant to this EA are those protected under the federal Endangered Species Act of 1973 (ESA), Bald and Golden Eagle Protection Act of 1940 (BGEPA), or Migratory Bird Treaty Act of 1918, or under applicable state laws or regulations.

Pursuant to Section 7 of the ESA, the DAF conducted informal consultation with the U.S. Fish and Wildlife Service (USFWS) for the project areas which varied by acreage involved, not square footage of facilities and parking. The DAF's documentation of its effect determinations for federally listed species and USFWS' concurrence, when applicable, are provided in **Appendix E**. No formal consultation with the USFWS was required.

The ROI for biological resources includes vegetation present within the Alternative site boundaries, wildlife present on-site or within 0.5 mile of the Alternative site boundaries, and aquatic resources present on-site or downstream of the Alternative sites within 0.5 mile (in accordance with the ROI for surface waters; see **Section 3.6**).

3.7.1 Affected Environment

3.7.1.1 Alternative 1 – Huntsville, AL (Redstone Arsenal)

Vegetation: The Alternative 1 site is located within an upland area and consists of agricultural vegetation (i.e., fenced cattle pasture and hayfields) that is transected with forested hedgerows along modified dry ditches. Vegetation in the agricultural area consists of mixed grass blends which provide foraging options for livestock. Common species of vegetation occurring in the forested hedgerows at Redstone Arsenal include mixed oaks (*Quercus sp.*), American beech (*Fagus grandifolia*), and sweetgum (*Liquidambar styraciflua*) (Air Force, 2019a). The proposed site is managed for non-native species in accordance with the installation's Integrated Pest Management Plan (IPMP) (US Army Garrison - Redstone, 2017).

Wildlife: Wildlife occurring on the proposed site are those typically found on grassland/pastureland with forested hedgerows, such as white-tailed deer (*Odocoileus virginianus*), eastern cottontail (*Sylvilagus floridanus*), and red fox (*Vulpes vulpes*). No aquatic habitat exists on the Alternative 1 site. However, two unnamed streams and four freshwater ponds are located within the ROI (see **Section 3.6.1.1**). These features may offer habitat to common species such as eastern box turtle (*Terrapene carolina carolina*), green frog (*Rana clamitans*), and crayfish (*Cambarus sp*.).

Special Status Species: The USFWS's Information for Planning and Consultation (IPaC) system identified seven federally listed threatened or endangered species that could potentially occur on the Alternative 1 site (USFWS, 2021b). The DAF determined[10] that only three of these species have the potential to occur on-site: the gray bat (*Myotis grisecens*), Indiana bat (*Myotis sodalis*), and northern long-eared bat (*Myotis septentrionalis*; NLEB). The proposed site does not offer suitable habitat for the bald eagle (Air Force, 2019a). While migratory birds are known to utilize the site for foraging and nesting, no migratory birds of conservation concern[11] (BCC) are expected to occur at the proposed site (**Table 3-14**) (USFWS, 2021c). One state-protected species, the Tuscumbia darter (*Etheostoma tuscumbia*), may occur in the streams within the ROI (US Army Garrison - Redstone, 2017).

3.7.1.2 Alternative 2 – Albuquerque, NM (Kirtland AFB)

Vegetation: Vegetation on the Alternative 2 site consists of disturbed grassland community (Air Force, 2018b). Overall, vegetative cover on the proposed site is sparse, covering less than 50 percent of the ground surface, and dominated by non-native plants. Russian thistle (*Salsola sp*.) is the most prevalent plant, comprising about 80 percent of total plant cover (AECOM, 2021a). Non-native species on Kirtland AFB are managed in accordance with the installation's IPMP (Air Force, 2018b).

Wildlife: Wildlife occurring on the proposed site are those commonly found in an early successional community with sparse vegetation, such as killdeer (*Charadrius vociferus*), western kingbird (*Tyrannus vertialis*), spotted ground squirrel (*Xerospermophilus spilosoma*), and coyote (*Canis latrans*). No aquatic habitat is present within the ROI.

Special Status Species: IPaC identified five federally listed threatened or endangered species that could potentially occur on the Alternative 2 site (USFWS, 2021d). Additionally, there are 16 state-listed species with geographic ranges in Bernalillo County. However, the DAF determined that no suitable habitat for federally listed species, state-protected species, or bald or golden eagles exists on the proposed site (AECOM, 2021a). IPaC identified 15 BCCs with potential to occur on the proposed site. The DAF conducted a desktop review of the habitat requirements of these BCCs and determined that suitable habitat exists on the proposed site for only six of these species. Breeding seasons for these species generally range from March to August (**Table 3-14**) (USFWS, 2021e). Notably, suitable habitat for the burrowing owl (*Athene cunicularia*) exists on the proposed site; while they are not known to occur on-site currently, they are regularly spotted utilizing burrows near a masonry wall approximately 0.2 mile south of the proposed site (AECOM, 2021a).

[10] The DAF's effect determinations for federally listed species, pursuant to informal consultation under Section 7 of the ESA, as well as any USFWS responses received, are provided in **Appendix E**.

[11] The USFWS identifies BCCs with potential to occur on each proposed site. BCCs are defined as "migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent [the USFWS's] highest conservation priorities" *(USFWS, 2015)*.

Table 3-14: IPAC-Identified BCCs For Each Site with Suitable Habitat Present

Common Name	Scientific Name	Potential Use of the ROI
Alternative 1 – Huntsville, AL (Redstone Arsenal)		
None		
Alternative 2 – Albuquerque, NM (Kirtland AFB)		
Brewer's Sparrow	*Spizella breweri*	Foraging and nesting, breeds May 15 to August 10
Burrowing Owl	*Athene cunicularia*	Foraging and nesting; breeds March 15 to August 31
Chestnut-collared Longspur	*Calcariius ornatus*	Foraging; breeds elsewhere
Long-billed Curlew	*Numenius americanus*	Foraging and nesting; breeds April 1 to July 31
Rufous Hummingbird	*Selasphorus rufus*	Foraging; breeds elsewhere
Virginia's Warbler	*Vermivora virginiae*	Foraging and nesting; breeds May 1 to July 31
Alternative 3 – Bellevue, NE (Offutt AFB)		
American Golden-plover	*Pluvialis dominica*	Foraging; breeds elsewhere
Buff-breasted Sandpiper	*Calidris subruficollis*	Foraging; breeds elsewhere
Red-headed woodpecker	*Melanerpes erythrocephalus*	Foraging and nesting; breeds May 10 to Sep 10
Wood Thrush	*Hylocichla mustelina*	Foraging and nesting; breeds May 10 to August 31
Alternative 4 – Colorado Springs, CO (Peterson SFB)		
Burrowing Owl	*Athene cunicularia*	Foraging and nesting; breeds March 15 to August 31
Lark Bunting	*Calamospiza melanocorys*	Foraging and nesting; breeds May 10 to August 15
Alternative 5 – San Antonio, TX (Port San Antonio)		
None		
Alternative 6 – Brevard County, FL (Space Coast Spaceport)		
American Kestrel	*Falco sparverius paulus*	Foraging and nesting; breeds April 1 to August 31
Bald Eagle	*Haliaeetus leucocephalus*	Foraging and nesting; breeds September 1 to July 31
Black Rail	*Laterallus jamaicensis*	Foraging and nesting; breeds March 1 to September 15
Common Ground-dove	*Columbina passerine exigua*	Foraging and nesting; breeds February 1 to December 31
King Rail	*Rallus elegans*	Foraging and nesting; breeds May 1 to September 5
Lesser Yellowlegs	*Tringa flavipes*	Foraging; breeds elsewhere
Limpkin	*Aramus guarauna*	Foraging and nesting; breeds January 15 to August 31
Prairie Warbler	*Dendroica discolor*	Foraging and nesting; breeds May 1 to July 31
Reddish Egret	*Egretta rufescens*	Foraging and nesting; breeds March 1 to September 15
Short-billed Dowitcher	*Limnodromus griseus*	Foraging; breeds elsewhere

Common Name	Scientific Name	Potential Use of the ROI
Short-tailed Hawk	*Buteo brachyurus*	Foraging and nesting; breeds March 1 to June 30
Swallow-tailed Kite	*Elanoides forficatus*	Foraging and nesting; breeds March 10 to June 30
Yellow Warbler	*Dendroica petechia gundlachi*	Foraging and nesting; breeds May 20 to August 10

3.7.1.3 Alternative 3 – Bellevue, NE (Offutt AFB)

Vegetation: The Alternative 3 site is entirely developed/disturbed (Air Force, 2020b). Ground cover on the site consists of a mixture of Kentucky bluegrass (*Poa pratensis*) and tall fescue (*Schedonorus arundinaceus*) with scattered ornamental shade trees, including Norway spruce (*Picea abies*), sugar maple (*Acer saccharum*), and northern red oak (*Quercus rubra*). Large stands of non-native Canada thistle (*Circsium arvense*) and musk thistle (*Cardus nutans*) are present on the proposed site (AECOM, 2021b). In a letter dated June 29, 2021 (**Appendix A**), the Nebraska Game and Parks Commission acknowledged that the proposed site is previously disturbed, lacks native vegetation, and is surrounded by urban development. Non-native species on the proposed site are managed in accordance with the installation's IPMP (Air Force, 2020b).

Wildlife: The proposed site offers low quality habitat to most wildlife, due to its developed/disturbed nature. However, avian species are known to occur on the proposed site (AECOM, 2021b). An unnamed stream is present within the ROI, approximately 0.3 mile southeast of the proposed site (**Section 3.6.1.3**). This stream is seasonally dry and therefore offers limited habitat to aquatic species.

Special Status Species: IPaC identified four federally listed threatened or endangered species that could occur on the Alternative 3 site (USFWS, 2021f). Additionally, there are nine state-listed species with geographic ranges in Sarpy County (Nebraska Natural Heritage Program, 2017). The DAF determined no suitable habitat for federally listed species, state-protected species, or bald or golden eagles exists on the proposed site, with the exception of the federally threatened NLEB (AECOM, 2021b). The NLEB has been documented at Offutt AFB as recently as 2017 (Center for Integrated Research on the Environment, 2017). The NLEB may forage in the vicinity of Offutt AFB, including on the proposed site; however, the proposed site does not offer suitable habitat for NLEB roost sites or maternity colonies (AECOM, 2021b). IPaC identified 11 BCCs with potential to occur on the proposed site, of which the DAF determined via desktop review that only 4 have suitable habitat present on-site. Breeding seasons for these species generally range from May to September (**Table 3-14**) (USFWS, 2021g).

3.7.1.4 Alternative 4 – Colorado Springs, CO (Peterson SFB)

Vegetation: Vegetation on the site is characterized as disturbed planted/grazed grassland (Air Force, 2019a). Common vegetative species occurring in grassland at Peterson SFB include buffalo grass (*Buchloe dactyloides*), three-awn grass (*Aristida purpurea*), and dropseed (*Sporobolus cryptandrus*) (Air Force, 2019a). Non-native species on the proposed site are managed in accordance with the installation's IPMP (Air Force, 2020c).

Wildlife: Wildlife occurring on the proposed site are those commonly found in disturbed grassland communities in Colorado, such as western meadowlark (*Sturnella neglecta*), mule deer (Odocoileus hemionus) and pronghorn antelope (*Antilocapra americana*) (Air Force, 2020c). No aquatic habitat occurs within the ROI.

Special Status Species: IPaC identified seven federally listed species with potential to occur on the proposed site (USFWS, 2021h). However, no suitable habitat for any federally listed species exists on the

proposed site. Additionally, three state-protected species, black-tailed prairie dog (*Cynomys ludovicianus*), western burrowing owl (*Athene cunicularia*), and ferruginous hawk (*Buteo regalis*), have suitable habitat on the proposed site (Air Force, 2019a). IPaC identified five BCCs with potential to occur on the proposed site, of which the DAF determined via desktop review that only two have suitable habitat on-site. Breeding seasons for these species generally range from March to August (**Table 3-14**) (USFWS, 2021i). The proposed site does not offer suitable habitat for the bald or golden eagle (Air Force, 2019a).

3.7.1.5 Alternative 5 – San Antonio, TX (Port San Antonio)

Vegetation: Vegetation on the site consists of several well-spaced ornamental trees and an understory of grasses and forbs. The most common trees on the site are pecan (*Carya illinoinensis*), cedar elm (*Ulmus crassifolia*), and live oak (*Quercus fusiformis*). Understory species include Johnsongrass (*Sorghum halepense*), Bermudagrass (*Cynodon dactylon*), and giant ragweed (*Ambrosia trifida*) (AECOM, 2021c). All projects on Port San Antonio must comply with the City of San Antonio's Landscaping and Tree Preservation Ordinances, which include requirements to use native species, develop and adhere to a landscaping plan, and to preserve tree canopy coverage to the extent practicable (Port San Antonio, 2016; City of San Antonio, 2021d).

Wildlife: Wildlife occurring on the proposed site are those generally expected to inhabit urban/disturbed environments in central Texas, such as fox squirrel (*Sciurus niger*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), rock pigeon (*Columba livia*), and European starling (*Sturnus vulgaris*) (City of San Antonio, 2014; AECOM, 2021c).

Special Status Species: IPaC identified 21 federally listed species with potential to occur on the proposed site (USFWS, 2021j). Further, 19 state-listed species are known to occur within Bexar County (Texas Parks & Wildlife, 2021). However, the DAF determined that no suitable habitat exists on the proposed site for any of these listed species (AECOM, 2021d). Additionally, no suitable habitat exists for bald or golden eagles on the site (AECOM, 2021d). IPaC identified three BCCs with potential to occur on the proposed site; however, the DAF determined via desktop review that there is no suitable habitat on-site for these species (**Table 3-14**) (USFWS, 2021k).

3.7.1.6 Alternative 6 – Brevard County, FL (Space Coast Spaceport)

Vegetation: The proposed site is undeveloped and is generally densely vegetated with various species of trees, shrubs, and grasses. Specific vegetative communities include shrub and brushland, pine flatwoods, upland mixed coniferous-hardwood forest, freshwater marsh, wet prairies, slash pine swamp forest, and wetland forested mixed; refer to the DAF's informal consultation letter to the USFWS for further detail. The City of Titusville Landscaping Ordinance includes requirements for managing vegetation and encourages the use of drought tolerant native vegetation and preservation of existing trees (City of Titusville, 2021d).

Wildlife: Wildlife expected to occur on the proposed site are those common in the vegetative communities described above, such as nine-banded armadillo (*Dasy novemcinctus*), American alligator (*Alligator mississippiensis*), and gopher tortoise (*Gopherus polyphemus*) (About Titusville, 2021).

Special Status Species: IPaC identified 13 federally listed species with potential to occur on the Alternative 6 site (USFWS, 2021l). Of these, the DAF determined that suitable habitat exists on-site for four federally listed (or candidate) species: eastern indigo snake (*Drymarchon couperi*), Florida scrub-jay (*Aphelocoma coerulescens*), gopher tortoise, and wood stork (*Mycteria americana*) (AECOM, 2021e). In addition, there are five state-listed species with suitable habitat on the proposed site: Florida pine snake (*Pituophis melanoleucus mugitus*), Florida sandhill crane (*Grus canadensis pratensis*), little blue heron (*Egretta caerulea*), tricolored heron (*Egretta tricolor*), and roseate spoonbill (*Platalea ajaja*) (AECOM, 2021f). IPaC

identified 16 BCCs with potential to occur on the proposed site, of which the DAF determined via desktop review that suitable habitat exists for 13 of these species. Breeding seasons for these species generally range from March to September (**Table 3-14**) (USFWS, 2021m). Suitable bald eagle habitat exists within the proposed site, and two bald eagle nests are located 1.1 miles south and 1.5 miles southeast of the proposed site, respectively (Audubon, 2021).

3.7.2 Environmental Consequences

A biological resources impact would be significant if it would 1) substantially reduce regionally or locally important habitat; 2) substantially diminish a regionally or locally important plant or animal species; or 3) adversely affect recovery of a federally or state-listed species.

As described in the subsections below, the Proposed Action would have *no significant impact* on biological resources under any Alternative.

3.7.2.1 Proposed Action – All Alternatives

Vegetation: The DAF assumes that all vegetation on the Alternative sites would be cleared during construction of the Proposed Action. Vegetation removal and/or replacement would be conducted in accordance with the INRMP or local regulations applicable to the site, as well as time of year restrictions necessary to minimize or prevent impacts on wildlife and their habitat. Native vegetation communities and wildlife habitats could be impacted by the introduction or encroachment of noxious weeds or invasive species during construction. However, contractors would minimize the introduction or spread of invasive species by adhering to the INRMP and/or local regulations, including implementation of BMPs such as cleaning all construction equipment prior to bringing it on-site. Once construction is complete, the site would be revegetated with native species according to the landscape plan.

Overall, the Alternative 1, 2, 3, 4, and 5 sites contain marginal vegetative communities due to existing agricultural use, disturbance, active grounds maintenance, and/or extensive invasive species populations. Thus, removal of vegetation on these sites would be a *long-term, negligible impact*, which would be controlled through compliance with applicable plans and policies (i.e., INRMPs, IPMPs, and state and local regulations). Additionally, removal of existing on-site invasive species populations if Alternative 2 or 3 is selected would constitute a *long-term, beneficial* impact to the biological resources near that site. Alternative 6 would have the largest impact to vegetation for this Proposed Action due to the removal of approximately 103 acres of existing natural vegetative communities. However, these vegetative communities, and the scale of the proposed development, are locally common; impacts would remain *long-term and not significant adverse*. None of the considered Alternatives would substantially reduce vegetative communities that comprise regionally or locally important habitat.

As existing natural vegetative communities would be removed during construction, operation of the Proposed Action would have *no effect* on vegetation. The DAF would manage the facility grounds, including native vegetation species, in accordance with the site's applicable plans and policies.

Wildlife: Construction of the Proposed Action would permanently remove all existing habitat (i.e., primarily vegetation) from the selected site; this impact would be minor since existing on-site habitat at most of the Alternative sites is generally small in size and low quality, and similar habitats are abundant near the proposed sites. The common wildlife species occurring on the selected site would be physically displaced, and construction noise and increased human activity may also disturb wildlife species located within the ROI (0.5 mile) of the selected site. Mobile wildlife species, such as birds and mammals, would likely relocate to areas of similar habitat near the site, although less-mobile species (e.g., some reptiles and amphibians) could be inadvertently destroyed by construction activities. Although disturbance, displacement, or

inadvertent wildlife mortality from construction activities would be an adverse impact, such impacts would occur at the individual, rather than population or species, level, and would not inhibit the continued propagation of common wildlife populations and species near each site. Therefore, construction of the Proposed Action would result in *short-term and long-term, insignificant adverse* impacts to wildlife. Increased human presence and noise associated with operation of the Proposed Action would cause minor disturbance to wildlife in the ROI of the selected site. Over time, many wildlife species would adapt to these new conditions or relocate to other areas. Therefore, operation of the Proposed Action would result in a *long-term, insignificant adverse* impact to wildlife.

Special Status Species: In general, potential adverse impacts to special status species, if present, would be similar to those described for vegetation and wildlife: habitat loss, displacement, disturbance, and/or mortality. **Table 3-15** compares the potential for impacts to special-status species for each Alternative site, as well as applicable BMPs the DAF would implement to avoid or minimize potential impacts. With implementation of these BMPs, as well as adherence to measures identified in applicable INRMPs and/or regulations, the Proposed Action *may affect, but would not be likely to adversely affect,* up to four federally listed species, and could have *short- and long-term, negligible to insignificant adverse* impacts on up to five state-protected species, depending on the Alternative selected. The Proposed Action would not adversely affect the recovery of a federally or state-listed species. If, as the Proposed Action progresses, the DAF determines it would not be able to implement any of the Alternative-specific BMPs listed in **Table 3-15**, it would continue consulting with the USFWS and/or the appropriate state regulatory agency to ensure compliance with the ESA and applicable state regulations. The Proposed Action would have *short- and long-term, negligible adverse impacts* on the bald eagle if Alternative 6 is selected.

Potential impacts to migratory birds could include disturbance to breeding individuals during the nesting season, particularly if construction occurred during the nesting season and nests are located within or adjacent to the construction site. Impacts would potentially include direct loss of eggs or nestlings, indirect displacement from increased noise and human presence in the vicinity of the project, and an incremental reduction in foraging habitat. Most birds would likely avoid the selected site and/or relocate to nearby habitats in the area. Overall, impacts to migratory birds would be greatest under Alternative 6 due to the higher quality habitat and number of BCCs with potential to occur in the area. In the event construction occurs during the breeding season, the DAF would adhere to applicable avoidance and minimization measures presented in the selected installation's INRMP and/or other natural resources management guidelines. Adherence to these requirements would establish that construction impacts on migratory birds, including BCCs, are *short-term and negligible or insignificant adverse*. Once built, there could be *long-term, insignificant adverse impacts* on migratory birds from occasional mortality resulting from window strikes. Bird collision deterrence options would be assessed during the design process and implemented as appropriate.

3.7.2.2 No Action Alternative

Under the No Action Alternative, the proposed permanent USSPACECOM HQ facility would not be constructed, and there would be *no impact* on biological resources at any of the six Alternative sites. Existing vegetation and wildlife at the Alternative sites would remain undisturbed. USSPACECOM operations would continue at Peterson SFB, and biological resources would continue to be managed as under current conditions. Current operations would not result in any removal or disturbance of vegetation, with the exception of landscape activities and removal of non-native species in accordance with the installation's IPMP. Current operations would not destroy the habitat of or disturb common or special-status wildlife species, and continued vegetation management may increase available habitat.

Table 3-15: Potential Impacts to Federally and State Protected Species

Common Name	Status	Effect Determination	Discussion
Alternative 1 – Huntsville, AL (Redstone Arsenal)			
Gray Bat	FE	May Affect, Not Likely to Adversely Affect (USFWS Concurred)	There is low potential of occurrence due to limited water sources and riparian foraging habitat on and near the proposed site. Tree clearing on the proposed site would not impact prime foraging habitat.
Indiana Bat	FE	May Affect, Not Likely to Adversely Affect (USFWS Concurred)	Suitable foraging and summer roost habitat exists on the proposed site. In accordance with the USFWS's *Procedures for Working with the Indiana Bat in Alabama,* the DAF would restrict tree clearing to only occur between October 15 and March 31 (USFWS, n.d.).
Northern Long-Eared Bat	FT	May Affect, Not Likely to Adversely Affect (USFWS Concurred)	Suitable foraging and summer roost habitat exists on the proposed site. The DAF would restrict tree clearing for the Proposed Action to only occur between October 15 and March 31.
Tuscumbia Darter	SP	Negligible	Suitable habitat in the two streams within the ROI. Impacts to this species would be minimized through BMPs to avoid erosion and sedimentation from the project site described in **Sections 3.5.2.1** and **3.6.2.1**.
Alternative 2 – Albuquerque, NM (Kirtland AFB)			
None			
Alternative 3 – Bellevue, NE (Offutt AFB)			
Northern Long-Eared Bat	FT	May Affect – Take Not Prohibited (USFWS Concurred)	Using the NLEB key within the IPaC system, the DAF concluded, and USFWS verified, that the Proposed Action may affect the NLEB; however, any take that may occur as a result of the Proposed Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 C.F.R. 17.40(o).
Alternative 4 – Colorado Springs, CO (Peterson SFB)			
Western Burrowing Owl	SP	Not Significant Adverse	While no western burrowing owls have been observed on the Peterson SFB, they are regularly observed on properties immediately adjacent to the installation (Air Force, 2020c). Some suitable nesting habitat for the western burrowing owl would be lost if

Common Name	Status	Effect Determination	Discussion
			Alternative 4 is selected. However, this habitat loss would be small in the context of available habitat at Peterson SFB and in the surrounding region.
Ferruginous Hawk	SP	Negligible	Some suitable foraging habitat for the ferruginous hawk would be lost if Alternative 4 is selected. However, this habitat loss would be small in the context of available habitat at Peterson SFB and in the surrounding region.
Black-tailed Prairie Dog	SP	Negligible	While no active prairie dog colonies occur on the installation, there are active colonies on lands adjacent to the installation. Peterson SFB's INRMP supports the removal of prairie dogs from installation grounds, as their presence may attract raptors, which pose safety concerns for airspace operations (Air Force, 2020c).
Alternative 5 – San Antonio, TX (Port San Antonio)			
None			
Alternative 6 – Brevard County, FL (Space Coast Spaceport)			
Eastern Indigo Snake	FT	May Affect, Not Likely to Adversely Affect (USFWS Concurred)	Known to use gopher tortoise (*Gopherus polyphemus*) burrows for overwintering (USFWS, 2018). Several gopher tortoise burrows occur on the site, which could potentially provide habitat for this species. The DAF would implement the USFWS's *Standard Protection Measures for the Eastern Indigo Snake* in order to minimize potential impacts to this species during construction of the Proposed Action (USFWS, 2013).
Florida Scrub-jay	FT	May Affect, Not Likely to Adversely Affect (USFWS Concurred)	Adequate foraging habitat for this species occurs on-site. However, due to the absence of nesting habitat and the limited presence of potential foraging habitat, this species would be unlikely to frequent the proposed site and would likely avoid the site during any disturbance activities associated with the Proposed Action.
Gopher Tortoise	C	May Affect, Not Likely to Adversely Affect (USFWS Concurred)	Gopher tortoise burrows occur on-site. The DAF would comply with the Florida Fish and Wildlife Conservation Commission's (FWC) *Gopher Tortoise Permitting Guidelines* to relocate gopher tortoises and to avoid or minimize impacts to this species during implementation of the Proposed Action (FWC, 2020).
Wood Stork	FT	May Affect, Not Likely to Adversely Affect (USFWS Concurred)	Suitable foraging habitat for this species occurs on-site. The DAF consulted the Determination Key for the Wood Stork in Central and North Peninsular Florida to identify potential impacts to this species from the Proposed Action (USFWS, 2008). In accordance with the Determination Key and to minimize potential impacts to the wood

Common Name	Status	Effect Determination	Discussion
			stork, the DAF would provide suitable foraging habitat compensation in an approved area and would comply with the USFWS's *Habitat Management Guidelines for the Wood Stork in the Southeast Region* (USFWS, 1990). The details for this compensatory mitigation and incorporation of habitat management guidelines would be determined during the project design phase.
Florida Pine Snake	SP	Not Significant Adverse	Florida pine snakes spend the majority of their time underground in refuges, such as gopher tortoise burrows. Therefore, there is potential for the Florida pine snake to inhabit the proposed site. The DAF would comply with the FWC's *Gopher Tortoise Permitting Guidelines,* which includes guidelines for relocating Florida pine snakes alongside gopher tortoises, and the FWC's *Florida Pine Snake: Species Conservation Measures and Permitting Guidelines* which includes recommended conservation practices to avoid or minimize impacts to this species during implementation of the Proposed Action (FWC, 2020; FWC, 2018).
Florida Sandhill Crane	SP	Not Significant Adverse	Suitable habitat for this species is available within the on-site herbaceous wetland habitat. The DAF would conduct surveys for nesting Florida sandhill cranes prior to construction activities and during the December through August breeding season. The DAF would also comply with the FWC's *Florida Sandhill Crane: Species Conservation Measures and Permitting Guidelines*, which includes measures to avoid or minimize potential impacts to this species, such as avoiding activity within 400 feet of nest sites during the breeding season (December through August) (FWC, 2016).
Little Blue Heron; Tricolored Heron; Roseate Spoonbill	SP	Not Significant Adverse	These species are discussed collectively since they occupy similar habitats and have similar feeding patterns. Suitable habitat exists on the proposed site within the forested and herbaceous wetland habitat. The DAF would comply with the FWC's *Threatened Wading Birds Species Conservation Measures and Permitting Guidelines*, which includes guidelines to avoid or minimize potential impacts to these species, including maintaining appropriate buffers around active nest sites during the breeding season (February through August) (FWC, n.d.).
Bald Eagle	BGEPA, SP	Negligible	The project site contains suitable habitat for the bald eagle. However, no documented bald eagle nests occur on the site. Bald eagle nests are located 1.1 miles and 1.5 miles south and southeast of the proposed site. The DAF would comply with the USFWS's *National Bald Eagle Management Guidelines*, which include recommendations for avoiding disturbance at nest sites and foraging areas. As the site is more than 660 feet away from these nests, the Proposed Action would have no effect on these nests (USFWS, 2007).

Status: FT = Federally Threatened; FE = Federally Endangered; C = Federal Candidate; SP = State Protected; BGEPA = Bald and Gold Eagle Protection Act

3.8 CULTURAL RESOURCES

Cultural resources are historic properties as defined by the NHPA; cultural items as defined by the Native American Graves Protection and Repatriation Act; archaeological resources as defined by the Archaeological Resources Protection Act; sacred sites as defined by EO 13007, *Indian Sacred Sites*, to which access is afforded under the American Indian Religious Freedom Act; and collections and associated records as defined by 36 C.F.R. Part 79.

Historic properties covered by the NHPA include any prehistoric or historic district, site, building, structure, or object with known or potential significance with regard to pre- or post-American history, architecture, archaeology, engineering, or culture. Section 106 of the NHPA requires federal agencies to consider the effect an undertaking may have on historic properties. The Proposed Action is considered an undertaking and is required to comply with Section 106, including consultation with applicable State Historic Preservation Offices (SHPO). All Section 106 correspondence with SHPOs for this Proposed Action is provided in **Appendix F**.

Consistent with Section 106 of the NHPA, DoD Instruction 4710.02, AFI 90-2002, and AFMAN 32-7003, the DAF is also consulting with 76 federally recognized tribes that are historically affiliated with the geographic region of each Alternative site regarding the potential for the Proposed Action to affect properties of cultural, historical, or religious significance to the tribes. The DAF initiated consultation with each tribe via letter in June and July 2021; a record of this consultation, including subsequent attempts to contact the tribes, is provided in **Appendix B**. To date, tribes have identified no properties of cultural, historical, or religious significance on the Alternative sites.

The ROI for cultural resources is the area of potential effects (APE) as defined by the NHPA; it includes two parts for each Alternative site. The archaeological APE includes all areas potentially subject to ground disturbance from the Proposed Action: the entireties of the Alternative 1, 2, 3, 4, and 5 sites, as well as the focused site boundaries of the Alternative 6 site. The architectural APE includes areas within a 0.25-mile buffer of the archaeological APE, which could experience a change in character from the Proposed Action (e.g., viewshed changes). The APEs are determined by acreages for each location, not square feet of facilities and parking.

3.8.1 Affected Environment

3.8.1.1 Alternative 1 – Huntsville, AL (Redstone Arsenal)

Archaeological APE: The Alternative 1 site contains two archaeological sites, both of which are ineligible for the NRHP (Air Force, 2019a). One site consists of a prehistoric and historic surface scatter, and one site consists of a single brick and stone chimney base with no associated artifacts.

Architectural APE: The Alternative 1 site contains no built resources. A portion of Building Area 4400, which contains Cold War-era buildings, is within the architectural APE, although it is screened from the Alternative 1 site by a forested area and thus is not within the viewshed.

3.8.1.2 Alternative 2 – Albuquerque, NM (Kirtland AFB)

Archaeological APE: The Alternative 2 site contains no archaeological sites (Johnson, 2021).

Architectural APE: The Alternative 2 site contains no built resources (Johnson, 2021).

Thirty-eight buildings on Kirtland AFB are within the architectural APE and of historic age for this project (i.e., constructed prior to 1976). Of these, one (Building 20220) is eligible for the NRHP. Building 20220, located approximately 0.2 mile east-northeast of the Alternative 2 site, is Field Command/Armed Forces Special Weapons Project HQ, which served as the division HQ for Sandia Base and Security Forces Operation. The building was constructed in 1952 and is one of only a few properties on Kirtland AFB with stylistic architectural features including the horizontal banding of windows and the flat roof overhang reminiscent of the Prairie Style. It also possesses clean lines characteristic of the 1950's military penchant for the International Style (Johnson, 2021).

The other 37 buildings on Kirtland AFB of historic age within the architectural APE are not eligible for the NRHP. While 18 of these buildings were less than 50 years of age at the time they were evaluated, and consequently may require re-evaluation in the future as they reach 50 years of age, they were all constructed after 1976 and would not require re-evaluation for this Proposed Action (Johnson, 2021).

Finally, the architectural APE includes portions of six properties in a private residential development outside Kirtland AFB that were constructed prior to 1976. To date, these properties have not been evaluated for NRHP eligibility (Johnson, 2021).

3.8.1.3 Alternative 3 – Bellevue, NE (Offutt AFB)

Archaeological APE: The Alternative 3 site has been subject to intensive previous ground disturbance and has a very low potential for any archaeological sites (Harrington, 2021).

Architectural APE: The Alternative 3 site contains part of a historic apron that was previously recommended for inclusion as a contributing element to the NRHP-eligible Glenn L. Martin Bomber-Nebraska Plant Historic District. More recently, the apron was reevaluated and determined to have lost its historic integrity due to consistent maintenance, repair, and reconstruction over time (Harrington, 2021).

Outside the Alternative 3 site, but within the architectural APE, are two historic houses (SY02-093 and SY02-089), which were constructed in 1930 and 1920, respectively. Neither house is recommended eligible for listing on the NRHP (Harrington, 2021).

Finally, the historic Offutt AFB Cemetery, which remains in active use and has not been evaluated for the NRHP, is located within 0.25 mile of the northwest corner of the Alternative 3 site (Harrington, 2021).

3.8.1.4 Alternative 4 – Colorado Springs, CO (Peterson SFB)

Archaeological APE: The Alternative 4 site has been partially surveyed for archaeological materials. To date, none have been identified within the site, although the site has a medium potential for buried cultural materials due to its relatively deep and undisturbed soils (Air Force, 2019a). Peterson SFB's cultural resources personnel are in the process of completing additional cultural resources surveys (unrelated to the Proposed Action) to support the Installation Development Plan, which include the remainder of the Alternative 4 site yet to be surveyed.

Additionally, the western portion of the site contains manmade furrows in the ground that control water runoff and soil degradation. They were likely constructed by the Civilian Conservation Corps in the 1930's and may merit evaluation for the NRHP. However, such furrows are common in El Paso County, Colorado, and these on-site examples are degraded; they are not likely to be eligible for the NRHP or support the NRHP eligibility of a larger cultural landscape. Isolated historic artifacts have also been found on-site in the form of historical litter (Air Force, 2019a).

Architectural APE: The Alternative 4 architectural APE contains no historic properties (Air Force, 2019a).

3.8.1.5 Alternative 5 – San Antonio, TX (Port San Antonio)

Archaeological APE: The Alternative 5 site contains no archaeological sites (Hartsfield, Ahr, & McDougall, 2021).

Architectural APE: The Alternative 5 architectural APE contains five historic resources. The Bungalow Colony Historic District, located adjacent to the Alternative 5 site to the southwest, is listed on the NRHP with 35 contributing elements constructed between 1920 and 1945. It consists of a residential/office complex from the former Kelly AFB that serviced senior officers and their families. Additionally, the Billy Mitchell Village Historic District, located approximately 600 feet north of the Alternative 5 site, is NRHP-eligible; it consists of 347 townhomes constructed for military family housing in the 1940's (Hartsfield, Ahr, & McDougall, 2021).

The other three historic resources in the architectural APE consist of an administration building, Air Force day care facility, and financial institution, all of which were constructed around 1973. These three resources were recommended not eligible for the NRHP (Hartsfield, Ahr, & McDougall, 2021); on August 20, 2021, the Texas SHPO concurred that these three resources are ineligible for the NRHP (**Appendix F**).

3.8.1.6 Alternative 6 – Brevard County, FL (Space Coast Spaceport)

Archaeological APE: The Alternative 6 site contains one archaeological site, which was recommended not eligible for the NRHP. The site consists of a low-density concentration of pottery sherds dating to the Woodland period (Martinkovic & Potere, 2021).

Architectural APE: The Alternative 6 architectural APE contains no historic properties (Martinkovic & Potere, 2021).

3.8.2 Environmental Consequences

A cultural resources impact would be significant if it would constitute an unresolved adverse effect as defined in Section 106 of the NHPA (36 C.F.R. 800.5): alteration, directly or indirectly, of any of the characteristics of a historic property that qualify it for inclusion in the NRHP in a manner that would diminish the integrity of its location, design, setting, materials, workmanship, feeling, or association.

As described in the subsections below, the Proposed Action would have *no significant impact* on cultural resources under any Alternative.

3.8.2.1 Alternative 1 – Redstone Arsenal

The Proposed Action would have *no effect* on archaeological resources under Alternative 1, as no NRHP-eligible archaeological resources are present in the APE.

The Proposed Action would have *no effect* on architectural resources under Alternative 1, as the Proposed Action would not be visible from off-site architectural resources.

In a letter dated June 24, 2022, the Alabama SHPO concurred that the Proposed Action would have no effects on historic properties (**Appendix F**).

3.8.2.2 Alternative 2 – Kirtland AFB

The Proposed Action would have *no effect* on archeological resources under Alternative 2, as no NRHP-eligible archaeological sites are located within the archaeological APE.

The only NRHP-eligible architectural resource in the architectural APE, Building 20220, currently has a viewshed toward the Alternative 2 site containing other existing buildings. Additionally, if the Proposed Action were constructed, only the parking lot and the upper stories of the building may be visible from Building 20220. As the Proposed Action would not result in any direct impacts to Building 20220, substantially alter the current setting of Building 20220, or affect its integrity or NRHP eligibility, the Proposed Action would have a *negligible impact* on Building 20220 (i.e., no adverse effect under the NHPA).

If Alternative 2 is selected for implementation, the DAF would inventory and evaluate the NRHP eligibility of the six unrecorded private properties of historic age within the architectural APE prior to beginning construction. However, none of these properties are within the project boundaries, and because all six properties face west away from the Alternative 2 site, the Proposed Action would not be within their primary viewsheds. Therefore, if any of those properties were to be recommended NRHP-eligible, the Proposed Action would be anticipated to have *negligible impacts* on them (i.e., no adverse effect under the NHPA).

If Alternative 2 is selected, it will not be implemented until consultation with the New Mexico SHPO is complete. Should substantial new information arise, the DAF will consider reopening public comment for the limited purpose of addressing the new information

3.8.2.3 Alternative 3 – Offutt AFB

The Proposed Action would have *no effect* on archaeological resources under Alternative 3, as the site has undergone extensive prior ground disturbance.

The Proposed Action would have *no effect* on architectural resources under Alternative 3, as no NRHP-eligible resources are located within the APE, and Offutt AFB has been subject to construction, maintenance, and reconstruction projects consistently throughout the historic and modern period.

In a letter dated June 4, 2021, the Nebraska SHPO determined that no historic properties would be affected by the Proposed Action (**Appendix F**).

3.8.2.4 Alternative 4 – Peterson SFB

While no archaeological sites are known to exist on-site, the DAF would continue to coordinate with Peterson SFB regarding the results of its ongoing cultural resources surveys (unrelated to the Proposed Action) in the Alternative 4 site. If any on-site resources are determined to be NRHP-eligible (e.g., archaeological sites or the existing furrows), they would either be avoided or fully mitigated under the NHPA in consultation with the Colorado SHPO and any Section 106 consulting parties. Therefore, the Proposed Action would have *no significant adverse impacts* to cultural resources within the archeological APE.

The Proposed Action would have *no effect* on architectural resources within the architectural APE, as none are present.

During consultation with the Colorado SHPO for the 2019 USSPACECOM EA, the DAF, SHPO, and other consulting parties prepared a project-specific Programmatic Agreement in which they agreed to complete Section 106 consultation, including analysis of potential effects of the Proposed Action on historic properties, if Peterson SFB was selected for implementation of the Proposed Action (Air Force et al., 2019).

The premise for this decision was that the effects on historic properties could not be fully determined until the NEPA process was finalized and the DAF approved the Proposed Action. The DAF would continue its Section 106 consultation process for this Proposed Action by following the stipulations of the Programmatic Agreement if Alternative 4 is selected for implementation.

In a letter dated June 22, 2021, the Colorado SHPO stated the APE is sufficient to establish potential effects caused by construction of the facility, but noted the APE may need to be modified to account for access roads, visual effect concerns, and input from tribes (**Appendix F**). As the Alternative 4 site is immediately adjacent to Vandenberg Street, no off-site access roads are anticipated. The architectural APE is intended to account for potential visual effect concerns, although potential effects on historic properties would be evaluated in accordance with the Programmatic Agreement. Finally, the DAF has consulted with tribes; to date, none have provided input on the Alternative 4 site that would affect the APE.

3.8.2.5 Alternative 5 – Port San Antonio

The Proposed Action would have *no effect* on archaeological resources under Alternative 5, as no NRHP-eligible archaeological resources are present in the archaeological APE.

Since the two NRHP-listed/eligible architectural resources in the architectural APE consist of a residential/office complex and a family housing village used to support Kelly AFB, the introduction of a facility used to support the USSPACECOM mission to the area would not compromise the historic integrity of these historic districts. Therefore, the Proposed Action would have a *negligible impact* on the Bungalow Colony Historic District and Billy Mitchell Village Historic District (i.e., no adverse effect under the NHPA).

In correspondence dated August 20, 2021, the Texas SHPO concurred that the Proposed Action would have no adverse effects on historic properties (**Appendix F**).

3.8.2.6 Alternative 6 – Space Coast Spaceport

The Proposed Action would have *no effect* on archaeological or architectural resources under Alternative 6, as no NRHP-eligible resources are present in the APE.

In a letter dated June 21, 2021, the Florida SHPO determined that the Proposed Action would have no effect on historic properties (**Appendix F**).

3.8.2.7 No Action Alternative

Under the No Action Alternative, the proposed permanent USSPACECOM HQ facility would not be constructed, and would have *no impact* on cultural resources at any of the six Alternative sites. USSPACECOM operations would continue at Peterson SFB; these operations would not include additional ground disturbance or building modifications and thus would not disturb potential cultural resources. Cultural resources at Peterson SFB would continue to be managed as under current conditions.

3.9 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

Socioeconomics refer to the attributes of the human environment, and include demographic and economic characteristics such as age, race, income, and employment. Environmental Justice (EJ) is the consideration of low-income and minority populations. EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, and EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, direct federal agencies to consider the potential adverse impacts of their activities on EJ communities and children, and require that impacts which may

disproportionately affect these communities be addressed. The CEQ has established criteria for identifying EJ communities of concern with respect to race and income: minority populations exist where the percentage of minorities exceeds 50 percent or is meaningfully greater than in the general population of the larger surrounding area, and low-income populations exist where there is a substantial discrepancy between a community and surrounding communities with regard to income and poverty status (CEQ, 1997). Accordingly, this EA assesses for the presence of EJ communities using the following EJ indicators: minority population percentage; median household income; and the population percentage living below the poverty level. Additionally, this EA identifies the population percentage under 18 years of age to determine if there are particularly high populations of children in the ROI.

The ROI for socioeconomics and EJ includes the nearest surrounding community to each of the Alternative sites, as well as the encompassing county. Nearby communities would be most likely to experience impacts from the Proposed Action, both with regard to changes in socioeconomic characteristics and potential disproportionate impacts.

3.9.1 Affected Environment

3.9.1.1 Alternative 1 – Huntsville, AL (Redstone Arsenal)

Socioeconomic and EJ data for the City of Huntsville and Madison County, Alabama, the Redstone Arsenal ROI, are presented in **Table 3-16**. Huntsville accounts for approximately 54 percent of Madison County's population. For both geographies, approximately 9 percent of housing units are vacant, and civilians make up over 99 percent of the total labor force. The EJ indicators are similar between both Huntsville and Madison County, and the minority population is below 50 percent; therefore, Huntsville is not considered an EJ community of concern.

Approximately 40,500 military and civilian personnel and contractors are currently employed at Redstone Arsenal (Air Force, 2019a).

3.9.1.2 Alternative 2 – Albuquerque, NM (Kirtland AFB)

Socioeconomic and EJ data for the City of Albuquerque and Bernalillo County, New Mexico, the Kirtland AFB ROI, are presented in **Table 3-16**. Albuquerque accounts for approximately 83 percent of Bernalillo County's population. For both geographies, approximately 9 percent of housing units are vacant, and civilians make up over 99 percent of the total labor force. The EJ indicators are similar between both Albuquerque and Bernalillo County and the minority population is below 50 percent; therefore, Albuquerque is not considered an EJ community of concern.

Approximately 22,000 personnel are assigned to Kirtland AFB, including military, civilians, and contractors (Kirtland AFB, 2016).

3.9.1.3 Alternative 3 – Bellevue, NE (Offutt AFB)

Socioeconomic and EJ data for the City of Bellevue and Sarpy County, Nebraska, the Offutt AFB ROI, are presented in **Table 3-16**. Bellevue accounts for approximately 29 percent of Sarpy County's population. Approximately 4 and 5 percent of housing units are vacant within Bellevue and Sarpy County, respectively, and civilians comprise approximately 96 percent of the total work force in both geographies. While the median household income in Bellevue is approximately $17,000 lower than in Sarpy County, it is higher than the state overall (i.e., $61,439) (US Census Bureau, 2021). Additionally, the poverty level in the city is not particularly high. As the minority population in the city is also below 50 percent and similar to that of the county, Bellevue is not considered an EJ community of concern.

Table 3-16: Socioeconomic and EJ Data for Each Alternative

Demographic Indicators	City of Huntsville (Alt 1)	Madison County (Alt 1)	City of Albuquerque (Alt 2)	Bernalillo County (Alt 2)	City of Bellevue (Alt 3)	Sarpy County (Alt 3)	City of Colorado Springs (Alt 4)	El Paso County (Alt 4)	City of San Antonio (Alt 5)	Bexar County (Alt 5)	City of Titusville (Alt 6)	Brevard County (Alt 6)
Socioeconomic Indicators												
Total Population	196,219	372,909	559,374	679,121	53,324	187,196	464,871	720,403	1,508,083	2,003,554	45,932	601,942
Total Housing Units	93,853	161,577	245,476	293,787	21,523	69,059	191,476	272,379	548,473	693,478	24,195	278,173
Vacant Housing Units	8,833	13,388	21,310	26,088	1,117	2,799	9,998	14,872	47,073	57,233	5,476	47,756
Total Labor Force	100,612	187,581	286,715	340,955	28,972	101,476	248,684	371,817	754,541	975,564	20,863	267,746
Civilian Labor Force	99,919	186,248	285,096	338,046	27,912	97,963	238,560	343,102	747,306	958,878	20,850	266,313
EJ Indicators												
Median Household Income	$55,305	$65,449	$52,911	$53,329	$65,308	$82,032	$64,712	$68,779	$52,455	$57,157	$46,609	$56,775
Population Below Poverty Level (%)	16.8	11.5	16.9	15.5	10.5	5.9	11.7	8.8	17.8	15.2	9.4	16.3
Minority Population (%)	38.7	31.1	26.1	16.1	18.2	11.2	21.5	16.7	19.7	15.7	16.8	23.7
Population Under 18 Years (%)	20.6	21.6	22.4	21.4	24.4	27.2	23.2	23.8	25.0	25.3	19.2	18.1

Sources: (US Census Bureau, 2019b; US Census Bureau, 2019c; US Census Bureau, 2019d; US Census Bureau, 2021)

Approximately 12,000 personnel are assigned to Offutt AFB, including military, civilians, and contractors (Offutt AFB, 2005).

3.9.1.4 Alternative 4 – Colorado Springs, CO (Peterson SFB)

Socioeconomic and EJ data for the City of Colorado Springs and El Paso County, Colorado, the Peterson SFB ROI, are presented in **Table 3-16**. Colorado Springs accounts for approximately 66 percent of El Paso County's population. Approximately 5 percent of housing units are vacant in each geography. In Colorado Springs, approximately 96 percent of the total labor force consists of civilians, while in El Paso County overall, civilians comprise approximately 92 percent of the labor force. The EJ indicators are similar across both geographies, and the minority population is below 50 percent; therefore, Colorado Springs is not considered an EJ community of concern.

Approximately 10,300 military and civilian personnel are assigned to Peterson SFB (Air Force, 2019a).

3.9.1.5 Alternative 5 – San Antonio, TX (Port San Antonio)

Socioeconomic and EJ data for the City of San Antonio and Bexar County, Texas, the Port San Antonio ROI, are presented in **Table 3-16**. San Antonio accounts for approximately 77 percent of Bexar County's population. Approximately 8 percent of housing units are vacant in both geographies. In San Antonio, approximately 99 percent of the labor force consists of civilians, while civilians comprise approximately 98 percent of the labor force in Bexar County. The EJ indicators are similar across both geographies, and the overall minority population is below 50 percent. However, the southern portions of San Antonio and Bexar County have a higher population of low-income and minority people in comparison to the overall geographies (USEPA, 2020). While the Alternative 5 site is south of downtown San Antonio, due to its location in a developed industrial area, there are few surrounding residential communities. Therefore, San Antonio is not considered an EJ community of concern.

Port San Antonio is an occupied office, technology, and industrial campus that employs approximately 14,000 workers across the numerous tenant organizations located on the campus (Port San Antonio, 2021).

3.9.1.6 Alternative 6 – Brevard County, FL (Space Coast Spaceport)

Socioeconomic and EJ data for the City of Titusville and Brevard County, Florida, the Space Coast Spaceport ROI, are presented in **Table 3-16**. Titusville accounts for approximately 7 percent of Brevard County's population. Approximately 22 percent and 17 percent of housing units are vacant in Titusville and Brevard County, respectively. Civilians comprise approximately 99 percent of the total labor force in both geographies. The EJ indicators are similar across both geographies, although Titusville has a lower percentage of residents living below the poverty level. The minority population is also below 50 percent; therefore, Titusville is not considered an EJ community of concern.

The Space Coast Spaceport site is part of the Space Coast Regional Airport, and is nearby Kennedy Space Center and Cape Canaveral Space Force Station. Personnel data for the regional airport are not available.

3.9.2 Environmental Consequences

A socioeconomic impact would be significant if it would 1) substantially alter the location and distribution of the local population; 2) substantially reduce the availability or number of local jobs; or 3) substantially affect local housing markets or vacancy rates.

As no EJ communities of concern with respect to race or income are present surrounding any of the six Alternative sites, there is no potential for the Proposed Action to disproportionately impact EJ communities. Therefore, this resource is dismissed from further analysis.

The total population under 18 years of age does not exceed 25 percent of the overall population in the cities surrounding any of the six Alternative sites, and is similar to the proportion in each respective county. While there is a population of children near each site, and there may be children living on the four associated installations, no children are present on the Alternative sites. While children are present at schools, daycares, and similar facilities near the Alternative sites, they would not be permitted near an active construction site, and the selected site would be secured to prevent unauthorized or accidental access. With site monitoring and access controls in place, and standard air quality controls in place, the Proposed Action would not have the potential to disproportionately impact off-site children. Therefore, protection of children does not warrant special consideration under EO 13045 for this Proposed Action, and this resource is dismissed from further analysis.

As described in the subsections below, the Proposed Action would have *no significant impact* on socioeconomics under any Alternative.

3.9.2.1 Proposed Action – All Alternatives

Implementation of the Proposed Action at any of the six Alternative sites would be anticipated to have a *short-term, beneficial impact* on the surrounding communities during construction. Proposed construction activities would likely be completed by local contractors, increasing employment opportunities, personal incomes, and materials purchases within the community. If non-local contractors support construction, direct economic benefits associated with expenditures on lodging, food, and retail would accrue to the local community. Tax revenues associated with direct and indirect construction expenditures would also benefit economic conditions.

Operation of the Proposed Action at any of the six Alternative sites would be anticipated to have *long-term, beneficial impacts* on the economy of the surrounding community through the creation of up to 1,800 new permanent jobs. These personnel would pay taxes and spend their income locally, benefitting nearby businesses.

Demographic characteristics, population growth, and community services, would not substantially change during operation of the Proposed Action at any of the Alternative sites. As part of the DAF's initial Alternative site screening process (**Section 2.2**), all potential sites were evaluated for their capacity to support population increases associated with a new work force. Each of the six retained Alternative sites were determined to have adequate existing community resources and sufficient infrastructure, or capacity to accommodate new infrastructure, prior to being chosen for further consideration.

Up to approximately 1,800 personnel would be employed at the proposed USSPACEOM HQ facility, and would be required to relocate to the surrounding area. As shown in **Table 3-17**, this increase would not constitute population growth at a higher rate than the current annual growth rate surrounding the Alternative 1, 4, and 5 sites. The personnel increase at the Alternative 2, 3, and 6 sites would exceed the current surrounding annual growth rate and increase demand on housing and public services; however, the total population increase would be minor compared to the existing population in the ROIs, and existing or future infrastructure would readily accommodate this increase. Further, the DAF may transition personnel in phases over multiple years, depending on mission requirements and logistical considerations, which would further reduce the population growth rate and associated increased use of public services resulting from the Proposed Action. Therefore, there would be *negligible impact* on these factors in the surrounding community at the Alternative 1, 4, and 5 sites, and *minor impacts* at the Alternative 2, 3, and 6 sites.

Table 3-17: Proposed Action Population Growth Relative to Existing Conditions

Alternative	Population Growth (2018-2019) (%)	Population Growth with New Personnel (%)
Alternative 1 – Huntsville, AL (Redstone Arsenal)	1.3	0.9
Alternative 2 – Albuquerque, NM (Kirtland AFB)	0.03	0.3
Alternative 3 – Bellevue, NE (Offutt AFB)	0.2	3.4
Alternative 4 – Colorado Springs, CO (Peterson SFB)	1.6	0.4
Alternative 5 – San Antonio, TX (Port San Antonio)	1.5	0.1
Alternative 6 – Brevard County, FL (Space Coast Spaceport)	1.0	3.9

Sources: (US Census Bureau, 2018; 2019b)

The Proposed Action does not include housing, so personnel and their families would move into either the nearby communities or base housing if available. Based on the number of vacant housing units in the ROI for each site, including the nearest community and encompassing county, there is sufficient housing to accommodate the Proposed Action under Alternatives 1, 2, 4, 5, and 6, and the Proposed Action would have *no impacts* on housing under these Alternatives.

However, the proposed increase in personnel (i.e., up to approximately 1,800) exceeds the number of housing units that are currently vacant in the City of Bellevue (i.e., 1,117) and comprises 64 percent of the total number of vacant units in Sarpy County, Nebraska (i.e., 2,799). The relocation of this many personnel would increase demand for housing and may cause housing prices to increase. While higher property values typically constitute a beneficial impact, due to the limited supply, current residents looking to buy homes may be adversely impacted by higher prices and reduced supply.

As Offutt AFB is within 10 miles of Omaha, Nebraska, located immediately north in Douglas County, the DAF expects that relocating to Omaha would likely be an attractive option for many USSPACECOM personnel. Douglas County contains an additional 16,459 vacant housing units, 14,668 of which are in Omaha (US Census Bureau, 2019d), which would substantially alleviate any increased housing pressure in the ROI. On-base housing at Offutt AFB may also be able to accommodate some of the additional personnel and reduce housing demand off-site. As of 2018, there were approximately 236 vacant military homes at Offutt AFB. The Installation Development Plan further identifies approximately 97 acres in existing family housing districts for development or redevelopment, and noted a capacity to construct new neighborhoods should new missions require additional residential space (Offutt AFB, 2018b). As a result, operation of the Proposed Action under Alternative 3 would result in a *short-term, insignificant adverse impact* on housing.

3.9.2.2 No Action Alternative

The No Action Alternative would have *no impact* on socioeconomic conditions near the six Alternative sites. Continued operation of the interim USSPACECOM facility at Peterson SFB would continue to benefit the local economy and would not result in any additional demographic changes to the surrounding area. Personnel associated with the interim facility would remain stable; no effects on housing availability or community resources would be anticipated. No off-installation populations would be directly affected by continued administrative/office operations on the installation.

3.10 TRANSPORTATION

This section describes the existing vehicular transportation network serving the six Alternative sites being considered for the Proposed Action. Mass transit, bicycle, and pedestrian infrastructure are not addressed as the Proposed Action would not meaningfully impact them.

The ROI for transportation consists of the roadways providing access to the proposed Alternative sites and, as applicable, the installations containing the sites.

3.10.1 Affected Environment

3.10.1.1 Alternative 1 – Huntsville, AL (Redstone Arsenal)

Redstone Arsenal is southwest of Huntsville, Alabama and is bounded by I-565 to the north and the Tennessee River to the south. US Route (US)-231 is located just east of the installation and runs north-south through Alabama. Local roadways in and adjacent to Redstone Arsenal include Zierdt Road, Rideout Road, Drake Avenue, Goss Road, Patton Road, Martin Road, and Redstone Road (**Figure 3-3**). Entrances to the installation are located along or off of these roadways. There is a substantial network of roads within Redstone Arsenal that provide access to other sections of the installation; many of the same roads that allow entrance to the installation also serve as the primary roadways within Redstone Arsenal.

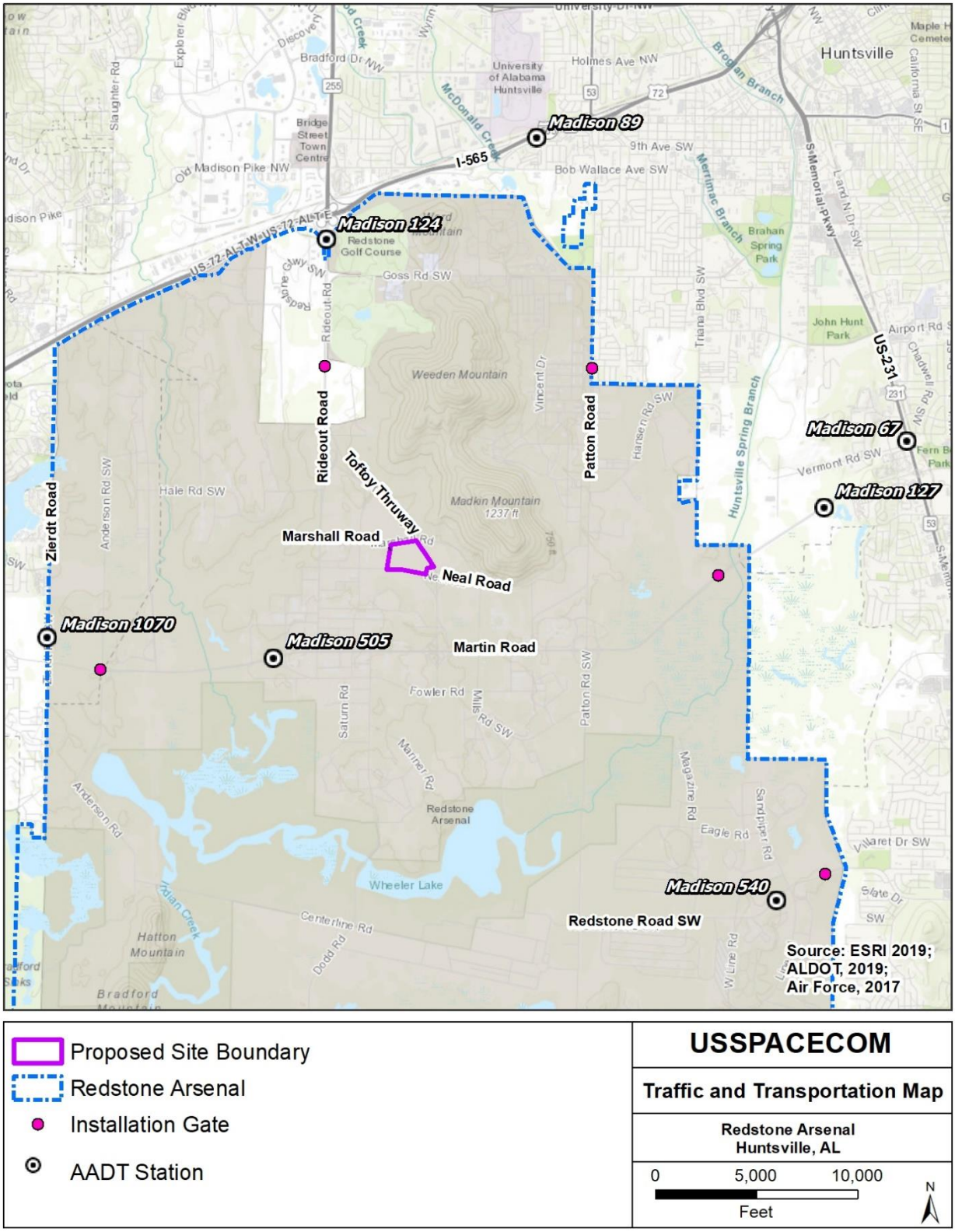
The Alternative 1 site within Redstone Arsenal is located approximately 1 mile east of Rideout Road, and is bounded by Neal Road to the south, Marshall Road to the north, and Toftoy Thruway to the east. Both Neal Road and Marshall Road connect to Rideout Road and provide access to the proposed site; Neal Road also connects to Patton Road in the east and provides access from that direction. Numerous gates are located around Redstone Arsenal, any of which may provide access to the proposed HQ facility (**Figure 3-3**). Estimated average annual daily traffic (AADT) volumes on roads near Redstone Arsenal and the proposed site are presented in **Table 3-18**.

Table 3-18: Estimated AADT Volumes at Redstone Arsenal, 2019

Road	Station ID Number	Estimated AADT Volume
US-231 near intersection with Martin Road	Madison 67	70,816
Rideout Road near intersection with I-565	Madison 124	34,131
I-565 near Patton Road entrance to Redstone Arsenal	Madison 89	117,935
Zierdt Road between I-565 and Martin Road	Madison 1070	16,819
Redstone Road SW near entrance to Redstone Arsenal	Madison 540	7,672
Martin Road near west entrance to Redstone Arsenal	Madison 505	9,940
Martin Road near east entrance to Redstone Arsenal	Madison 127	14,127

Source: (ALDOT, 2019)

Figure 3-3: Transportation Network Surrounding Alternative 1 Site (Redstone Arsenal)



3.10.1.2 Alternative 2 – Albuquerque, NM (Kirtland AFB)

Kirtland AFB is southeast of Albuquerque, New Mexico and is generally bounded by I-40 to the north, I-25 to the west, and Isleta Pueblo to the south. Local roadways in and adjacent to Kirtland AFB include Gibson Boulevard SE, Wyoming Boulevard SE, Pennsylvania Street SE, and Eubank Street SE (**Figure 3-4**). Entrances to the installation are located along or off of these roadways. In addition, Gibson Boulevard SE directly connects to I-25, and both Wyoming Boulevard SE and Eubank Street SE directly connect to I-40. Most roadways within the installation are focused in the northwestern portion, with many of the access roads serving as the primary roadways.

The Alternative 2 site is located adjacent to Pennsylvania Street SE; this road comprises the eastern border of the proposed site, and provides direct access to the site. Gibson Boulevard SE is located just north of the site, and Hardin Boulevard is located to the south. All of the entrances to Kirtland AFB would provide relatively easy access to the site, although employees would most likely utilize the gates located on Gibson Boulevard SE or Wyoming Boulevard SE. Estimated AADT volumes on roads near Kirtland AFB are presented in **Table 3-19**. The New Mexico Department of Transportation (NMDOT) has not tracked traffic volumes within Kirtland AFB.

Table 3-19: Estimated AADT Volumes at Kirtland AFB, 2019 and 2020

Road	Station ID Number	Estimated AADT Volume (2019)	Estimated AADT Volume (2020)
Gibson Boulevard SE near intersection with I-25	15222	41,052	33,539
Wyoming Boulevard NE near intersection with I-40	15061	32,502	26,554
Eubank Boulevard SE near intersection with Innovation Parkway SE	15303	23,756	18,506
Gibson Boulevard SE near entrance along Truman Street SE	15230	56,696	46,321
Gibson Boulevard SE near entrance on Pennsylvania Street SE	15232	19,502	12,972
Wyoming Boulevard SE near entrance to Kirtland AFB	15048	7,495	6,123

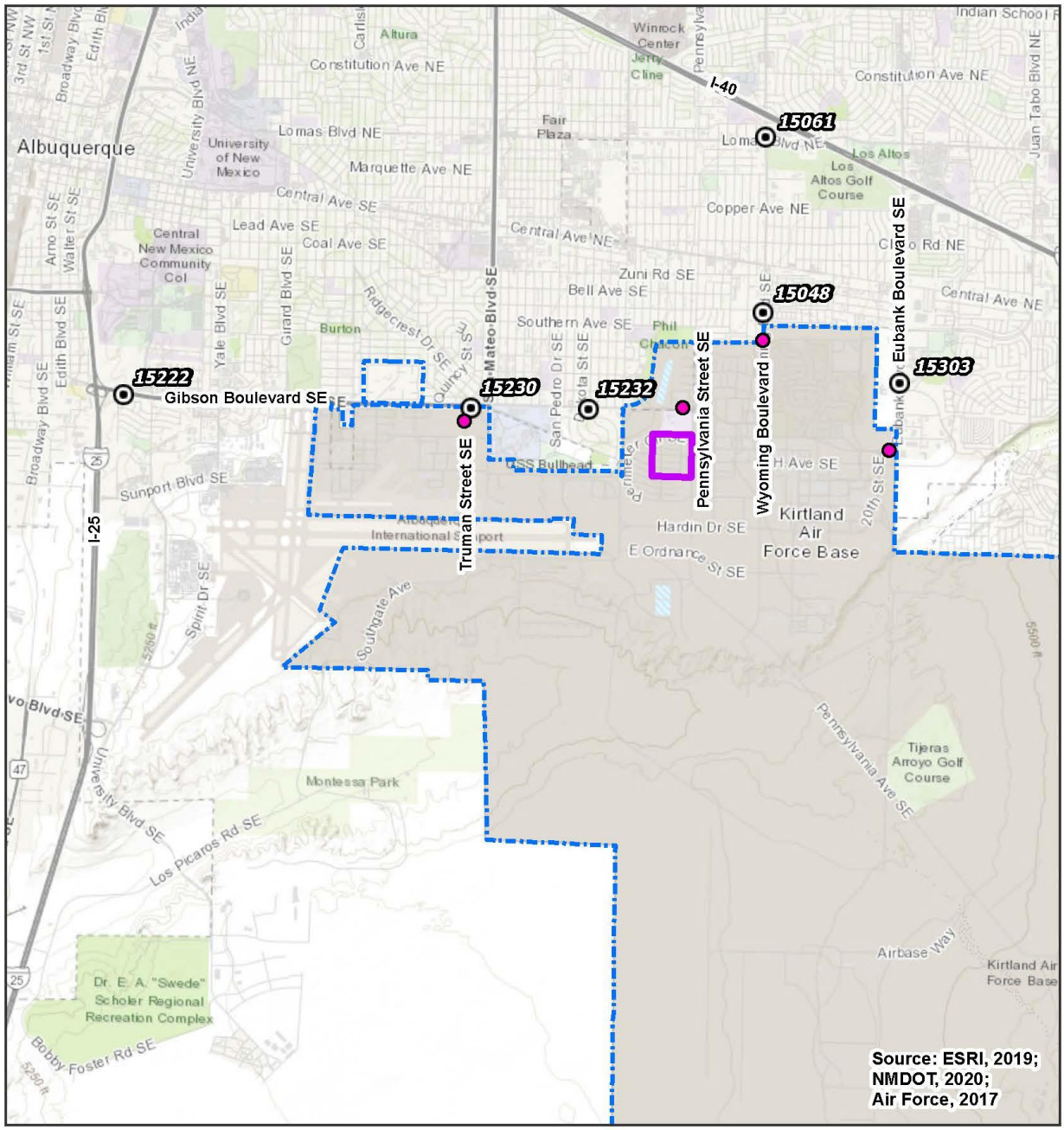
Source: (NMDOT, 2020)

3.10.1.3 Alternative 3 – Bellevue, NE (Offutt AFB)

Offutt AFB is located just east of US-75, which provides access to the City of Omaha to the north. The intersection of US-75 and Nebraska Route 370, which runs east-west through the state, is located near the northwest corner of Offutt AFB. Local roadways in and adjacent to Offutt AFB include Fort Crook Road South, Capehart Road, Mission Avenue and Harlan Drive (**Figure 3-5**). Entrances to the installation are located along or off of these roadways, except for Harlan Drive. Fort Crook Road South parallels US-75 and is adjacent to Offutt AFB in the west; Capehart Road directly connects to US-75. Mission Avenue crosses the Missouri River and connects to Iowa. Most roadways within the installation are located in the western portion. The main runway at Offutt AFB splits the installation, and the only connecting road between the northern and southern areas is SAC Boulevard.

The Alternative 3 site is located north of the airfield, and is bordered by Nelson Drive to the northwest and Bonner Lane to the east. Both of these roadways provide access to the site. Employees of the proposed facility would likely enter Offutt AFB via one of the two gates located at either end of Nelson Drive. Estimated AADT volumes on roads near Offutt AFB are presented in **Table 3-20**. The Nebraska Department of Transportation (NDOT) has not tracked traffic volumes within Offutt AFB.

Figure 3-4: Transportation Network Surrounding Alternative 2 Site (Kirtland AFB)



Proposed Site Boundary
Kirtland Air Force Base
Installation
AADT Station

USSPACECOM

Traffic and Transportation Map

Kirtland Air Force Base
Albuquerque, NM

0 5,000 10,000 N
Feet

Figure 3-5: Transportation Network Surrounding Alternative 3 Site (Offutt AFB)

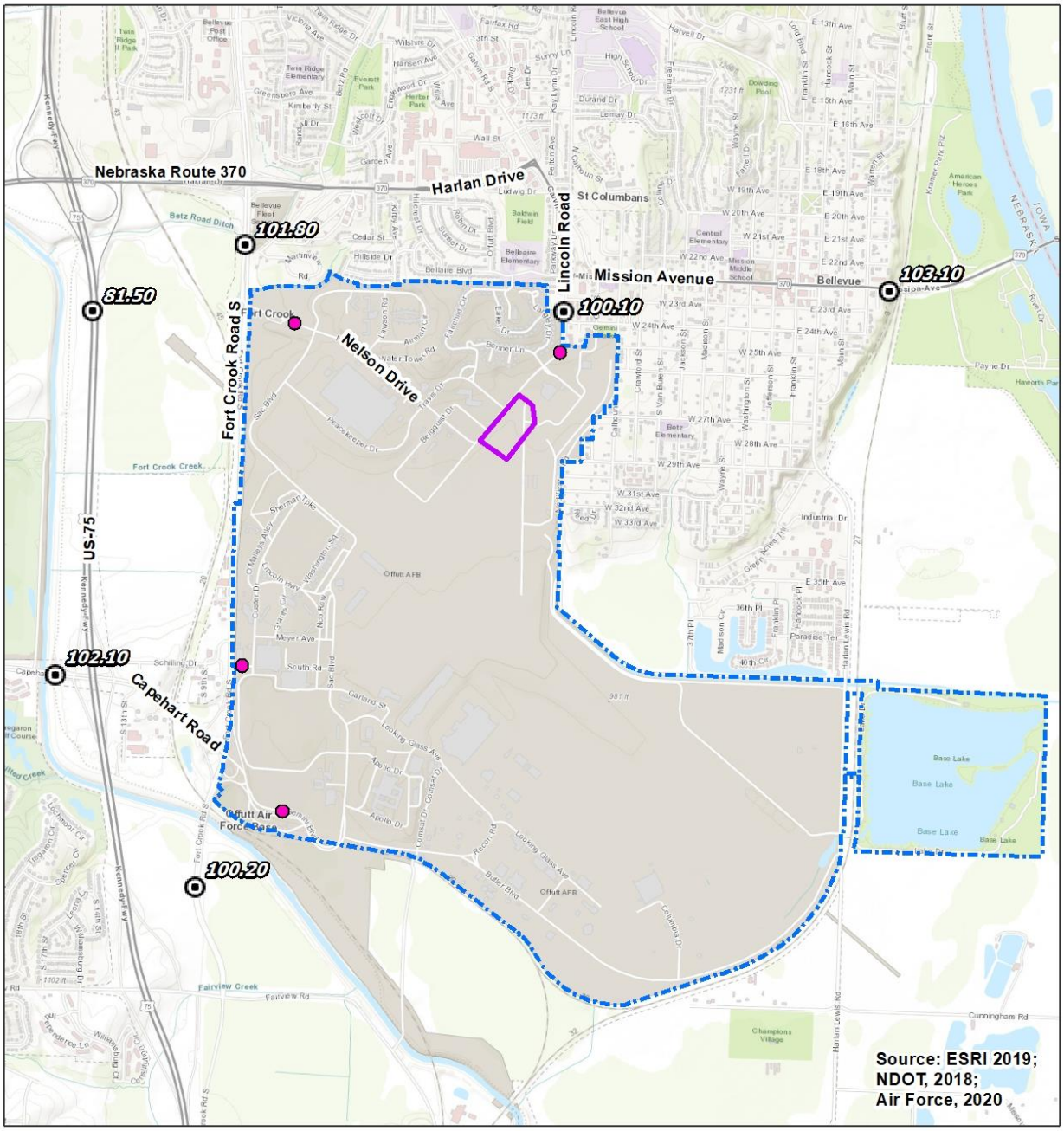


Table 3-20: Estimated AADT Volumes at Offutt AFB, 2018

Road	Station ID Number	Estimated AADT Volume
US-75 near intersection with Harlan Drive	81.50	38,095
Capehart Road near intersection with US-75	102.10	22,500
Mission Avenue near Missouri River crossing	103.10	2,255
Fort Crook Road South near entrance on Nelson Drive	101.80	11,290
Fort Crook Road South south of Papillon Creek	100.20	6,850
Lincoln Road	100.10	7,295

Source: (NDOT, 2018)

3.10.1.4 Alternative 4 – Colorado Springs, CO (Peterson SFB)

Peterson SFB is located near the intersection of US-24, SR 21, and East Platte Road. These highways provide access to the area from Colorado Springs. Local roadways in and adjacent to Peterson SFB include Peterson Boulevard, Marksheffel Road, Space Village Avenue, and Stewart Avenue (**Figure 3-6**). Each of these roads provide access to the installation from US-24, except for Space Village Avenue, which parallels the northern border of the installation and connects Marksheffel Road to US-24. There is an expansive road network within Peterson SFB that provides access throughout the installation; the same roads that provide entrance also serve as the primary roadways.

The Alternative 4 site is located east of Vandenberg Street, which loops off Peterson Boulevard. Personnel traveling to the site would likely access Peterson SFB via the North Gate located along Peterson Boulevard, or via the West Gate located along Stewart Avenue. Estimated AADT volumes on major roads near Peterson SFB are presented in **Table 3-21**. The Colorado Department of Transportation (CDOT) has not tracked traffic volumes within Peterson SFB.

Table 3-21: Estimated AADT Volumes at Peterson SFB, 2019

Road	Station ID Number	Estimated AADT Volume
Intersection at split of US-24 and SR 21	106026	66,000
US-24 near intersection with Peterson Boulevard	100849	45,000
SR 94 near intersection with Marksheffel Road	103943	9,800

Source: (CDOT, 2019)

3.10.1.5 Alternative 5 – San Antonio, TX (Port San Antonio)

Port San Antonio is located near the southern end of Texas Route 371, which connects to US-90 to the north. The proposed site is approximately 1.5 miles south of US-90, which runs east-west, and approximately 2.5 miles west of I-35, which runs north-south and connects to downtown San Antonio. These roadways connect to various other interstate highways, providing extensive regional access. Local roadways adjacent to Port San Antonio include Billy Mitchell Boulevard, Cupples Road, South General McMullen Drive, and General Hudnell Drive (**Figure 3-7**). South General McMullen Drive provides a direct connection to US-90, and the other three roadways connect to SR 371.

Figure 3-6: Transportation Network Surrounding Alternative 4 Site (Peterson SFB)

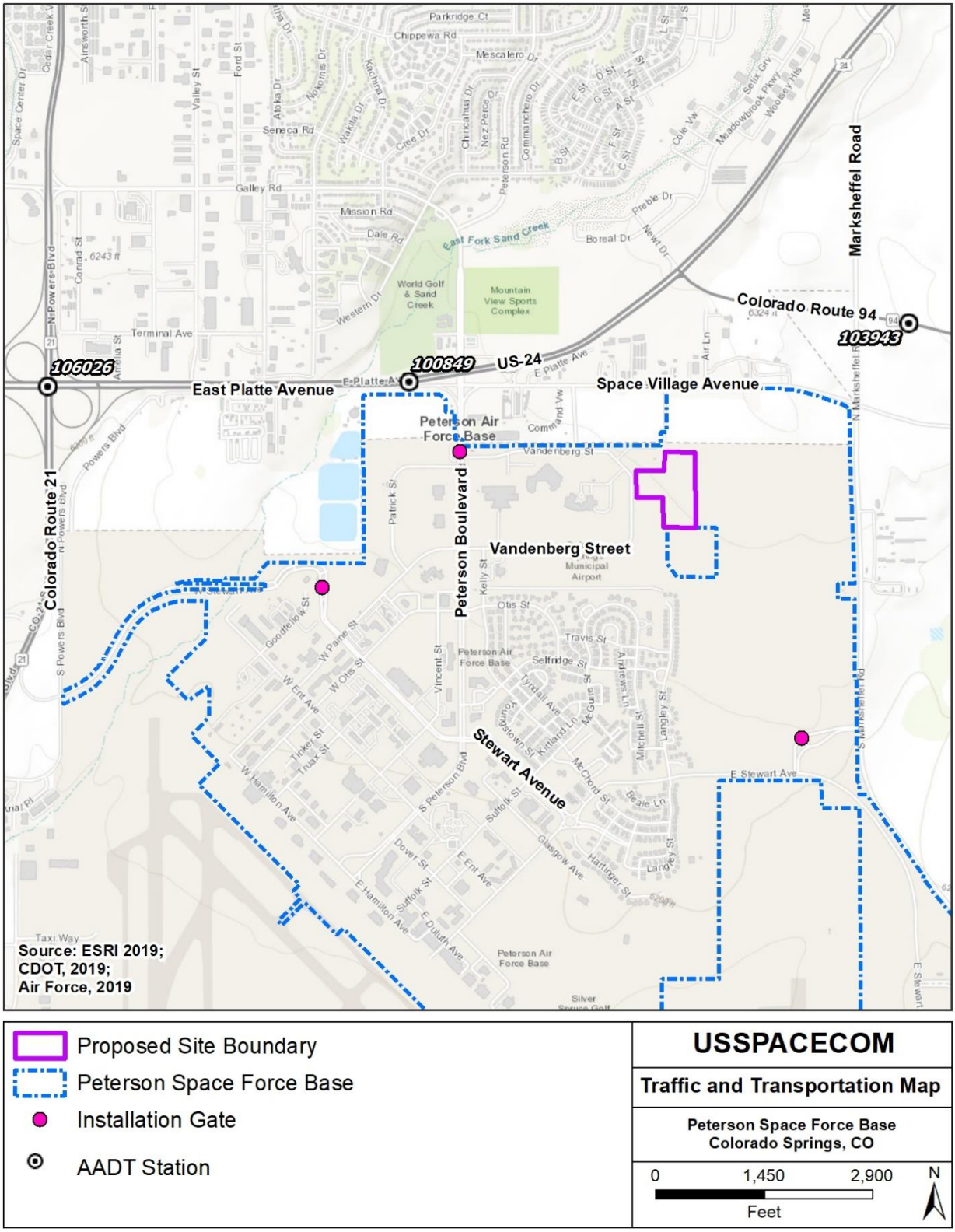
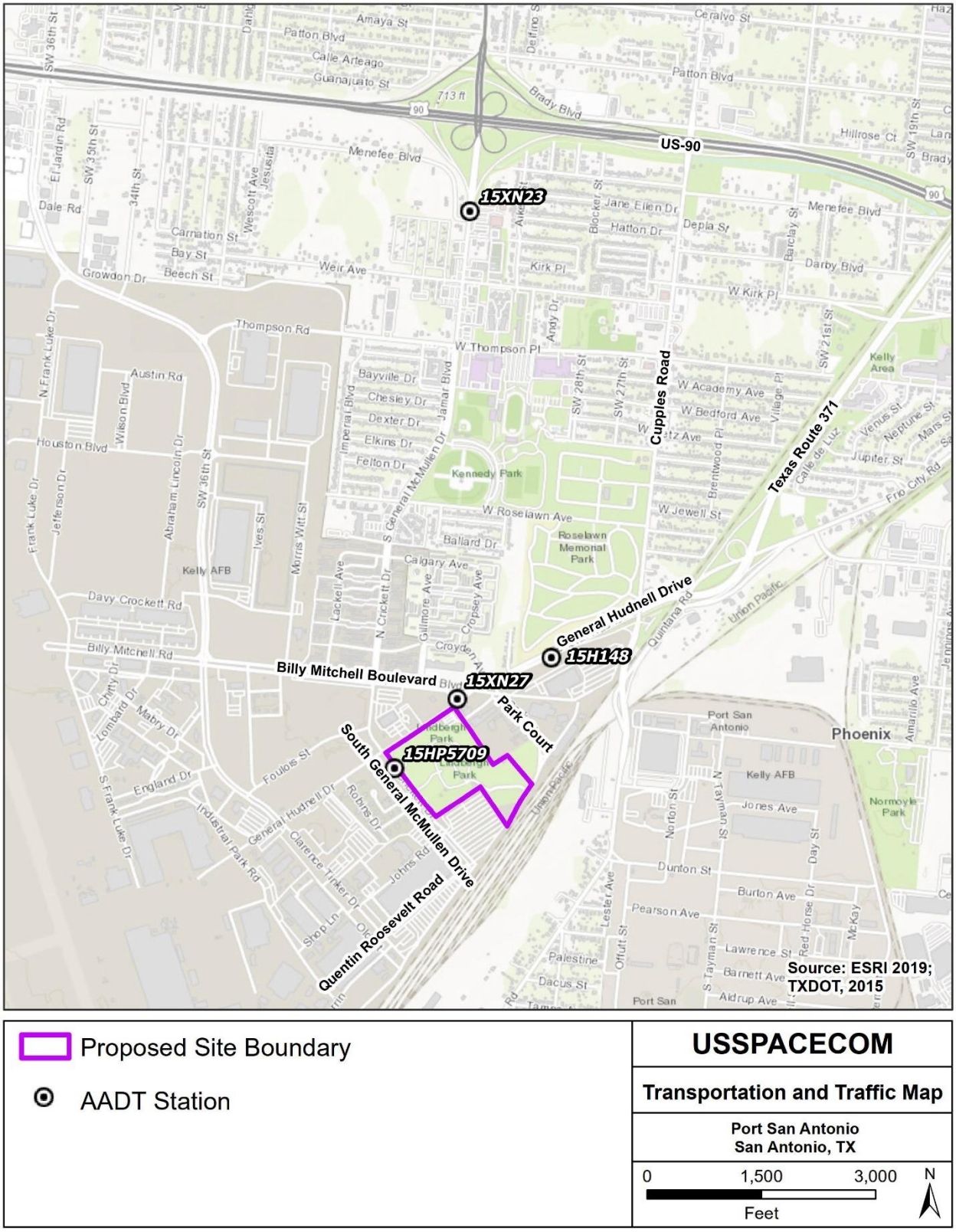


Figure 3-7: Transportation Network Surrounding Alternative 5 Site (Port San Antonio)



The Alternative 5 site is bounded by General Hudnell Drive to the northwest, South General McMullen Drive to the southwest, Park Court to the northeast, and Quentin Roosevelt Road to the east; any of these roads could provide access to this site. Estimated AADT volumes on roads near Port San Antonio are presented in **Table 3-22**.

Table 3-22: Estimated AADT Volumes at Port San Antonio, 2015

Road	Station ID Number	Estimated AADT Volume
Southern extent of SR 371	15H148	13,175
South General McMullen Drive near intersection with US-90	15XN23	20,982
South General McMullen Drive near intersection with General Hudnell Drive	15HP5709	4,930
General Hudnell Drive adjacent to Port San Antonio	15XN27	6,183

Source: (TXDOT, 2015)

3.10.1.6 Alternative 6 – Brevard County, FL (Space Coast Spaceport)

Space Coast Spaceport is located along SR 407 (i.e., Challenger Memorial Parkway) approximately 1 mile north of its intersection with I-95. SR 405, which intersects with SR 407, is located north of the site and provides access to Merritt Island. Local roadways surrounding the Alternative 6 site include Shepard Drive and Gibson Parkway (**Figure 3-8**). Gibson Parkway is located to the east of the proposed site and connects with SR 405 to the north. Shepard Drive connects Gibson Parkway and SR 407.

The Alternative 6 site is bounded by SR 407 to the west. Site access would be provided off of this major road. Estimated AADT volumes on roads near Space Coast Spaceport are provided in **Table 3-23**.

Table 3-23: Estimated AADT Volumes at Space Coast Spaceport, 2019 and 2020

Road	Station ID Number	Estimated AADT Volume (2019)	Estimated AADT Volume (2020)
I-95 near intersection with SR 407	700401	48,500	46,500
SR 405 near intersection with SR 407	700429	21,500	20,500
SR 407 adjacent to Space Coast Spaceport	970396	8,000	8,200
Shepard Drive	708109	2,400	2,400

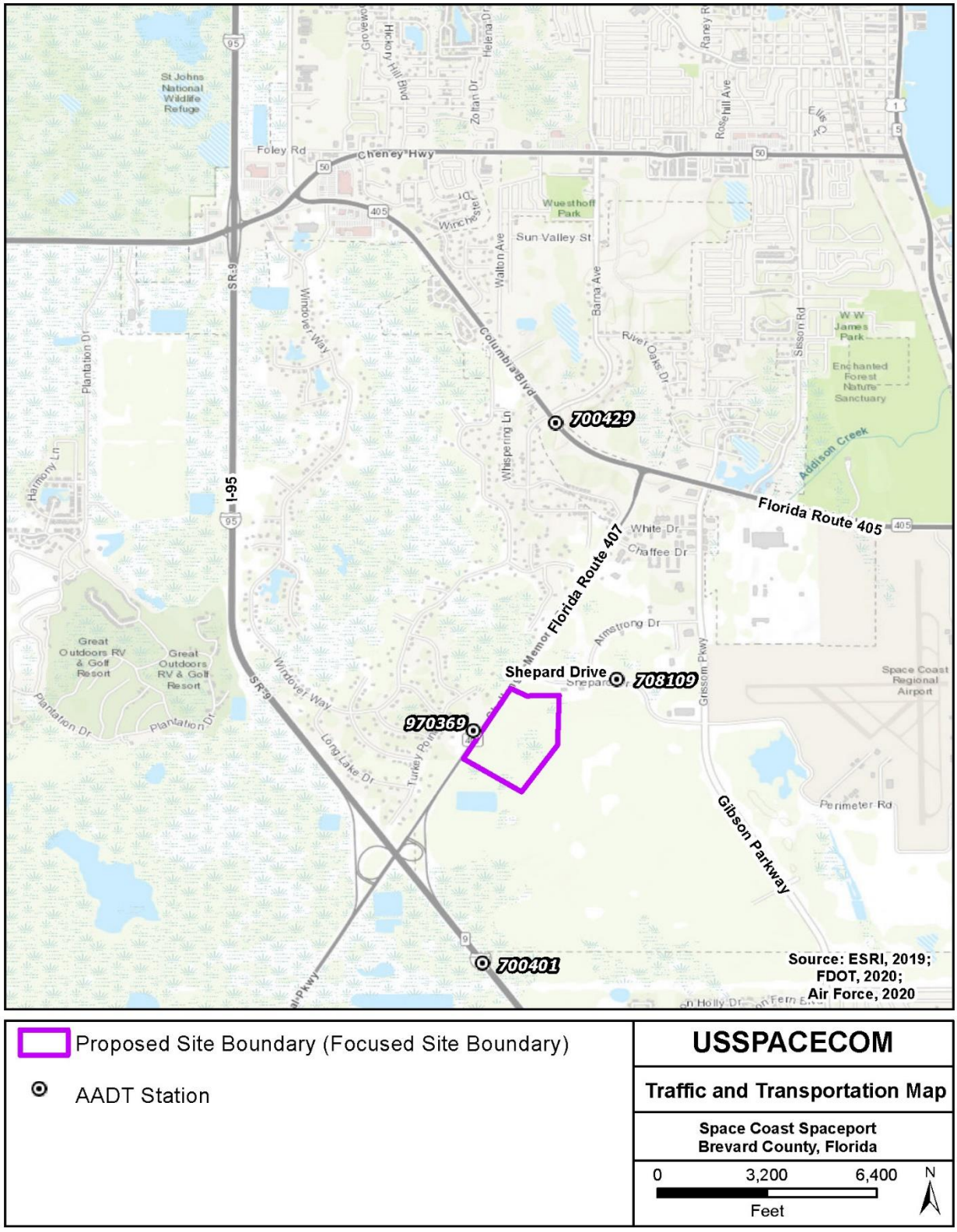
Source: (FDOT, 2020)

3.10.2 Environmental Consequences

A transportation impact would be significant if the associated increase in construction- or operation-related traffic would exceed the existing capacity of vehicular transportation networks or contribute to a noticeable degradation of existing traffic conditions.

As described in the subsections below, the Proposed Action would have *no significant impact* on transportation under any Alternative.

Figure 3-8: Transportation Network Surrounding Alternative 6 Site (Space Coast Spaceport)



3.10.2.1 Proposed Action – All Alternatives

Construction of the Proposed Action would result in temporary increases in construction-related traffic at the selected Alternative site that would include workers' personal commuting vehicles and heavy construction vehicles. The number of vehicles traveling to and from the selected site during construction would likely be fewer than 100. These construction vehicles would travel to and from the selected site at least once daily, and some vehicles would likely make several trips throughout the day to transport construction and waste materials. The number of heavy construction vehicles would likely be greatest in the early stages of facility construction, during initial site preparation.

To manage construction-related traffic, the contractor would implement and adhere to a project-specific transportation management plan (TMP) that would specify appropriate routes for construction-related vehicles to follow to and from the selected Alternative site. Routes in the TMP would follow major highways and roads, and would avoid local, residential, and neighborhood roads, to the extent practicable. If appropriate, the arrival of construction trucks and personnel would be scheduled to occur outside of typical commuting hours in order to minimize traffic congestion. In addition, at the Alternative 1, 2, 3, and 4 sites, construction vehicles would access the installation via commercial gates, thus diverting traffic from the main installation gates and reducing traffic and congestion at these gates. The TMP would also identify appropriate parking and staging areas for construction vehicles and equipment on-site.

Overall, increases in traffic near the Alternative site would be temporary, within the capacity of the existing vehicular transportation network, and would not contribute to a noticeable degradation of traffic conditions. Therefore, construction would have *short-term, negligible impacts* on transportation.

This analysis captures traffic impacts associated with approximately 1,800 personnel working at the USSPACECOM HQ facility. Not all employees would report to the facility at the same time, however, as some employees would work non-standard shifts (i.e., the facility would be operational for 24 hours per day), and not all assigned staff would be on-site daily. Further, some staff may carpool or use public transportation. For this analysis, the DAF assumes an estimated 1,440 vehicles, or 80 percent of the total number of assigned personnel, would be added to the local roadways. Since AADT estimates account for two-way traffic, and each new vehicle would travel to and from the proposed facility daily, the resulting increase in traffic relative to AADT counts would be approximately 2,880 new vehicle trips per day.

Major roads serving the six Alternative sites (e.g., interstates) are expected to have sufficient capacity to handle the associated increase in traffic; the number of additional vehicles on main roadways would be minor in comparison to the volume of traffic these large and extensive road networks currently accommodate. Bernalillo County Public Works expressed concern regarding the capacity of the I-25/Gibson Boulevard interchange due to several recent, large developments in the area, and requested a traffic study be completed (**Appendix A**). As discussed below, the existing road network can adequately accommodate potential increases in traffic. A traffic study would be beneficial but not necessary to assess traffic impacts. Should Alternative 2 be selected, the DAF will further consider this request as part of site design.

Once vehicles exit the major roads, they would be distributed across various local roadways as they approach the installation or site. Additionally, the vehicles would be expected to access the selected site via multiple installation gates, if applicable, or from multiple directions on local roads. Therefore, to best evaluate potential impacts on traffic surrounding each Alternative site, the DAF compared the anticipated increase of 2,880 trips per day against the combined AADT values on roadways near the gates to each site (**Table 3-24**).

Table 3-24: Estimated Change in Traffic Volumes near Installation Entrances/Site Access Points

Alternative	Road	Total AADT Volume	Percent Change
Alternative 1 Huntsville, AL (Redstone Arsenal)	Rideout Road near intersection with I-565	183,805 vehicles (2019)	1.6
	I-565 near Patton Road entrance		
	Redstone Road SW near entrance		
	Martin Road near entrance		
	Martin Road near entrance		
Alternative 2 Albuquerque, NM (Kirtland AFB)	Eubank Boulevard SE near intersection with Innovation Parkway SE	107,449 vehicles (2019)	2.7
	Gibson Boulevard SE near entrance along Truman Street SE		
	Gibson Boulevard SE near entrance on Pennsylvania Street SE		
	Wyoming Boulevard SE near entrance		
Alternative 3 Bellevue, NE (Offutt AFB)	Fort Crook Road South south of Papillon Creek	25,435 vehicles (2018)	11.3
	Fort Crook Road South near entrance on Nelson Drive		
	Lincoln Road		
Alternative 4 Colorado Springs, CO (Peterson SFB)	US-24 near intersection with Peterson Boulevard	54,800 vehicles (2019)	5.3
	Colorado Route 94 near intersection with Marksheffel Road		
Alternative 5 San Antonio, TX (Port San Antonio)	Southern extent of Texas Route 371	24,288 vehicles (2015)	11.9
	South General McMullen Drive near intersection with General Hudnell Drive		
	General Hudnell Drive adjacent to Port San Antonio		
Alternative 6 Brevard County, FL (Space Coast Spaceport)	SR 407 adjacent to Space Coast Spaceport	10,400 vehicles (2019)	27.7
	Shepard Drive		

Sources: (ALDOT, 2019; CDOT, 2019; FDOT, 2020; NDOT, 2018; NMDOT, 2020; TXDOT, 2015)

As shown in **Table 3-24**, the potential increases in estimated traffic near the entrances to the Alternative 1, 2, and 4 sites would range from 1.6 to 5.3 percent relative to the estimated number of vehicles currently

using those roads. It is anticipated that these additional volumes would be readily accommodated by the existing vehicular transportation network surrounding these proposed sites, and the use of multiple gates would facilitate the movement of traffic off local roadways and onto the installations, thus reducing the likelihood of additional congestion during peak travel times. Therefore, operation of the Proposed Action at the Alternative 1, 2, or 4 sites would result in *long-term, negligible impacts* on transportation.

At the Alternative 3 and 5 sites, the potential increases in estimated traffic near the site entrances would be 11.3 and 11.9 percent, respectively, relative to the estimated number of vehicles currently using those roads (**Table 3-24**). These increases are notable, and are likely to increase traffic and congestion slightly surrounding these sites. It is anticipated, however, that these additional volumes would be accommodated by the existing vehicular transportation network. Port San Antonio is located in a highly urbanized, commercial setting with a substantial surrounding roadway network, and at both Port San Antonio and Offutt AFB, it is anticipated that not all personnel would access the site at the same time, and their trips would be spread throughout different periods of the day. Moreover, the use of multiple gates or entrances would allow personnel to access the site easily, and would reduce the likelihood of additional traffic congestion during peak travel times. Therefore, operation of the Proposed Action at the Alternative 3 and 5 sites would result in *long-term, insignificant adverse impacts* on transportation.

Finally, the roadways adjacent to the Alternative 6 site would see the greatest potential increase in traffic over existing conditions at approximately 27.7 percent (**Table 3-24**). While these new trips would be spread throughout different periods of the day, this anticipated increase would be noticeable, particularly on SR 407, a two-lane highway that runs parallel to the proposed site and would provide primary access to the proposed facility. Given the larger size of Alternative 6 compared to the other proposed sites, the DAF may have flexibility to design the on-site road network such that it draws employees off the public roads and accommodates any queues on-site, potentially at multiple gates, thereby minimizing the potential for slowdowns on the public roads. The DAF would coordinate the transportation component of the facility site plan with the Florida Department of Transportation (FDOT) during the design phase to ensure potential transportation impacts are minimized, and would develop an operational TMP for its personnel to manage the number and circumstances of commuters. With the implementation of these measures, the existing vehicular transportation network surrounding this Alternative site would be able to accommodate the new traffic volumes. Therefore, operation of the Proposed Action at the Alternative 6 site would also result in *long-term, insignificant adverse impacts* on transportation.

3.10.2.2 No Action Alternative

The No Action Alternative would have *no impact* on the vehicular transportation network on and near the six Alternative sites, as the proposed facility would not be constructed and operated. Traffic volumes surrounding the Alternative sites would likely continue to increase independent of the Proposed Action, as local development and overall population growth continues. Current traffic conditions at and surrounding Peterson SFB would remain. Personnel associated with the interim facility would remain stable, and would not lead to an increase in traffic congestion on or off the installation.

3.11 HAZARDOUS AND TOXIC MATERIALS AND WASTE

This section describes the use and presence of hazardous materials and the generation of hazardous waste at the six Alternative sites. The ROI for HTMW is the boundary of each Alternative site and the nearby surrounding area.

HTMW are generally defined as materials or substances that pose a risk (through either physical or chemical reactions) to human health or the environment. Regulated hazardous substances are identified through a number of federal laws and regulations. The most comprehensive list is contained in 40 C.F.R.

Part 302, and identifies quantities of these substances that, when released to the environment, require notification to a federal government agency. Hazardous wastes, defined in 40 C.F.R. 261.3, are considered hazardous substances. Generally, hazardous wastes are discarded materials (solids or liquids) not otherwise excluded by 40 C.F.R. 261.4 that exhibit a hazardous characteristic (i.e., ignitable, corrosive, reactive, or toxic), or are specifically identified within 40 C.F.R. Part 261. Petroleum products are specifically exempted from 40 C.F.R. Part 302, but some are also generally considered hazardous substances due to their physical characteristics (especially fuel products), and their ability to impair natural resources.

Hazardous materials at Air Force installations are used, handled, stored, and managed in accordance with AFMAN 32-7002, *Environmental Compliance and Pollution Prevention, Hazardous Material Management, Chapters 3 and 5*. The use, handling, storage, and management of hazardous materials on Army installations is regulated in accordance with Army Regulation 200-1, *Environmental Protection and Enhancement*, and Department of the Army Pamphlet 710-7, *Hazardous Material Management Program*. Hazardous wastes generated on DoD installation are managed and disposed of in accordance with Hazardous Waste Management Plans (HWMPs) prepared by each installation.

The DoD Environmental Restoration Program (ERP) was established to provide for the cleanup of environmental contamination at DoD installations. Eligible ERP sites include those contaminated by past defense activities that require cleanup under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, and certain corrective actions required by the Resource Conservation and Recovery Act (RCRA). Non-ERP sites are remediated under the Compliance-Related Cleanup Program.

3.11.1 Affected Environment

3.11.1.1 Alternative 1 – Huntsville, AL (Redstone Arsenal)

Hazardous waste generated at Redstone Arsenal includes lead acid batteries, printer toner cartridges, fuel, lubricants, flammable solvents, and oil (Air Force, 2019a). The installation operates under a RCRA part B permit for the management of hazardous wastes (USACE, 2020a). The installation maintains both a HWMP and a BMPs Plan that identifies baseline BMPs applicable to spill prevention and response procedures, preventative maintenance, HTMW disposal procedures, use of least toxic materials when possible, and management of oil/water separator components. Redstone Arsenal also maintains an Oil and Hazardous Substance Spill Prevention and Response Plan, which provides procedures for spill cleanup and notification (US Army Garrison - Redstone, 2017).

The Alternative 1 site is currently undeveloped, and consists of an agricultural field that is used for livestock grazing. No hazardous materials are used or stored, and no hazardous waste is generated, on the site. Pesticides and herbicides may be periodically applied to maintain vegetation and control pests. No Installation Restoration Program (IRP), Compliance Restoration Program (CRP), or Military Munitions Response Program (MMRP) sites are located on-site; however, two underground ERP sites are located immediately to the south (Air Force, 2019a; US Army Garrison - Redstone, 2014). There are no known per- and polyfluorinated substance (PFAS) releases on-site.

3.11.1.2 Alternative 2 – Albuquerque, NM (Kirtland AFB)

Hazardous waste generated at Kirtland AFB consists of used oil, lithium and other batteries, mercury-containing equipment, fluorescent lamps, aerosols, petroleum, lubricants, and special waste material, such as asbestos-containing material (ACM) and lead-contaminated material. The installation is designated and permitted as a Large Quantity Generator by the USEPA. The installation maintains a HWMP, which contains procedures for managing hazardous wastes in accordance with applicable DoD, federal, and state regulations and requirements (Air Force, 2020d). Under the HWMP, host and tenant units that generate

1,000 pounds or more of hazardous wastes that are disposed of through Kirtland AFB's waste program must develop and implement a Pollution Prevention Plan and other waste minimization plans (Air Force, 2020d). Kirtland AFB also maintains an SPCCP, which it implements in conjunction with the HWMP, to address incident response and emergency responsibilities resulting from spills or discharges of HTMW (Air Force, 2018c).

The Alternative 2 site is developed with a grid roadway network, although no buildings or other infrastructure are present on the site; the site was previously occupied by residential housing. There is no history of HTMW use, storage, generation, or disposal at this site. There is also no record of contamination on-site, although historical and current use of the on-site roads creates potential for the presence of leaked fuels or oil from vehicles; these instances would likely be minimal and discountable, and addressed via the SPCCP. The proposed site is also located approximately 0.85 mile northeast of the Bulk Fuels Facility pipeline, which began leaking in 1999. The resultant fuel plume has not affected the proposed site, and efforts are underway to address surrounding contamination and clean-up drinking water wells (Kirtland AFB, 2020b). The Bulk Fuels Facility is listed as an IRP site; no other IRP or MMRP sites are located on or surrounding the proposed site (DoD, 2018).

A PFAS release site due to a historic spill at the south taxiway is located approximately 0.6 mile to the southwest of the site. PFAS has been detected in surface soils at this site, but below regulated action limits; no PFAS has been detected in subsurface soils or in groundwater (AFCEC, 2017). This suggests limited migration of PFAS, and also suggests that the Alternative 2 site has not been impacted (AFCEC, 2021a).

3.11.1.3 Alternative 3 – Bellevue, NE (Offutt AFB)

Hazardous materials used and wastes generated at Offutt AFB include fuels, petroleum products, toxic chemicals, paints, aerosols, munitions, batteries, and PCB waste (Air Force, 2020b; Air Force, 2020e). The installation is classified as a Large Quantity Generator by the USEPA (Offutt AFB, 2020a). The installation maintains a HWMP, which contains procedures for managing, storing, and disposing of hazardous wastes in accordance with applicable DoD, federal, and state regulations and requirements (Air Force, 2020e). Offutt AFB maintains and implements an Integrated Contingency Plan (ICP), which consolidates all applicable federal, state, and Air Force requirements for managing spills or releases. The ICP contains an SPCCP, facility response plans, and additional components for emergency response planning, in order to adequately address oil spills or releases of other hazardous materials (Offutt AFB, 2020c).

The Alternative 3 site is disturbed and partially developed. No HTMW contamination is present on-site, and no ERP, MMRP, or potential PFAS release sites are located on-site (ARGO/LRS JV, 2020; AFCEC, 2015). A historic ERP site was previously located approximately 750 feet to the southwest of the proposed site, but has been remediated and closed (Offutt AFB, 2007). A PFAS release site at the current fire training area is located approximately 0.2 mile to the southeast of the site. Groundwater and surface water near this site have PFAS concentrations above screening levels. However, groundwater and surface water flows to the southeast, away from the Alternative 3 site, which suggests that the Alternative 3 site has not been impacted by this release (USACE, 2019).

3.11.1.4 Alternative 4 – Colorado Springs, CO (Peterson SFB)

Hazardous wastes generated at Peterson SFB consist of fuel, lubricants, oil, industrial solvents, corrosives, flammable solvents, paint, filters, and batteries. The installation is designated as a Small Quantity Generator of hazardous wastes by the USEPA, and maintains an SPCCP that establishes responsibilities, prevention guidelines, and contingency plans in the event of a hazardous materials release (Air Force, 2019a).

The Alternative 4 site is currently undeveloped and primarily consists of disturbed, planted grassland. The site was previously used as a construction laydown area. No IRP, CRP, or MMRP sites are on or near the site. During the proposed site's previous use as a construction laydown area, it is possible that the use or storage of HTMW occurred on or near the site; however, there is no indication of contamination related to this previous use, and no HTMW are currently used, stored, or generated on-site (Air Force, 2019a). Additionally, no known PFAS sites are located on the site (USACE, 2020b). The closest PFAS release site is located approximately 0.9 mile southwest of the site. PFAS have been detected in the soil below screening levels, but above screening levels in groundwater and surface water. Groundwater flow, however, is to the southwest, so the Alternative 4 site is not located within a potential exposure pathway (AFCEC, 2019).

3.11.1.5 Alternative 5 – San Antonio, TX (Port San Antonio)

The Alternative 5 site was previously part of the former Kelly AFB, which closed in 2001. Prior to disposing of Kelly AFB, the DAF implemented an environmental cleanup program which included remedial actions to address any hazardous substances remaining on the property that had the potential to affect human health and the environment. Cleanup of the overall industrial area at Kelly AFB was completed in 2010 and cleanup sites were restored (ALEO Environmental Enterprises, Inc., 2019). However, during a prior site evaluation conducted in 1999, the specific Alternative 5 site was determined not to be contaminated (OPTECH, 1999). More recently, an Environmental Site Assessment also found no record of past contamination on the Alternative 5 site, and did not identify any HTMW, including ACM, lead-based paint, and PCBs, on-site or on adjoining properties (ALEO Environmental Enterprises, Inc., 2019). There are no known PFAS releases on-site.

3.11.1.6 Alternative 6 – Brevard County, FL (Space Coast Spaceport)

Space Coast Regional Airport currently uses and handles hazardous materials, primarily fuel and paint. There are 12 RCRA facilities located within the airport property, all of which are regulated and located outside the immediate area of the proposed Alternative 6 site. The airport also has SPCCPs in place to prevent and address oil spills and discharges (FAA, 2020).

The Alternative 6 site consists almost entirely of natural vegetation; areas surrounding the site are also largely undeveloped, with the exception of SR 407 to the west and some commercial buildings to the north. Due to the undeveloped nature of the site, and the separation between this site and the developed areas of the regional airport, it is not likely that the site contains any contamination.

3.11.2 Environmental Consequences

An HTMW impact would be significant if it would 1) interrupt, delay, or impede ongoing cleanup efforts; or 2) create new or substantial human or environmental health risks (e.g. soil or groundwater contamination).

As described in the subsections below, the Proposed Action would have *no significant impact* on HTMW under any Alternative.

3.11.2.1 Proposed Action – All Alternatives

Construction of the Proposed Action would involve the handling, use, and storage of hazardous materials, and the generation of hazardous waste, including paints, thinners, solvents, and petroleum-based products (e.g., fuels and lubricants for construction vehicles and equipment). These materials would be handled and used by authorized personnel in accordance with label directions, and would be stored in appropriate containers when not in use. Safety data sheets would be maintained on the construction sites for all

hazardous materials in use. Hazardous wastes generated would be stored on-site in secured containers in accordance with the installation's HWMP, as available, and applicable federal and state regulations. These wastes would be transported by licensed contractors to permitted facilities for disposal. On-site maintenance and refueling of construction vehicles would either be conducted in accordance with the site's applicable policies and procedures, or would be prohibited altogether.

Implementation of existing SPCCPs or other spill contingency plans at the Alternative 1, 2, 3, 4, and 6 sites would ensure that construction-related spills or releases are managed and addressed; the DAF would develop a new SPCCP for the Alternative 5 site. With implementation of these practices, construction impacts from the use, handling, management, storage, and disposal of HTMW would be *short-term and negligible* under each Alternative.

No HTMW contamination has been identified at any of the six Alternative sites. While petroleum residues could be present in soils at the Alternative 2, 3, 4, and 5 sites due to historical materials storage or the presence of on-site parking lots/roads, these instances would likely be minimal. Should the DAF identify a new HTMW concern at the selected Alternative site prior to or during construction, work would cease in that location until the concern can be properly identified and addressed (e.g., through sampling and development of an appropriate remediation strategy if necessary). All fill soils imported to the site during construction would be free of contamination. The removal or remediation of contaminated soils at the selected Alternative site, if required, would result in a *long-term beneficial impact* on HTMW management.

Operation of the Proposed Action would involve the use of HTMW typical of administrative operations and facility maintenance, such as solvents, paints, thinners, cleaning products, pesticides/herbicides, and petroleum-based products. Generally, HTMW quantities associated with the Proposed Action would remain small relative to the total quantities used, generated, and disposed of at the larger installation, industrial campus, or airport. All such materials would be stored in secured lockers or cabinets when not in use, and would be used by authorized personnel in accordance with label directions. Any hazardous wastes would be transported by licensed contractors to permitted facilities for disposal. Safety data sheets would be maintained in a centralized, accessible location for all hazardous materials stored and used at the proposed facility. The DAF would operate the facility in accordance with the existing HTMW plans (e.g., HWMP and SPCCP; see **Section 3.11.1**) for the site; if an Alternative site is selected for which such plans do not exist, a new HTMW management plan would be developed. Finally, the Proposed Action would have no potential to inhibit ongoing cleanup activities occurring on sites near the Alternative sites. Therefore, impacts from HTMW during the operation of the Proposed Action would be *long-term and negligible*.

3.11.2.2 No Action Alternative

Under the No Action Alternative, the proposed USSPACECOM HQ facility would not be constructed or operated. There would be no changes in the quantity of HTMW and non-hazardous solid waste used, generated, or disposed of at any of the six proposed sites. Current HTMW conditions and management would continue at each of the proposed sites, and at the current provisional HQ location at Peterson SFB. Current operations at the interim facility would continue to use and generate minor amounts of HTMW, and Peterson SFB would continue to manage HTMW in accordance with its existing Small Quantity Generator permit and SPCCP. Implementation of the No Action Alternative would have *no impact* on HTMW.

3.12 REGULATORY COMPLIANCE MEASURES, DESIGN COMMITMENTS, AND MITIGATION MEASURES

The DAF would comply with all federal and state laws and regulations, including consultation and permitting requirements. **Table 3-25** summarizes the RCMs and other design commitments that the DAF would implement for each of the Action Alternatives, as discussed throughout this EA's impact analysis.

With implementation of the RCMs and other design commitments identified in **Table 3-25**, the Proposed Action would be anticipated to have no significant impacts. As such, no resource-specific mitigation measures are recommended.

Table 3-25: Regulatory Compliance Measures and Design Commitments, by Alternative

Resource Area	RCMs and Design Commitments
All Alternatives	
Land Use and Zoning	None
Noise	• Comply with the local noise ordinance for construction activities (e.g., time-of-day restrictions), and consult with local officials to obtain exemptions if necessary.
Air Quality	• Comply with the CAA, SIPs, and other applicable federal state and local air quality regulations.
Earth Resources	• Conduct a site-specific geotechnical study to confirm geological properties and associated design requirements. • Incorporate design measures to address site-specific seismic hazards appropriately. • Obtain a NPDES CGP pursuant to the CWA, and develop a site-specific SWPPP. • Following construction, revegetate the site with native species to stabilize soils over the long term.
Water Resources	• Obtain a NPDES CGP and develop or update a site-specific SWPPP in accordance with the CGP. Following construction, implement a MS4 permit, General Industrial NPDES permit, or other required stormwater management permit, including implementation of a SWMP/SWPPP as necessary. • Comply with the stormwater runoff requirements of Section 438 of the EISA to restore the pre-development hydrology of the site to the maximum extent feasible. • Implement construction BMPs to avoid groundwater impacts, such as inspecting equipment routinely, maintaining spill-containment materials on-site, and adhering to site-specific HTMW plans. Following construction, implement a site-specific SPCCP.
Biological Resources	• Conduct vegetation removal and other construction activities in accordance with installation INRMPs and IPMPs or local regulations. • Following construction, revegetate the site with native species to stabilize soils over the long term. • Continue consultation with the USFWS if the DAF determines the species-specific measures it has committed to in consultation to date become infeasible. • Assess, and incorporate into the design as appropriate, measures to deter bird collisions with the HQ facility.
Cultural Resources	• Continue to consult with federally recognized tribes that, during the NEPA process, express interest in ongoing consultation regarding the Proposed Action.
Socioeconomics and Environmental Justice	None
Transportation	• Implement a TMP to manage construction traffic.

Resource Area	RCMs and Design Commitments
Hazardous and Toxic Materials and Waste	• Implement a site-specific SPCCP and HWMP (or other applicable HTMW management plan). • Use, handle, store, and manage hazardous materials in accordance with AFMAN 32-7002, Army Regulation 200-1, and Army Pamphlet 710-7.
Alternative 1 – Huntsville, AL (Redstone Arsenal)	
Earth Resources	• Incorporate design measures to address potential radon hazards.
Biological Resources	• Adhere to the USFWS' *Procedures for Working with the Indiana Bat in Alabama*. • Restrict tree clearing between October 15 and March 31 to avoid impacts to the Indiana bat and NLEB.
Alternative 2 – Albuquerque, NM (Kirtland AFB)	
Earth Resources	• Incorporate design measures to address potential radon hazards.
Cultural Resources	• Continue to consult with the New Mexico SHPO under Section 106 of the NHPA to ensure any potential adverse effects to historic properties are avoided or mitigated. • Inventory and evaluate the NRHP eligibility of the six unrecorded private properties of historic age within the architectural APE prior to beginning construction. Mitigate potential adverse effects under the NHPA as required.
Transportation	• Evaluate need for a traffic study of the I-25/Gibson Boulevard interchange.
Alternative 3 – Bellevue, NE (Offutt AFB)	
Earth Resources	• Incorporate design measures to address potential radon hazards.
Biological Resources	• Comply with the ESA Section 4(d) rule for the NLEB.
Alternative 4 – Colorado Springs, CO (Peterson SFB)	
Air Quality	• Maintain CO emissions below General Conformity *de minimis* levels.
Earth Resources	• Incorporate design measures to address potential radon hazards.
Cultural Resources	• Continue to consult with the Colorado SHPO to identify and address potential effects on historic properties in accordance with the 2019 Programmatic Agreement between the DAF, SHPO, and other consulting parties.
Alternative 5 – San Antonio, TX (Port San Antonio)	
Air Quality	• Maintain VOC and NO_x emissions below General Conformity *de minimis* levels.

Resource Area	RCMs and Design Commitments
Alternative 6 – Brevard County, FL (Space Coast Spaceport)	
Land Use and Zoning	• Re-zone the 103-acre focused site in accordance with zoning designations in the City of Titusville Zoning Ordinance.
Earth Resources	• Consult with the NRCS and complete a Farmland Conversion Impact Rating Form in accordance with the FPPA. Incorporate prime farmland avoidance protection measures into the project design as required.
Water Resources	• Design the site layout to avoid impacts to wetlands in accordance with EO 11990. • Comply with the enforceable policies of Florida's Coastal Management Program.

Biological Resources	• Adhere to USFWS' species guidelines:
	  • *Standard Protection Measures for the Eastern Indigo Snake*
	  • *Habitat Management Guidelines for the Wood Stork in the Southeast Region*
	  • *National Bald Eagle Management Guidelines*
	• Comply with the FWC's species guidelines:
	  • *Gopher Tortoise Permitting Guidelines*
	  • *Florida Pine Snake: Species Conservation Measures and Permitting Guidelines*
	  • *Florida Sandhill Crane: Species Conservation Measures and Permitting Guidelines*
	  • *Threatened Wading Birds Species Conservation Measures and Permitting Guidelines*
	• Provide suitable wood stork foraging habitat compensation in an approved area.
	• Conduct nesting survey for Florida sandhill cranes prior to construction activities and during the December and August breeding season.

Transportation	• Coordinate the transportation component of the facility site plan with FDOT during the design phase. • Implement an operational TMP to manage the number and circumstances of commuters.

4.0 CUMULATIVE EFFECTS

4.1 INTRODUCTION

The DAF identified past, present and reasonably foreseeable future projects (listed in **Table 4-1**), then reviewed cumulative effects within the Proposed Action's ROI for each resource area defined in **Section 3.0**. DAF analyzed the direct, indirect and cumulative effects of the projects listed. The affected environment for each Alternative includes the reasonably foreseeable environmental trends and planned actions, with a focus on expanding or upgrading outdated facilities and providing improved transportation and utility systems. Environmental trends indicate increased utility and optimization of land use by providing more efficient and usable spaces, long-term air quality improvements from new energy standards and road improvements, and economic growth from temporary and permanent employment opportunities and improved public services.

Table 4-1: Actions with Potential Cumulative Impacts

Alternative Location	Name of Action	Project Type	Anticipated Timeframe	Description
Alternative 1 Huntsville, AL (Redstone Arsenal)	Redstone Arsenal Technology Park District Area Development Plan (ADP)	Institutional; Transportation; Utilities	2020-2040 (approximate)	Fifteen projects, including construction of new institutional facilities and administrative buildings, road improvements, and a new electric substation.
	Missile Defense Agency (MDA) Consolidated Test Center	Institutional	2021-2025	Addition of two buildings in the Von Braun Complex to create the MDA Consolidated Test Center comprising laboratories and office space.
	Gate 7 Expansion	Institutional; Transportation	~2023-2025	This project is for the construction of additional lanes at Gate 7, the only personnel gate on Redstone's western border. The expansion supports the growth of the City of Huntsville in the areas west of Redstone Arsenal. Current Gate 7 traffic causes substantial congestion. The City of Huntsville has already constructed additional infrastructure to support the growth outside of the installation.
	Missile and Space Intelligence Center (MSIC) Advanced Analysis Facility	Institutional; Utilities	2021-2025	The proposed work will include the Foreign Materiel Exploitation (FME) building for weapon systems analysis, Remote Mail Handling Facility, Vehicle Maintenance Shop, Central Energy Plant addition, local substation upgrades, new transmission lines, vehicle access to the buildings, parking areas, and utility connections for the buildings.

Alternative Location	Name of Action	Project Type	Anticipated Timeframe	Description
Alternative 2 Albuquerque, NM (Kirtland AFB)	Kirtland AFB Zia Park ADP	Institutional; Transportation; Recreational; Utilities	2018-2038 (approximate)	Development of new facilities, fitness center, medical clinic and pharmacy, recreational facilities, dining facility, road improvements, and utility upgrades.
	Enhanced Use Lease Program	Institutional; Commercial; Residential; Transportation; Utilities	2021-2031	Development of a 100-acre underutilized portion of land into a mixed-use site that would include office space, retail/commercial use, and housing, in addition to road improvements.
	C-130 FTU	Institutional	~2024-2025	C-130 Formalized Training Unit Beddown
Alternative 3 Bellevue, NE (Offutt AFB)	Northside District ADP	Institutional; Transportation	2021-2041 (approximate)	Construction and operation of short-, medium-, and long-term projects including new base housing, building renovations, on base runway replacement, and road improvements.
	Fort Crook Road Improvements (Cornhusker Road to Capehart Road)	Transportation	2024-2025	Road improvements to a 3-mile stretch of Fort Crook Road directly west of Offutt AFB.
	Flood Recovery	Industrial; Institutional	2021-2025	Multiple projects to rebuild damaged facilities from 2019 floods at Offutt AFB.
Alternative 4 Colorado Springs, CO (Peterson SFB)	Peterson SFB ADP	Institutional; Transportation; Recreational	2018-2038 (approximate)	Updated or new facilities, new recreational trails, greenspace improvements, and transportation improvements.
	North Gate Project	Transportation	~2027	Construction of new entrance/exit gate to Peterson SFB.
	East Peterson Electrical Grid Update	Industrial	~2027	Upgrade electrical grid for energy resiliency.
	Special Operations Command; North	Institutional	2021-2022	New construction of hangar.
	Hazardous Waste Site	Industrial; Institutional	~2027	Construction of new hazardous waste site.

Alternative Location	Name of Action	Project Type	Anticipated Timeframe	Description
Alternative 5 San Antonio, TX (Port San Antonio)	Innovation Center	Institutional; Recreational	2021-2022	Development of a new 130,000-square foot Innovation Center with museum space, research and development laboratories, and a 2,500-seat arena.
	DeLorean Motor Company Headquarters	Institutional	2025-2027	Construction of company headquarters up to 400,000 square feet, approximately 450 personnel
	Research and Engineering Facilities	Institutional	~2027	Construction of educational, office, and flex space at approximately 400,000 square feet and personnel increase of up to 5,000.
Alternative 6 Brevard County, FL (Space Coast Spaceport)	Spaceport Commerce Park	Institutional; Industrial	2021-2025	Construction of a 75,000-square foot building at Spaceport Commerce Park for office or industrial space.
	New Connector Road (SR-407 to Grissom Parkway)	Transportation	~ 2025-2030	New road connecting SR-407 to Grissom Parkway, located west of the Space Coast Regional Airport.
	KB Homes – Verona	Residential	2021-2023	New residential development of 141 single family homes situated directly south of the Alternative 6 site.

4.2 ALTERNATIVE 1 – HUNTSVILLE, AL (REDSTONE ARSENAL)

Cumulative effects of the implementation of Alternative 1 at Redstone Arsenal in consideration with other past, present, and reasonably foreseeable projects could lead to increased construction-related impacts in the ROI; specifically, increased air emissions, hazardous and solid waste generation, soil erosion, stormwater runoff, noise and traffic congestion. These impacts would be *short-term and not significant* due to the temporary and localized nature of construction. The three actions (ADP, MDA, and MSIC) that are expected to occur simultaneously to construction of the Proposed Action would exacerbate adverse effects to the stated resource areas, however this would be on a short-term and temporary basis.

The 15 projects associated with the ADP as well as the Gate 7 Expansion, are all relatively small in size, and in different locations across Redstone, and therefore the cumulative effect to the ROIs for soil erosion, water runoff, hazardous waste, and noise (as described in **Section 3.0**) would be minimal since the projects are generally dispersed over a wide area. It should be noted that the expected impact to air quality, which has a broader ROI, would be minimal even with the increase in construction activities and use of combustion engine equipment. It is highly unlikely the air quality in the defined ROI would be noticeably affected by these projects. Construction equipment and fugitive dust generated by the construction activities associated with construction of the ADP projects would be temporary. Also, not all 15 projects would be underway at the same time, thus alleviating any adverse effects to air quality, since air quality is measured on an annual basis and the projects would be spread over two decades. Furthermore, the noise, hazardous waste, traffic congestion, soil, and stormwater runoff would only be adversely affected in the immediate vicinity of where construction is occurring, which is largely on base; therefore, the general public would experience no significant impacts. It should be noted that while traffic congestion and resulting air emissions would be impacted adversely in the short term, with the completion of the Gate 7 Expansion it is expected that wait times to get on base would be reduced, thus alleviating traffic and emissions from vehicle idling in the long term.

Similar observations pertain to the cumulative effects of the MSIC projects and MDA, since both projects are on a much smaller scale than the ADP. During project implementation for all projects, the DAF would adhere to appropriate erosion and sediment control BMPs, as described in **Section 2.1.2**, to minimize adverse impacts. Further, physical disturbances would primarily occur within Redstone Arsenal's existing footprint, which is extensively developed. Likewise, implementation of Alternative 1 and other projects would result in minimal impacts to biological resources and cultural resources due to previous site disturbances.

4.3 ALTERNATIVE 2 – ALBUQUERQUE, NM (KIRTLAND AFB)

Cumulative effects of Alternative 2 at Kirtland AFB considering past, present, and reasonably foreseeable future actions would be comprised of short-term and long-term adverse effects to noise and air quality, as well as short-term minor adverse effects to groundwater and surface water, hazardous waste, and soil erosion. No cumulative effects to cultural or biological resources would be expected from the proposed action and the projects outlined in **Table 4-1** specific to Kirtland AFB, nor are these projects anticipated to result in significant impacts.

The anticipated C-130 beddown at Kirtland AFB would increase the overall noise impact to the ROI, but noise generated from this proposed action would be expected to be within insignificant levels. While propeller driven aircraft do produce notable audible impacts, they are not as severe as fighter jets or afterburner capable aircraft. Also, C-130's are incapable of breaking the sound barrier and creating sonic booms. Both sonic booms and the use of afterburner contribute greatly to noise impacts within an ROI, and are often the source of impacts deemed significant for noise to an ROI. Since a C-130 is not capable of either, impacts are expected to be not significant. Furthermore, the use of construction equipment associated with the project and activities will result in minor increases in noise in the immediate ROI in the short term, but given the relative simplicity of construction and expected short duration, and the fact that the onsite locations for the Proposed Action and C-130 beddown project are occurring in different locations on base, noise from either action's construction would not be amplified by the other. Air impacts resulting from the C-130 cannot be determined at this given time since project specifics are unknown. However, generally speaking, turboprop engines such the ones used by the C-130 produce less emissions than turbo fan or turbo jet engines below the USEPA designated mixing zone of 3,000 feet AGL and therefore it is anticipated that cumulative effects from the FTU C-130 project, other construction projects, and the Proposed Action would not have significant long-term impacts to air quality. However, the full analysis of potential noise impacts from the C-130 beddown will be addressed in its own NEPA-compliant analysis and documentation and take into account this Proposed Action.

The more construction intensive projects, the Enhanced Use Lease (EUL) agreement and Kirtland Zia Park ADP, will incur a heavier utilization of combustion engine construction equipment, resulting in increased air emissions. However, all projects associated with the EUL and ADP are planned to occur over 10 and 20 year periods respectively and are therefore are not expected to contribute to a significant annual increase in air emissions in any given year, even in conjunction with the Proposed Action and other construction projects. Significant increases in noise are also not expected given the time frames for each project. The EUL will result in additional traffic which could initially worsen congestion and increase air emissions within the ROI from vehicle combustion engines, but the roadway improvements associated with the project and ADP are expected to lessen congestion effects within the ROI which would help alleviate any long-term air quality impacts. Given the roadway improvements, any long-term effects to traffic and air quality are expected to be insignificant long-term effects of the Proposed Action and other construction projects related to air quality are expected to be not significant.

Construction activities occurring after and concurrently with the Proposed Action could cause adverse but not significant impacts to groundwater and drainage, and soil erosion. Any impacts to water and drainage

would be short-term and negligible in nature. It is expected that applicable BMPs, as described in **Section 2.1.2**, would be utilized to keep adverse effects as minimal as possible.

4.4 ALTERNATIVE 3 – BELLEVUE, NE (OFFUTT AFB)

Cumulative effects of implementing the Proposed Action at the Alternative 3 site on Offutt AFB considering other past, present, and reasonably foreseeable actions would result in *short-term, adverse, but not significant* impacts on air quality, noise, and water.

Construction projects, including roadway upgrades, and the Flood Recovery action would cause short-term adverse impacts to noise, soils, air quality, and water. In March 2019, Offutt AFB was hit with major flooding that covered roughly 1/3 of the southeastern portion of the installation, including 3,000 feet of the runway. The flood waters affected 137 base facilities, 1.2 million square feet of workspace, including $230 million of simulators, displacing more than 3,200 personnel. Starting in early 2022, demolition began on the southeastern portion of the installation and 673,000 cubic yards of dirt were brought in to support fill and elevation of new mission campus areas being built as part of the effort. The use of heavy machinery and construction activities will contribute to *not significant, short-term* increases in noise in the immediate vicinity of where construction occurs for any given projects. Generally, no portion of the Proposed Action would occur near the other projects outlined in **Table 4-1**, and therefore noise from the construction of the Proposed Action would not be amplified by additional construction in the immediate area even if construction of any of the projects occurs simultaneously. Flood recovery construction projects were evaluated to not be expected to cause significant impacts to noise. Demolition of existing, damaged structures is one of the more noise intensive activities. Demolition activity is projected to run through 2022 and most demolition would occur prior to the proposed construction of the USSPACECOM HQ under Alternative 3, thus having no significant impact on the ROI.

There would also be adverse effects on air quality in the short term from the use of combustion engine construction equipment and the particulate matter that is inherently generated during construction activities related to all projects. However, Offutt AFB and the vast majority of the entire state of Nebraska is classified as attainment for all criteria pollutants, and given the temporary nature of construction, impacts to the ROI are expected to be *not significant* to air quality. Improvements to Fort Crook Road, which is a primary access road for the installation, may overlap with construction, but construction traffic associated with the Proposed Action would likely be minimal, and the roadwork would likely be complete prior to the proposed HQ facility becoming operational. In the long term, there may be positive impacts to air quality even though personnel and traffic would increase as a result of the Proposed Action since planned roadway improvements would reduce traffic congestion, thus reducing idling times and vehicle emissions.

Construction activities occurring after and concurrently with the Proposed Action could cause *adverse but not significant* impacts to groundwater and drainage. If deemed necessary and to minimize any and all adverse impacts to a resource area's ROI as defined in **Section 3.0**, appropriate BMPs as described in **Section 2.1.2**, will be utilized for all projects. Any impacts to water and drainage would be short-term and negligible in nature, and with completion of the flood recovery project, positive impacts to the ROI would be expected for stormwater runoff since the ongoing flood recovery project will greatly improve stormwater management and lessen adverse flooding effects on the ROI. Furthermore, the rebuilding of structures related to the Offutt Flood Rebuild has the new buildings constructed in less flood prone areas.

4.5 ALTERNATIVE 4 – COLORADO SPRINGS, CO (PETERSON SFB)

Cumulative impacts for Alternative 4 at Peterson SFB with consideration of past, present, and reasonably foreseeable projects within Alternative 4 resource area ROIs (described in **Section 3.0**) are expected to be *insignificant* in the long term. All adverse cumulative effects from the actions listed in **Table 4-1** will be

temporary and localized nature. The cumulative effects from the projects discussed below, which are largely construction projects, will increase air emissions, potentially cause stormwater runoff issues, and cause negligible increases in noise resulting from the construction of the projects and associated equipment. Effects to cultural and biological resources would not be expected. Adverse long-term effects from all projects are not expected within the Alternative 4 resource area ROIs.

Since Peterson SFB currently serves as the provisional location for the USSPACECOM HQ there would be no increase to traffic in the area of the Proposed Action. Short-term impacts from the construction of the permanent HQ facility would be expected in the form of additional air emissions from construction equipment and particulate matter generated, but this increase would be negligible. The facility constructed would be energy efficient and designed with proper drainage as to alleviate any adverse impacts from additional stormwater runoff, and maintain the base's historic base-wide runoff.

The North Gate project would create short-term air emissions from construction equipment and particulate matter generated from the utilization of such equipment. Long-term cumulative impacts from this project would result in less traffic congestion as the project will allow more vehicles to enter or exit the base at any given time, thus reducing vehicle idling time and air emissions from vehicle traffic.

Cumulative impacts from the East Peterson Electrical Grid Update in the short term would be negligible increases in air emissions resulting from construction associated with the project. Long-term impacts are anticipated to be increased safety with newer equipment that is safer to service, and more reliable power generation preventing any injuries or accidents due to power outages and decreased air emissions from less emergency generator use.

Construction of the new hazardous waste site would result in *short-term, insignificant* impacts to air emissions as discussed in other construction projects. Like the Electrical grid update, long-term cumulative effects would be positive for this resource area's ROI. The new site would increase protection to the environment by more reliably preventing hazardous waste damage and release.

4.6 ALTERNATIVE 5 – SAN ANTONIO, TX (PORT SAN ANTONIO)

Cumulative impacts of Alternative 5 at Port San Antonio would be *adverse for air quality, both in the short term and long term, but are expected to be not significant*. Traffic congestion from the Proposed Action would be met with additional traffic from the proposed construction projects specific to Port San Antonio, summarized in **Table 4-1**, resulting in more emissions generated from vehicles. However, it should be noted that there has been a significant decrease in traffic in the area of the Proposed Action since March of 2020, as many employees at Lackland AFB (near Port San Antonio) have opted to telework rather than commute. Overall, the anticipated net change in vehicle traffic is not expected to be much greater than the traffic seen in the area prior to 2020. Furthermore, the use of the Innovation Center for events will likely not be at peak commuting times. However, **Section 3.10.2.1** notes traffic increases for the Proposed Action at the Alternative 5 site are notable, and are likely to increase traffic and congestion slightly surrounding these sites. It is anticipated, however, that these additional volumes would be accommodated by the existing vehicular transportation network.

Adverse but not significant short-term impacts from the construction projects listed in **Table 4-1** are expected to air quality and noise due to the use of combustion engine construction equipment, and particulate matter generated from construction activities. Furthermore, drainage could be impacted in the short term while construction is underway. Since no buildings are planned to be demolished, and much of the area is already developed, no impacts to cultural or biological resources would be expected in the short term or long term.

In the long term, the Proposed Action at the Alternative 5 site, taken in consideration with other projects, would result in beneficial impacts on the local economy. Collective expenditures by temporary and permanent workforces would benefit local accommodation, food, and retail industries, as well as local fiscal benefits from associated sales tax revenues. The population growth rates are expected to remain the same or similar as current growth rates, as increases in personnel and employees would not constitute a significant increase relative to current population size in the vicinity of the Alternative 5 site.

4.7 ALTERNATIVE 6 – BREVARD COUNTY, FL (SPACE COAST SPACEPORT)

Cumulative effects of implementation of the Proposed Action at the Alternative 6 site at Space Coast Spaceport considering past, present, and reasonably foreseeable projects are expected to be *short-term, and long-term but insignificant.* The Proposed Action as well as the other construction projects listed in **Table 4-1** would result in adverse, short-term temporary increases in noise and air emissions.

Noise will be generated from the construction activities related to all projects, but given the nature of the construction and locations in which it is all occurring, anticipated impacts are expected to be *insignificant*. Construction of residential homes does not utilize a vast amount of heavy machinery, and construction along roadways often has the noise generated from construction shadowed from noise produced by traffic flow. Short-term impacts to air quality as a result of the use of combustion engine construction equipment and inherent fugitive dust created from construction activities is expected to be minor, given the current air quality attainment status of the area of the Alternative 6 site, *significant impacts to air quality are not expected in the short term*.

Furthermore, while the Proposed Action and addition of additional housing will result in more traffic in the vicinity of the Alternative 6 site, the improvements to the ROI roadway infrastructure is expected to result in more efficient flow of traffic and shorter commute times resulting in less vehicle emissions generated in the long term. Also, the increase in vehicles from the new 141-unit community immediately south of the Alternative 6 site would be minor relative to existing conditions, however there is a possibility that additional personnel related to the Proposed Action could reside within the community, and thus would have much shorter than average commute times. The DAF would coordinate with the FDOT and local planning authorities during the project design phase to ensure Alternative 6 is designed in a manner conducive to minimizing traffic and congestion to the extent practicable.

4.8 NO ACTION ALTERNATIVE

Under the No Action Alternative, the DAF would not construct the Proposed Action. Environmental trends resulting from development would continue, and existing conditions at the Alternative sites would persist. As the No Action Alternative would not result in any incremental impacts, there would be no resulting cumulative effects even with consideration of any past, present or reasonably foreseeable future actions.

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APPENDIX A:

CONSULTATION WITH FEDERAL, STATE, AND LOCAL AGENCIES

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Consultation with Federal, State, and Local Agencies

The DAF coordinated with other federal agencies with jurisdiction by law or special expertise over the Proposed Action and Alternatives, as well as state and local agencies relevant to each Alternative location, to inform the range of issues to be addressed in the EA. The DAF sent an Early Notification Letter, delivered by mail or email, to each agency listed below in June or July 2021. A sample of these letters, as well as all responses received, is provided in this appendix.

Alternative 1 – Huntsville, AL (Redstone Arsenal)

Federal Agencies

U.S. Environmental Protection Agency
Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-8960
POC: Douglas White, Strategic Programs Office, NEPA Section
Email: Kajumba.ntale@epa.gov

U.S. Fish & Wildlife Service
1208 Main Street
Daphne, AL 36526
POC: William Pearson, Field Supervisor
Email: bill_pearson@fws.gov

U.S. Army Corps of Engineers
Mobile District
Planning / Environmental Division
P.O. Box 2288
Mobile, AL 36628-0001
POC: Jeremy M. LaDart, Planning and Environmental Division Chief
Email: CESAM-PA@usace.army.mil

U.S. Department of Agriculture
Natural Resources Conservation Service
Alabama State Office
3381 Skyway Drive
Auburn, AL 36830
POC: Ben Malone, State Conservationist
Email: ben.malone@usda.gov

State Agencies

Alabama Department of Environmental Management
P.O. Box 301463
Montgomery, AL 36130
POC: Phillip Stroud
Email: decaturmail@adem.alabama.gov

Alabama State Historic Preservation Office
468 South Perry Street
P.O. Box 300900
Montgomery, AL 36130
POC: Eric Sipes
Email: Section106@ahc.alabama.gov

Alternative 2 – Albuquerque, NM (Kirtland AFB)

Federal Agencies

U.S. Senate
303 Hart Senate Office Building
Washington, DC 20510
POC: Martin Heinrich

Dirksen Senate Building, Suite B40C
Washington, DC 20510
POC: Ben Ray Luján

U.S. House of Representatives
1305 Longworth House Office Building
Washington, DC 20515
POC: Yvette Herrell

1421 Longworth House Office Building
Washington, DC 20515
POC: Melanie Stansbury

1432 Longworth House Office Building
Washington, DC 20515
POC: Teresa Leger Fernandez

Federal Aviation Administration
Southwest Region
10101 Hillwood Parkway
Fort Worth, TX 76177-1524
POC: Rob Lowe, Regional Administrator

U.S. Department of Agriculture
Natural Resources Conservation Service
Los Lunas Service Center
2600 Palmilla Road
Los Lunas, NM 87031
POC: Martin Meairs, District Conservationist

Bureau of Indian Affairs
Southwest Regional Office
1001 Indian School Road NW
Albuquerque, NM 87104
POC: Patricia Mattingly, Acting Regional Director and Environmental Specialist
Email: patricia.mattingly@bia.gov

Bureau of Land Management
Albuquerque District Office
4101 Jefferson Plaza NE
Albuquerque, NM 87109
POC: Mark Mathews, Acting District Manager
Email: blm_nm_comments@blm.gov

U.S. Department of Interior
Office of Environmental Policy and Compliance
Albuquerque District
1001 Indian School Road NW Suite 348
Albuquerque, NM 87104
POC: Susan King, Regional Environmental Officer

U.S. Army Corps of Engineers
Albuquerque District
4101 Jefferson Plaza NE
Albuquerque, NM 87109
POC: George MacDonell, Chief of Environmental Resources Section
Email: cespa-pa@usace.army.mil

U.S. Environmental Protection Agency
Region 6
1201 Elm Street, Suite 500
Dallas, TX 75270
POC: Michael Jansky, Project Review Lead
Email: jansky.michael@epa.gov

U.S. Forest Service
Southwest Region
333 Broadway Boulevard SE
Albuquerque, NM 87102
POC: Cheryl Prewitt, Regional Environmental Assessment

U.S. Fish and Wildlife Service
New Mexico Ecological Services Field Office
2105 Osuna Rd NE
Albuquerque, NM 87113
POC: Susan Millsap, Fish and Wildlife Administrator
Email: nmesfo@fws.gov

Department of Energy/National Nuclear Security Administration
Sandia Field Office
P.O. Box 5400
Albuquerque, NM 87187
POC: Jessica Small
Email: jessica.small@nnsa.doe.gov

Department of Energy/National Nuclear Security Administration
Office of General Counsel
P.O. Box 5400
Albuquerque, NM 87187
POC: John Weckerle
Email: john.weckerle@nnsa.doe.gov

State Agencies

New Mexico Historic Preservation Division
Department of Cultural Affairs
Bataan Memorial Building
407 Galisteo Street, Suite 236
Santa Fe, NM 87501
POC: Jeff Pappas, State Historic Preservation Officer and Director
Email: jeff.pappas@state.nm.us

New Mexico State Land Office
310 Old Santa Fe Trail
Santa Fe, NM 87501
POC: Stephanie Garcia Richard, Commissioner of Public Lands

New Mexico Energy, Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, NM 87505
POC: Sarah Cottrell Propst, Cabinet Secretary-Designate

New Mexico Department of Game and Fish
P.O. Box 25112
Santa Fe, NM 87504
POC: Matt Wunder, Chief

New Mexico Department of Agriculture
MSC 3189 Box 30005
Las Cruces, NM 88003
POC: Jeff M. Witte, Director/Secretary

New Mexico Environment Department
Office of General Counsel & Environmental Policy
P.O. Box 5469
Santa Fe, NM 87502-5469
POC: James C. Kenney

Local Agencies

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

Bernalillo County Manager
One Civic Plaza NW 10th Floor
Albuquerque, NM 87102
POC: Julie Morgas Baca, Bernalillo County Manager

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

City of Albuquerque Office of the Mayor
P.O. Box 1293
Albuquerque, NM 87103
POC: Mathew Ross, Director of Communications

Albuquerque City Council
P.O. Box 1293
Albuquerque, NM 87103
POC: Councilmembers

City of Albuquerque Planning Department
P.O. Box 1293
Albuquerque, NM 87103
POC: Brennon Williams

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

Alternative 3 - Bellevue, NE (Offutt AFB)

Federal Agencies

U.S. Fish and Wildlife Service
9325 South Alda Road
Wood River, NE 68883
POC: Amanda Ciurej
Email: nebraskaes@fws.gov
amanda_ciurej@fws.gov

U.S. Environmental Protection Agency
11201 Renner Boulevard
Lenexa, KS 66219
POC: Joshua Tapp
Email: Tapp.Joshua@epa.gov

U.S. Army Corps of Engineers
Omaha District
1616 Capitol Avenue, Suite 9000
Omaha, NE 68102
POC: Colonel Mark R. Himes
Email: DLL-CENWO-PAO@usace.army.mil

Federal Aviation Administration
901 Locust Street
Kansas City, MO 64106-2641
POC: Scott Tener
Email: Scott.tener@faa.gov

U.S. Department of Agriculture
Natural Resources Conservation Service
Nebraska State Office
Federal Building, Room 152
100 Centennial Mall North
Lincoln, NE 68508
POC: Jeff Vander Wilt, Acting State Conservationist
Email: Jeffrey.VanderWilt@usda.gov

State Agencies

Nebraska Game and Parks Commission
2200 North 33rd Street
Lincoln, NE 68503
POC: Mellissa Marinovich, Assistance Division Administrator – Endangered & Threatened Species, Wind & Energy, and Environmental Review and Jessica Tapp, Environmental Analyst Supervisor
Email: Melissa.marinovich@nebraska.gov; Jessica.tapp@nebraska.gov

Nebraska State Historic Preservation Office
1500 R Street
P.O. Box 82554
Lincoln, NE 68501
POC: Jill Dolberg, Deputy State Historic Preservation Officer
Email: jill.dolberg@nebraska.gov

Nebraska Department of Environment and Energy
1200 N Street, Suite 400
P.O. Box 98922
Lincoln, NE 68509
POC: Jim Macy, Director
Email: NDEE.moreinfo@nebraska.gov

Nebraska Department of Natural Resources
301 Centennial Mall South
Lincoln, NE 68509
POC: Tom Riley, Director
Email: tom.riley@nebraska.gov

Local Agencies

City of Bellevue Planning Department
1510 Wall Street
Bellevue, NE 68005
POC: Tammi Palm
Email: Tammi.Palm@bellevue.net

Sarpy County Planning Department
1210 Golden Gate Drive, Suite 1240
Papillion, NE 68046
POC: Donna Lynam, Interim Director of Planning
Email: planning@sarpy.gov

Alternative 4 – Colorado Springs, CO (Peterson SFB)

Federal Agencies

U.S. Army Corps of Engineers
Pueblo Office
200 South Santa Fe Avenue, Suite 301
Pueblo, Colorado 81003
Email: CESPA-RD-CO@usace.army.mil

U.S. Environmental Protection Agency
Region 8
999 18th Street, Suite 200
Denver, CO 80202
POC: Director, Office of Federal Activities
Email: thomas.debrah@epa.gov

U.S. Fish and Wildlife Service
134 Union Boulevard, Suite 650
Lakewood, CO 80228
POC: Nicole Alt, Field Supervisor
Email: Coloradoes@fws.gov, MountainPrairie@fws.gov

U.S. Department of Agriculture
Natural Resources Conservation Service
Colorado State Office
Denver Federal Center
Building 56, Room 2604
P.O. Box 25426
Denver, CO 80225-0426
POC: Clint Evans, State Conservationist
Email: Clint.Evans@usda.gov

State Agencies

Colorado Department of Agriculture
305 Interlocken Parkway
Broomfield, CO 80021
POC: Bev Zubke, Executive Assistant to the Commissioner
Email: beverly.zubke@state.co.us

Colorado Department of Public Health and Environment
Federal Facilities, HMWM 2800
4300 Cherry Creek Drive South
Denver, CO 80246
Email: cdphe.information@state.co.us

Air Pollution Control Division, APCD-TS-B2
4300 Cherry Creek Drive South
Denver, CO 80246
Email: cdphe.information@state.co.us

Colorado Natural Heritage Program
Colorado State University
1475 Campus Delivery
Fort Collins, CO 80523
Email: CNHP@colostate.edu

History Colorado
State Historic Preservation Officer
1200 Broadway
Denver, CO 80203
POC: Steve Turner
Email: oahp@state.co.us

Colorado Department of Transportation
2829 W. Howard Place, 4th Floor
Denver, CO 80204

El Paso County Development Services Department
2880 International Circle, Suite 110
Colorado Springs, CO 80910
POC: plnweb@elpasoco.com

El Paso County Public Health Department
1675 West Garden of the Gods Road, Suite 2044
Colorado Springs, CO 80907
Email: healthinfo@elpasoco.com

Pikes Peak Area Council of Governments
15 South 7th Street
Colorado Springs, CO 80905
Email: agunning@ppacg.org

El Paso County Board of County Commissioners
Centennial Hall
200 South Cascade, Suite 100
Colorado Springs, CO 80903
LonginosGonzalezJr@elpasoco.com

El Paso County Community Services Department, Environmental
3255 Anker Drive
Colorado Springs, CO 80922
POC: Nancy Prieve, Natural Resources Specialist
Email: NancyPrieve@elpasoco.com

Alternative 5 – San Antonio, TX (Port San Antonio)

Federal Agencies

U.S. Environmental Protection Agency
Region 6
1201 Elm Street, Suite 500
Dallas, TX 75270
POC: Eli Martinez
Email: Martinez.eli@epa.gov

U.S. Fish and Wildlife Service
Austin Ecological Services Field Office
10711 Burnet Road, Suite 200
Austin, TX 78758
POC: Adam Zerrenner, Field Supervisor and Tanya Sommer, Branch Chief, Consultations and Habitat Conservation Plans.
Email: adam_zerrenner@fws.gov, Tanya_Sommer@fws.gov

U.S. Department of Agriculture
Natural Resources Conservation Service
Texas State Office
101 South Main Street
Temple, TX 76501
POC: Kristy Oates, State Conservationist
Email: kristy.oates@usda.gov

State Agencies

Texas Commission on Environmental Quality
Region 13 - San Antonio
14250 Judson Rd
San Antonio, TX 78233-4480
POC: Joel Anderson, Regional Director
Email: info@tceq.texas.gov

Texas Historical Commission
State Historic Preservation Office
P.O. Box 12276
Austin, TX 78711-2276
POC: Mark S. Wolfe, Pamela Opiela, Emily Dylla
Email: mark.wolfe@thc.texas.gov, pamela.opiela@thc.texas.gov, Emily.Dylla@thc.texas.gov

Texas Parks and Wildlife Department
4200 Smith School Road
Austin, TX 78744
POC: John Silovsky, Director of Wildlife

Local Agencies

City of San Antonio Planning Department
111 Soledad, Suite 650
San Antonio, TX 78205
POC: Bridgett White, Director

City of San Antonio Economic Development Department
City Tower
100 West Houston Street, 19th Floor
San Antonio, TX 78205
POC: Alex Lopez, Director

Bexar County Economic Development Department
101 W Nueva, Suite 944
San Antonio, TX 78207
POC: Deborah Carter, Economic Development Director

Bexar County Community Development Department
233 N. Pecos Suite 320
San Antonio, TX 78207
POC: Jo Estrada, Community Resources Director

Alternative 6- Brevard County, FL (Space Coast Spaceport)

Federal Agencies

Federal Aviation Administration
Office of Commercial Space Transportation
800 Independence Ave, SW
Washington, DC 20591
POC: Stacey Zee, Environmental Protection Specialist
Email: stacey.zee@faa.gov

U.S. Army Corps of Engineers
Jacksonville District
701 San Marco Blvd
Jacksonville, FL 32207-8175
POC: COL Andrew Kelly, District Commander

U.S. Environmental Protection Agency
Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-8960
POC: Ntale Kajumba, Acting Chief of the NEPA Program Office
Email: kajumba.ntale@epa.gov

U.S. Fish and Wildlife Service
North Florida Ecological Services Office
7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256-7517
POC: Larry Williams, State Supervisor – Florida Ecological Services
Email: jaxregs @ fws.gov,
larry_williams@fws.gov

U.S. Department of Agriculture
Natural Resources Conservation Service
Florida State Office
4500 NW 27th Avenue, Building A
Gainesville, FL 32606
POC: Juan Hernandez, State Conservationist
Email: Juan.Hernandez@usda.gov

State Agencies

Florida State Historic Preservation Office
R.A. Gray Building, 4th Floor
500 South Bronough Street
Tallahassee, FL 32399
POC: Timothy Parsons, State Historic Preservation Officer and Scott Edwards, Historic Preservationist

Florida Department of Environmental Protection
Central District Office
3319 Maguire Boulevard
Orlando, FL 32803
Email: DEP_CD@DEP.state.fl.us

Florida Office of Intergovernmental Programs
3900 Commonwealth Blvd, MS 47
Tallahassee, FL 32399
POC: Chris Stahl, Clearinghouse Coordinator
Email: State.Clearinghouse@dep.state.fl.us

Florida Natural Areas Inventory
Natural Heritage Program
1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
POC: Dan Hipes, Director
Email: dhipes@fnai.fsu.edu

Florida Fish and Wildlife Conservation Commission
Northeast Region Office
1239 SW 10th Street
Ocala, FL 34471

POC: Greg Workman, Regional Director

Spaceport Operations
Mark Bontrager
Space Florida
100 Spaceport Way
Cape Canaveral, FL 32920
POC: Spaceport Operations, Vice President
Email: mbontrager@spaceflorida.gov

Local Agencies

City of Titusville Planning
P.O. Box 2806
Titusville, FL 32796
POC: Peggy Busacca, Director
Email: Peggy.Busacca@Titusville.com

Brevard County Planning and Development
2725 Judge Fran Jamieson Way
Melbourne, FL 32940
POC: Tad Calkins, Director
Email: tad.calkins@brevardfl.gov

North Brevard Economic Development Zone
400 South Street
Titusville, FL 32780
POC: Troy Post, Executive Director
Email: troy.post@brevardfl.gov

St. Johns River Water Management District
525 Community College Pkwy, SE
Palm Bay, FL 32909
POC: John Juilianna, Service Center Director
Email: jjuilianna@sjrwmd.com

Communications & Partner Relations, Economic Development Commission of Florida's Space Coast
6525 3rd Street, Suite 304
Rockledge, FL 32955
POC: Brian Baluta

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SAMPLE EARLY NOTIFICATION LETTER

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, REDSTONE
4488 MARTIN ROAD
REDSTONE ARSENAL, ALABAMA 35898-5000

AMIM-REG-ZA (RN 1) 3 June 2021

MEMORANDUM FOR US Environmental Protection Agency – Region 4 (Acting Chief of the NEPA Program Office/Ms. Ntale Kajumba), Sam Nunn Atlanta Federal Center, 61 Forsyth Street, SW, Atlanta, GA 30303-8960

SUBJECT: Establishment of Permanent US Space Command Headquarters Facility

1. The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent US Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). The proposed HQ facility would accommodate approximately 1,816 personnel in a multistory office/administrative building with approximately 460,000 square feet (SF) of functional space and approximately 310,000 SF of parking space.

2. The US Department of Defense (DoD) established USSPACECOM in 2019 as the eleventh unified combatant command. The purpose of this Proposed Action, accordingly, is to establish a permanent operational USSPACECOM HQ to facilitate a functional combatant command. The Proposed Action is needed due to the current lack of suitable permanent facilities in which USSPACECOM can fulfill its required functions and achieve full operational capability.

3. The EA will analyze the potential range of environmental impacts that would result from the Proposed Action. The US Air Force is considering six alternative sites for implementation of the Proposed Action: Cape Canaveral Spaceport, Florida; Kirtland Air Force Base (AFB), New Mexico; Offutt AFB, Nebraska; Peterson AFB, Colorado; Port San Antonio, Texas; and Redstone Arsenal, Alabama (enclosed). The EA will also analyze the No Action Alternative, which reflects the status quo, as a baseline for comparison of potential effects from the Proposed Action.

4. With the exception of the Cape Canaveral Spaceport and Port San Antonio sites, the alternative sites are on DoD installations owned and maintained by the federal government. All of the sites are currently vacant and have undergone varying levels of prior disturbance. No occupied buildings or facilities (including housing) would be displaced by the Proposed Action. The Peterson AFB and Redstone Arsenal sites are very similar to the sites that were previously analyzed in the US Air Force's 2019 EA for basing and construction of interim and permanent USSPACECOM HQ facilities.

AMIM-REG-ZA (RN 1)
SUBJECT: Establishment of Permanent US Space Command Headquarters Facility

5. The EA will be prepared in compliance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code 4321, et seq.), the Council on Environmental Quality NEPA Implementing Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and the Air Force and Army Environmental Impact Analysis Processes (32 CFR 989, 32 CFR 651). To support development of the EA, the US Air Force is also conducting site-specific field studies as necessary for wetlands, sensitive species, and cultural resources pursuant to the federal Clean Water Act of 1972, Endangered Species Act of 1973, and National Historic Preservation Act of 1966.

6. As part of this EA, we request your assistance in identifying any potential areas of environmental impact to be assessed in this analysis. If you have any specific items of interest about this proposal, please contact Allison Guilliams within 30 days of receipt of this letter at 256-842-6948 or allison.n.guilliams.civ@mail.mil.

Encl

GLEN N O. MELLOR
COL, SC
Commanding

Maximum Limits of Disturbance (104.7 Acres)

Permanent Site Boundary (244.3 Acres)

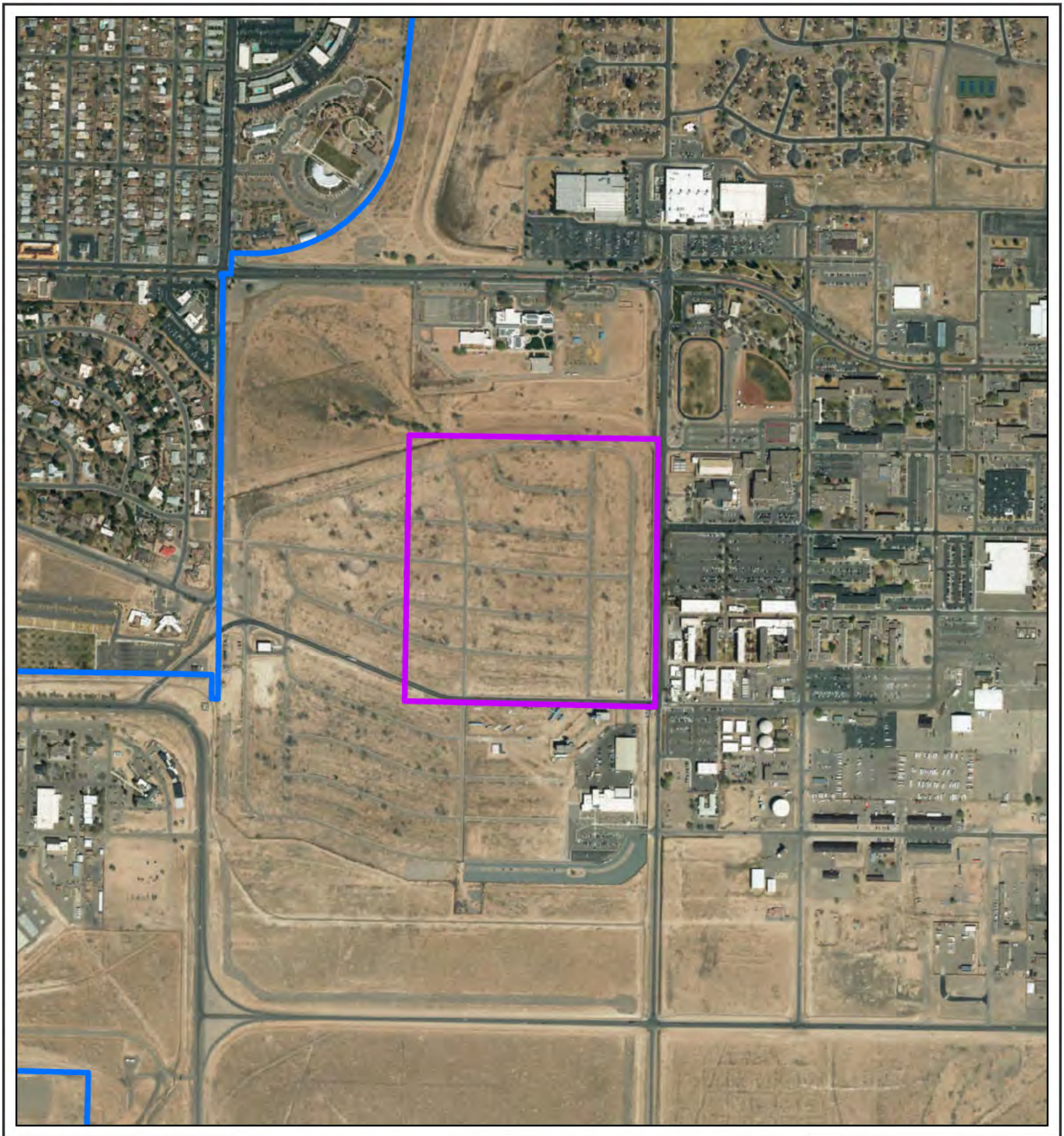
USSPACECOM

Cape Canaveral Spaceport
Cape Canaveral, FL

0 250 500 1,000 Feet

N

Source: ESRI 2019



Proposed Permanent Site Boundary (59.1 Acres)

Kirtland Air Force Base

USSPACECOM

Kirtland Air Force Base
Albuquerque, NM

0 300 600 1,200 Feet

N

Source: ESRI 2019

Proposed Permanent Site Boundary (10.9 Acres)

Offutt Air Force Base

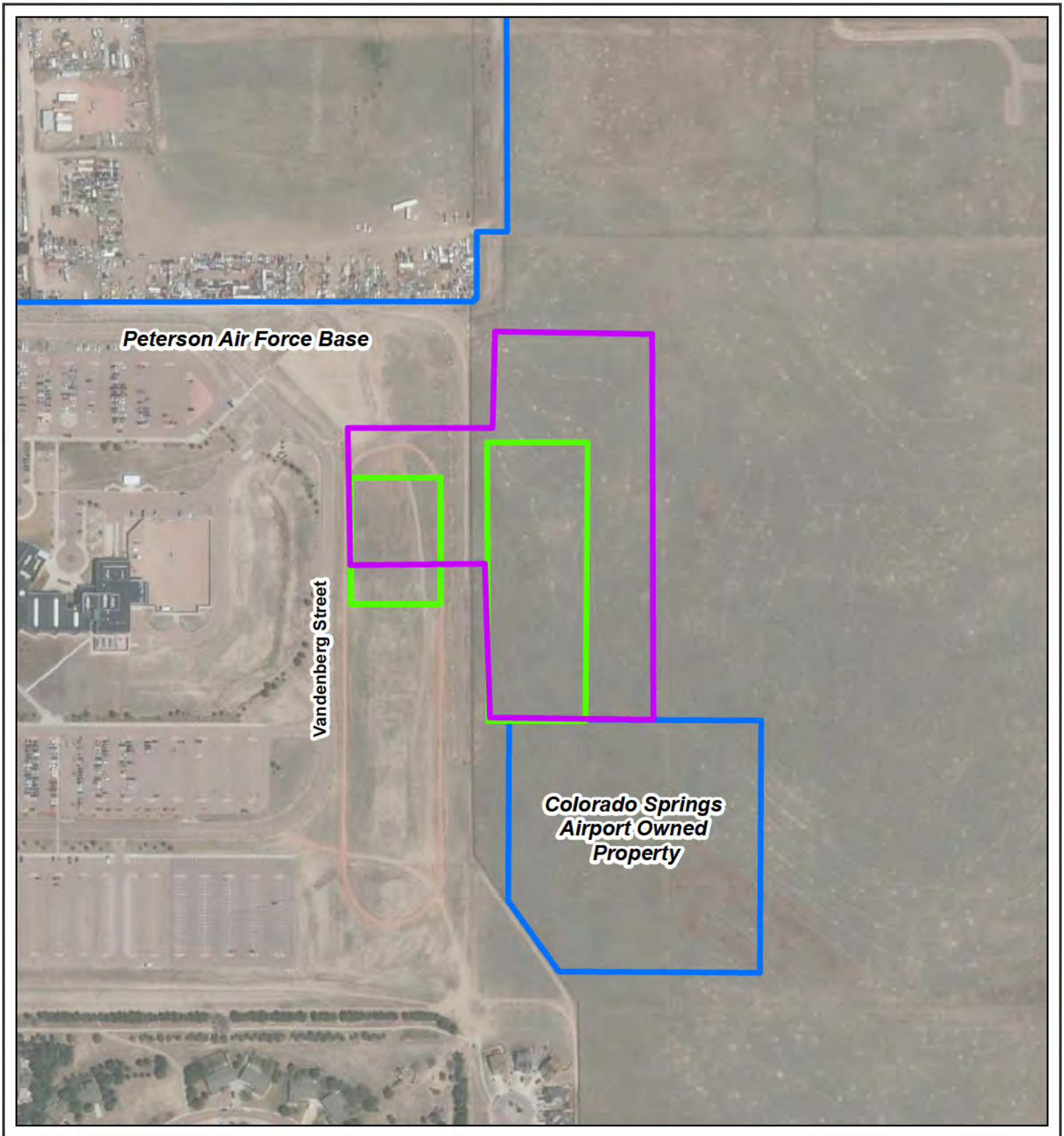
USSPACECOM

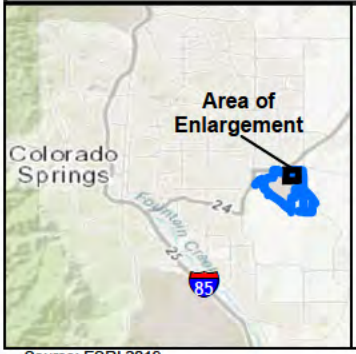
Offutt Air Force Base
Offutt AFB, NE

0 150 300 600 Feet

N

Source: ESRI 2019





Proposed Permanent Site Boundary (2021) (13.7 Acres)

Previously Studied Site Boundary (2019)

Peterson Air Force Base

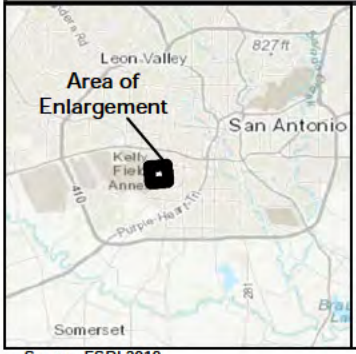
USSPACECOM

Peterson Air Force Base
Colorado Springs, CO

0 125 250 500
Feet

N

Source: ESRI 2019



Proposed Permanent Site Boundary (32.5 Acres)

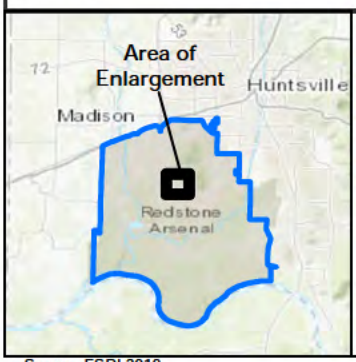
USSPACECOM

Port San Antonio
San Antonio, TX

0 250 500 1,000 Feet

N

Source: ESRI 2019



Proposed Permanent Site Boundary (2021) (59.9 Acres)

Previously Studied Site Boundary (2019)

Redstone Arsenal

USSPACECOM

Redstone Arsenal
Huntsville, AL

0 250 500 1,000 Feet

N

Source: ESRI 2019

From: White, Douglas
To: [redacted]
Cc: Kajumba, Ntale; Gissentanna, Larry; Warf, Jennifer; Busam, Michael
Subject: [EXTERNAL] EPA Comments: Proposed USSPACECOM Headquarters
Date: Thursday, July 15, 2021 6:07:37 PM

Good afternoon Ms. Guilliams,

Re: EPA Comments on the Notice of Intent to Prepare an Environmental Assessment for the Construction and Operation of a Permanent United States Space Command Headquarters Facility

The U. S. Environmental Protection Agency (EPA) is in receipt of the referenced document and has reviewed the subject proposal in accordance with Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA). The United States Department of the Air Force (DAF) is conducting an Environmental Assessment (EA) for the proposed construction and operation of facilities to host a permanent headquarters for the United States Space Command (USSPACECOM).

Under the Proposed Action Alternative, DAF would select a location, construct, and operate a 460,000-square-foot (SF) office building and a 310,000 SF parking space that would host 1,816 personnel. Depending on the site selected, the EPA presumes that a secure entrance and perimeter will be needed at the headquarters facility. The purpose of this EA is for DAF to evaluate the impacts of this Proposed Action.

Based on the EPA's review of the scoping documents, the Proposed Action is reasonably consistent with the current land use and available resources of three of the six proposed locations. It appears that the proposed project, if sited at Kirtland Air Force Base (AFB), Port San Antonio, or Redstone Arsenal will not have a significant impact on human health and the environment. Though inconsistent with current land use, selection of the Cape Canaveral Spaceport site may potentially have no significant impacts.

Alternatives Considered: The EPA understands that six sites have been selected for the initial selection process. Of these sites, Port San Antonio Texas (33-Acres) and Cape Canaveral Spaceport Florida (244-acres) are not federal property; however the Port San Antonio site borders Joint Base San Antonio Kelly Annex (JBSA) and is comprised of industrially developed land that is isolated by JBSA and the Union Pacific Sosan rail yard. The Offutt AFB Nebraska (11-Acres) and Peterson AFB Colorado (14-Acres) sites are smaller than the Proposed Action's building and parking footprint of 18-Acres. The Kirtland AFB (59-Acres) and Redstone Arsenal (60-Acres) sites are located on US military installations that currently host activity similar to the Proposed Action. The EPA recommends analyzing the proposed alternatives and providing a rationale for alternatives that are eliminated from further consideration. Please consider using the NEPAssist tool (https://www.epa.gov/nepa/nepassist), as part of the analysis process. NEPAssist combines multiple Geographic Information System (GIS) and internet databases to help screen for environmental impacts.

Environmental Justice: Possible impacts to local populations will vary by site and should be fully evaluated and inform site selection. In the case of Redstone Arsenal, centrally locating the Proposed Action on a large US military installation may insulate local populations from potential impacts, while acquisition and use of non-federal property such as Cape Canaveral Spaceport may entail greater unknown impacts. Consistent with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income

Populations (https://www.epa.gov/laws-regulations/summary-executive-order-12898-federal-actionsaddress-environmental-justice), please ensure protected populations are not disproportionately or adversely impacted by the project. We also promote compliance with Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, if applicable. Please use the EJSCREEN tool (https://www.epa.gov/ejscreen) as part of the NEPA analysis process. EJSCREEN combines environmental and demographic data to help determine environmental justice concerns that are integral to the NEPA process.

Energy and Recycling: The EPA recommends the use of sustainable building practices that maximize energy and water conservation, and the use of renewable energy. Please consult appropriate federal agencies (https://www.energy.gov/eere/femp/sustainable-federal-buildings) for energy conservation requirements. Efforts should be made to divert any recyclable materials such as concrete, steel and asphalt away from landfills and repurpose materials instead. The appropriate NEPA document should also address potential environmental and health impacts to construction workers.

Water Quality: The Proposed Action would disturb a considerable amount of soil. A construction stormwater permit will be required before construction can begin. The scoping document indicates that impacts to surface water bodies will be evaluated. Best management practices (BMP) should be implemented to protect Waters of the US (WOTUS) before and after construction. The EPA recommends that WOTUS delineations and flood water maps inform site selection and project development, and coordination with the US Army Corps of Engineers be made where proposed activities might enter or affect WOTUS. Land development and construction of impervious surfaces should take place alongside the construction of rainwater runoff control structures that are designed to leave existing stormwater runoff profiles of the selected site unchanged, in accordance with Section 438 of the Energy Independence and Security Act of 2007.

Geological Resources, IRP Sites, and Hazardous Waste Disposal: Resource Conservation and Recovery Act solid wastes should be disposed of in accordance with federal regulations. Department of Defense Installation Restoration Program (IRP) management and state IRP databases should be consulted prior to site selection and construction. The EPA understands that some of the proposed sites are on military installations that have land-use restrictions and active restoration programs. The EPA recommends including details and locations of these sites within the EA.

Air Quality and Climate Change: The EPA recommends analyzing the Proposed Action using tools such as the Air Conformity Applicability Model to verify that the Proposed Action will not produce emissions above de minimis levels or contribute towards exceedances of existing air emissions permits. The EPA understands that Proposed Action is not of the type to produce significant ongoing direct air emissions after construction is completed. Indirect emissions, including those that contribute to climate change, should be reduced by implementing energy conservation technology in facility designs and administrative procedures that encourage the use of ride-sharing and public transportation. Site selection criteria should consider present availability of sufficient transportation for the Proposed Action's 1,816 personnel. During construction, the EPA recommends controlling fugitive dust emissions and implementing measures to reduce diesel emissions, such as switching to cleaner fuels, retrofitting current equipment with emission reduction technologies, repowering older engines with newer cleaner engines, replacing older vehicles, and reducing idling through operator training and contracting policies.

Thank you for the opportunity to provide comments on DAF's proposed USSPACECOM headquarters. For effective coordination, please provide this office with an electronic version of the draft EA for further review and keep the local community informed and involved throughout the project process. If you have any questions, feel free to contact me at the information provided in my email.

V/R
Douglas White
U.S. Environmental Protection Agency
Region 4 Strategic Programs Office, NEPA Section
61 Forsyth Street, SW
Atlanta, GA 30303-8960
[redacted]

From: Busam, Michael <[redacted]>
Sent: Wednesday, June 9, 2021 8:53 AM
To: Kajumba, Ntale <[redacted]>
Cc: Guilliams, Allison N CIV USARMY USAG (USA) <[redacted]>; Warf, Jennifer <[redacted]>
Subject: Request for Information: Proposed USSPACECOM Headquarters at Redstone Arsenal

Ms. Kajumba,

The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). The Air Force's Preferred Alternative site is located at US Army Garrison Redstone Arsenal in Alabama.

Please see the attached Stakeholder Letter for greater detail regarding this Proposed Action and EA process.

As part of this EA, the Air Force requests your assistance in identifying any potential areas of environmental impact to be assessed in this analysis. If you have additional information regarding the Proposed Action and alternatives for inclusion and consideration during the EA process, we would appreciate receiving such information. To ensure that the Air Force has sufficient time to consider your input, please contact Allison Guilliams within 30 days of receipt of this letter by email to: allison.n.guilliams.civ@mail.mil; or by phone at (256) 842-6948.

Thank you,
Michael Busam

Michael Busam, AWB®

Environmental Planner
Impact Assessment & Permitting (IAP) Department
[redacted]

AECOM
12420 Milestone Center Drive, Suite 150
Germantown, MD 20876
T 301.250.2934
F 301.820.3409
www.aecom.com
Imagine it. Delivered.

United States Department of Agriculture
Natural Resources Conservation Service
1300 Meridian Street, Suite 23-F
Huntsville, AL 35801

June 17, 2021

Glenn O. Mellor-Col, SC Commanding
Department of The Army
US Army Installation Management Command
Headquarters, United States Army Garrison, Redstone
4488 Martin Road
Redstone, Arsenal, Alabama 35898-5000

Subject: Establishment of Permanent US Space Command Headquarter Facility

Colonel Glenn O. Mellor:

This letter is in response to a request for comments regarding the establishment of the US Space Command Headquarters facility, and its impact on the environment and its relation to soils. Due to the nature of the project, the project is exempt from the Farmland Protection Policy Act (FPPA).

Activities that are not subject to the Farmland Protection Policy Act includes:

- Federal permitting and licensing
- Projects planned and completed without the assistance of a Federal agency
- Projects on land already in urban development or used for water storage
- Construction within an existing right-of-way purchased on or before August 4, 1984
- *Construction for national defense purposes*
- Construction of on-farm structures needed for farm operations
- Surface mining, where restoration to agricultural use is planned
- Construction of new minor secondary structures such as a garage or storage shed.

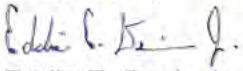
In addition:

“Only assistance and actions that would convert farmland to nonagricultural uses are subject to this Act. Assistance and actions related to the purchase, maintenance, renovation, or replacement of existing structures and sites converted prior to the time of an application for assistance from a Federal Agency, including assistance and actions related to the construction of minor new ancillary structures (such as garages or sheds), are not subject to the Farmland Protection Policy Act.”

NRCS primary concern is the possible conversion of prime farmland. Erosion and sediment control measures should be implemented and maintained during the construction phase to protect natural resources. However, construction activities near and across water bodies could be a Clean Water Act violation. Therefore, contacting your local Army Corps of Engineers representative is suggested on projects where it may be applicable.

If you have any additional questions, please contact me at (256) 947-5191 or email: eddie.davis@usda.gov.

Respectfully,



Eddie E. Davis Jr.
Resource Soil Scientist

STATE OF ALABAMA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
WILDLIFE AND FRESHWATER FISHERIES DIVISION

64 North Union Street, Ste. 567
P. O. Box 301456
Montgomery, AL 36130-1456
Phone: (334) 242-3465 Fax: (334) 242-3032
www.outdooralabama.com

July 9, 2021

Allison Guilliams
Office of the Garrison Commander
Department of the Army
US Army Installation Management Command
Headquarters, United States Army Garrison, Redstone
4488 Martin Road
Redstone Arsenal, Alabama 35998-5000

RE: Request for Information: Proposed USSPACECOM Headquarters at Redstone Arsenal

Dear Colonel Glenn O. Mellor:

The Division of Wildlife and Freshwater Fisheries, Department of Conservation and Natural Resources (ADCNR) has reviewed the above-referenced information request and provides the following comments and recommendations:

- Based on the information provided in your letter dated June 9, 2021 and our own research, the state protected Tricolor Bat (*Perimyotis subflavus*), Tuscumbia Darter (*Etheostoma tuscumbia*), Southern Cavefish (*Typhlichthys subterraneus*), Alabama Cave Crayfish (*Cambarus jonesi*), Tennessee Clubshell (*Pleurobema oviforme*), Tennessee Pigtoe (*Pleuronaia barnesiana*), Longsolid (*Fusconaia subrotunda*), Engraved Elimia (*Elimia perstriata*), Skirted Hornsnail (*Pleurocera pyrenella*) federally threatened Northern Myotis (*Myotis septentrionalis*) and federally endangered Alabama Cave Shrimp (*Palaemonias alabamae*) and Gray Myotis (*Myotis grisescens*) are known to occur within 3-miles of the project. This project may impact these species if proper tree removal, erosion control and re-vegetation procedures are not followed. In addition, several known caves and springs are located within 3-miles of the project. Enclosed is a list of additional Madison County sensitive species that are believed to occur in the designated county and the legal protection status of each species. Due to the presence of these species and karst habitats nearby, the upmost care should be taken to avoid impacts, directly or indirectly during project construction. We currently have no objections to the proposed project in Madison County, Alabama, pending preparation of an Environmental Assessment, if strict adherence to proper tree removal, erosion control and re-vegetation procedures are implemented.

- Federally-protected species are under the jurisdiction of the U. S. Fish and Wildlife Service. Please contact the U.S. Fish and Wildlife Service (251-441-5181) regarding potential impacts to federally-protected species.

- No net loss of stream or wetland functions should occur as a result of the project. Adverse functional impacts may result from physical impacts to a stream or wetland, or from the alteration of a stream's natural flow regime or the impairment of wetland hydrology. Adverse stream impacts requiring mitigation may include accelerated siltation resulting from improper construction or erosion control practices, stream realignment, flow diversion or interruption, the placement of riprap or other fill in the streambed in such a way that habitat functions are impaired or fish movement is impeded under low flow conditions, and other modifications of habitat or hydrology which reduce the density or diversity of aquatic species. If streams, ditches, or wetlands will be impacted by the proposed activity, the Mobile District, Army Corps of Engineers should be contacted at (251-690-3188) to determine if the

activity falls under a Corps regulation requiring mitigation for adverse ecological, morphological, or hydrological impacts.

- The state and federally protected aquatic species in Madison County are highly sensitive to runoff, erosion and sedimentation from disturbed soils. Environmental impacts should be minimized prior to and during construction by strict adherence to proper erosion control and re-vegetation procedures. Installation and implementation of best management practices (BMPs), as outlined in the Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas (July 2018) and the Field Guide for Erosion and Sediment Control on Construction Sites in Alabama (December 2018), will aid in minimizing erosion and migration of sediments into nearby stream or river systems.

- State water quality standards (particularly those related to erosion control, water turbidity, and dissolved oxygen) should be strictly adhered to.

- If tree removal is necessary for the project, removal of trees should be outside of bat roosting periods (between October 15 and March 31), to avoid disturbing potential habitat for state-wide ranging protected bat species.

We appreciate the opportunity to comment on this project and identify any areas of environmental impact to be assessed in an Environmental Assessment. ADCNR comments and recommendations above are preliminary in an attempt to improve the document during drafting for further evaluation. Before the project is finalized and approved, full evaluation should determine if all wildlife and fisheries resource concerns are satisfactorily addressed through, scientific study, analysis and ensure that acceptable mitigation plans have been developed. Please contact me if we may be of further assistance (334-242-3469).

Sincerely,

Todd Fobian
Environmental Affairs Supervisor

Enclosure

ALABAMA'S FEDERALLY LISTED AND STATE PROTECTED SPECIES (BY COUNTY)

This is a list of protected species that are believed to occur in the designated county and the legal protection status of each species. This list is a combination of the U.S. Fish and Wildlife Service (Daphne field office) federally listed species county and state lists and the Alabama State Lands Division's Natural Heritage Section (SLD-NHS) Database of species occurrence data. This list is continually being updated, and, therefore, it may be incomplete or inaccurate and is provided strictly for informational purposes. Site specific information can be provided by Alabama Department of Conservation and Natural Resources (ADCNR) Wildlife and Freshwater Fisheries Division (WFF), SLD-NHS and/or the U.S. Fish and Wildlife Service (Daphne field office) prior to project activities. To be certain of occurrence, surveys should be conducted by qualified biologists to determine if a sensitive species occurs within a project area. Species not listed for a given county does not imply that they do not occur there, only that their occurrence there is as yet unrecorded by these two agencies. This list is currently under review and reflects only our current understanding of species distributions. It also does not constitute any form of Section 7 consultation. The ADCNR, WFF and SLD-NHS recommends that the U.S. Fish and Wildlife Service field office in Daphne be contacted for Section 7 consultations.

Madison

Protection Status	Common Name	Scientific Name		Applicable State Regulation
State Protected	Alabama Cave Crayfish	Cambarus	jonesi	220-2-.98 (1) (a)
Endangered |State Protected	Alabama Cave Shrimp	Palaemonias	alabamae	220-2-.98 (1) (a)
Endangered | State Protected	Alabama Cavefish	Speoplatyrhinus	poulsoni	220-2-.92 (1) (a)
Endangered | State Protected	Alabama Lampmussel	Lampsilis	virescens	220-2-.98 (1) (a)
State Protected	Allegheny Woodrat	Neotoma	magister	220-2-.92 (1) (e)
State Protected	Angled Marstonia	Marstonia	angulobasis	220-2-.98 (1) (a)
Endangered | State Protected	Anthony's Riversnail	Athearnia	anthonyi	220-2-.98 (1) (a)
Endangered | State Protected	Armored Marstonia	Marstonia	pachyta	220-2-.98 (1) (a)
Endangered	Birdwing Pearly Mussel	Lemiox	rimosus	
State Protected	Black Sandshell	Ligumia	recta	220-2-.98 (1) (a)
State Protected	Blotchside Logperch	Percina	burtoni	220-2-.92 (1) (a)
State Protected	Bluebreast Darter	Etheostoma	camurum	220-2-.92 (1) (a)
Endangered | State Protected	Boulder Darter	Etheostoma	wapiti	220-2-.92 (1) (a)
State Protected	Coal Skink	Eumeces	anthracinus	220-2-.92 (1) (c)
State Protected	Common Kingsnake	Lampropeltis	getula	220-2-.92 (1) (c)
Endangered	Cumberland Bean	Venustaconcha	trabalis	220-2-.98 (1) (a)
State Protected	Cumberland Moccasinshell	Medionidus	conradicus	220-2-.98 (1) (a)
Endangered |State Protected	Cumberland Monkeyface	Quadrula	intermedia	220-2-.98 (1) (a)
Endangered	Dromedary Pearly Mussel	Dromus	dromas	
State Protected	Eastern Black Kingsnake	Lampropeltis	nigra	220-2-.92 (1) (c)
State Protected	Eastern Hellbender	Cryptobranchus	alleganiensis	220-2-.92 (1) (b)
State Protected	Eastern Small-footed Myotis	Myotis	leibii	220-2-.92 (1) (e)
State Protected	Eastern Spotted Skunk	Spilogale	putorius	220-2-.92 (1) (e)
State Protected	Eastern Tiger Salamander	Ambystoma	tigrinum	220-2-.92 (1) (b)
State Protected	Engraved Elimia	Elimia	perstriata	220-2-.98 (1) (a)
Endangered | State Protected	Fanshell	Cyprogenia	stegaria	220-2-.98 (1) (a)
Endangered | State Protected	Fine-Rayed Pigtoe	Fusconaia	cuneolus	220-2-.98 (1) (a)
Endangered | State Protected	Fine-Rayed Pigtoe	Fusconaia	cuneolus	220-2-.98 (1) (a)
State Protected	Flint River Crayfish	Faxonius	cooperi	220-2-.98 (1) (a)
State Protected	Gilt Darter	Percina	evides	220-2-.92 (1) (a)
Endangered |State Protected	Gray Myotis	Myotis	grisescens	220-2-.92 (1) (e)
State Protected	Green Salamander	Aneides	aeneus	220-2-.92 (1) (b)
Endangered |State Protected	Indiana Bat	Myotis	sodalis	220-2-.92 (1) (e)
State Protected	Kidneyshell	Ptychobranchus	fasciolaris	220-2-.98 (1) (a)

State Protected	Lake Sturgeon	Acipenser	fulvescens	220-2-.92 (1) (a)
State Protected	Little Brown Bat	Myotis	lucifugus	220-2-.92 (1) (e)
State Protected	Lollipop Darter	Etheostoma	neopterum	220-2-.92 (1) (a)
State Protected	Longnose Crayfish	Cambarus	longirostris	220-2-.98 (1) (a)
State Protected	Longsolid	Fusconaia	subrotunda	220-2-.98 (1) (a)
State Protected	Long-tailed Weasel	Mustela	frenata	220-2-.92 (1) (e)
State Protected	Monkeyface	Theliderma	metanevra	220-2-.98 (1) (a)
State Protected	Moss Pyrg	Marstonia	scalariformis	220-2-.98 (1) (a)
State Protected	Mountain Fork Crayfish	Cambarus	diupalma	220-2-.98 (1) (a)
State Protected	Mountain Madtom	Noturus	eleutherus	220-2-.92 (1) (a)
State Protected	Mucket	Actinonaias	ligamentina	220-2-.98 (1) (a)
State Protected	Northern Map Turtle	Graptemys	geographica	220-2-.92 (1) (c)
Threatened |State Protected	Northern Myotis	Myotis	septentrionalis	220-2-.92 (1) (e)
State Protected	Ohio Pigtoe	Pleurobema	cordatum	220-2-.98 (1) (a)
Endangered	Orange-Foot Pimpleback	Plethobasus	cooperianus	
Endangered |State Protected	Oyster Mussel	Epioblasma	capsaeformis	220-2-.98 (1) (a)
State Protected	Painted Creekshell	Villosa	taeniata	220-2-.98 (1) (a)
Endangered | State Protected	Pale Lilliput	Toxolasma	cylindrellus	220-2-.98 (1) (a)
Endangered | State Protected	Palezone Shiner	Notropis	albizonatus	220-2-.92 (1) (a)
Endangered | State Protected	Pink Mucket	Lampsilis	abrupta	220-2-.98 (1) (a)
State Protected	Prickly Cave Crayfish	Cambarus	hamulatus	220-2-.98 (1) (a)
State Protected	Pyramid Pigtoe	Pleurobema	rubrum	220-2-.98 (1) (a)
Threatened |State Protected	Rabbitsfoot	Quadrula	cylindrica	220-2-.98 (1) (a)
State Protected	Rafinesque's Big-eared Bat	Corynorhinus	rafinesquii	220-2-.92 (1) (e)
Endangered	Ring Pink	Obovaria	retusa	
Endangered | State Protected	Rough Pigtoe	Pleurobema	plenum	220-2-.98 (1) (a)
State Protected	Round Hickorynut	Obovaria	subrotunda	220-2-.98 (1) (a)
State Protected	Round Pigtoe	Pleurobema	sintoxia	220-2-.98 (1) (a)
State Protected	Round-Rib Elimia	Elimia	nassula	220-2-.98 (1) (a)
State Protected	Rugged Hornsnail	Pleurocera	alveare	220-2-.98 (1) (a)
State Protected	Seal Salamander	Desmognathus	monticola	220-2-.92 (1) (b)
State Protected	Seepage Salamander	Desmognathus	aeneus	220-2-.92 (1) (b)
State Protected	Shelta Cave Crayfish	Orconectes	sheltae	220-2-.98 (1) (a)
Endangered | State Protected	Shiny Pigtoe	Fusconaia	cor	220-2-.98 (1) (a)
State Protected	Skirted Hornsnail	Pleurocera	pyrenella	220-2-.98 (1) (a)
Endangered |State Protected	Slabside Pearlymussel	Pleuronaia	dolabelloides	220-2-.98 (1) (a)
Threatened | State Protected	Slackwater Darter	Etheostoma	boschungi	220-2-.92 (1) (a)
Endangered | State Protected	Slender Campeloma	Campeloma	decampi	220-2-.98 (1) (a)
State Protected	Slender Glass Lizard	Ophisaurus	attenuatus	220-2-.92 (1) (c)
State Protected	Slenderhead Darter	Percina	phoxocephala	220-2-.92 (1) (a)
State Protected	Slippershell Mussel	Alasmidonta	viridis	220-2-.98 (1) (a)
State Protected	Small-mouthed Salamander	Ambystoma	texanum	220-2-.92 (1) (b)
Threatened | State Protected	Snail Darter	Percina	tanasi	220-2-.92 (1) (a)
Endangered|State Protected	Snuffbox	Epioblasma	triquetra	220-2-.98 (1) (a)
State Protected	Southern Cave Crayfish	Orconectes	australis	220-2-.98 (1) (a)
State Protected	Southern Cavefish	Typhlichthys	subterraneus	220-2-.92 (1) (a)
State Protected	Speckled Crayfish	Cambarus	lentiginosus	220-2-.98 (1) (a)
Endangered |State Protected	Spectaclecase	Cumberlandia	monodonta	220-2-.98 (1) (a)
State Protected	Spike	Eurynia	dilatata	220-2-.98 (1) (a)
Threatened |State Protected	Spotfin Chub	Erimonax	monachus	220-2-.92 (1) (a)
Threatened |State Protected	Spring Pygmy Sunfish	Elassoma	alabamae	220-2-.92 (1) (a)
State Protected	Suckermouth Minnow	Phenacobius	mirabilis	220-2-.92 (1) (a)
State Protected	Sweet Home Alabama Cave Crayfish	Cambarus	speleocoopi	220-2-.98 (1) (a)
State Protected	Tennessee Cave Salamander	Gyrinophilus	palleucus	220-2-.92 (1) (b)
State Protected	Tennessee Clubshell	Pleurobema	oviforme	220-2-.98 (1) (a)
State Protected	Tennessee Heelsplitter	Lasmigona	holstonia	220-2-.98 (1) (a)
State Protected	Tennessee Pigtoe	Pleuronaia	barnesiana	220-2-.98 (1) (a)
State Protected	Tricolored Bat	Perimyotis	subflavus	220-2-.92 (1) (e)
Endangered	Tubercled Blossom	Epioblasma	torulosa	

State Protected	Tuscumbia Darter	Etheostoma	tuscumbia	220-2-.92 (1) (a)
Endangered | State Protected	White Wartyback	Plethobasus	cicatricosus	220-2-.98 (1) (a)

Key to codes on list:

- Endangered - Federally listed as an endangered species by the U. S. Fish and Wildlife Service
- Threatened - Federally listed as a threatened species by the U. S. Fish and Wildlife Service
- Candidate - Federally listed as a candidate species by the U. S. Fish and Wildlife Service
- Experimental - Species is protected throughout its range, except for the nonessential experimental population, by the U. S. Fish and Wildlife Service

- Federally-protected species are under the jurisdiction of the U. S. Fish and Wildlife Service. Please contact that agency regarding potential impacts to federally-protected species (251-441-5181).

- State Protected - It is unlawful to take, capture or kill; possess, sell or trade for anything of monetary value, or offer to sell or trade these species. Alabama Regulations relating to game, fish and furbearing animals. 2019-2020. Alabama Department of Conservation and Natural Resources. See http://www.outdooralabama.com/nongame-vertebrates-protected-alabama-regulations for more

Notes:

- Birds: The Nongame Species Regulation 220-2-.92 (1)(d) states: All nongame birds are protected under the provisions of this regulation except crows, starlings, blackbirds, English sparrows, Eurasian collared doves, pigeons and other non-native species.
- The Bald Eagle (Haliaeetus leucocephalus) has been delisted. This species is still protected by the Nongame Species Regulation and the Migratory Bird Act. This species is distributed statewide, but it is most likely to be observed near large rivers and reservoirs.
- The Migratory Bird Treaty Act (MBTA) prohibits the take of migratory birds, their nests, and eggs, except when specifically authorized by the Department of the Interior. Also, bald eagles are protected under the Bald and Golden Eagle Protection Act.
- Black Bear (Ursus americanus ssp.) may occur statewide.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1201 ELM STREET, SUITE 500
DALLAS, TEXAS 75270-2102

August 20, 2021

Mr. Steven T. Rose
Executive Director
US Space Command Logistics and Engineering
Peterson AFB, Colorado 80914

Dear Mr. Rose:

The U.S. Environmental Protection Agency (EPA) has reviewed the solicitation of views on locating and constructing the United States Space Command's Headquarters (HQ) at the Kirkland Air Force Base site, New Mexico. Our review is provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations (40 CFR Parts 1500 – 1508) and our NEPA review authority under Section 309 of the Clean Air Act.

EPA offers the following comments for your consideration:

Air Quality Comments
EPA asks that the Environmental Assessment (EA) provide a detailed discussion of ambient air conditions (baseline or existing conditions), National Ambient Air Quality Standards (NAAQS) and non-NAAQS pollutants, criteria pollutant nonattainment areas, and potential air quality impacts of the proposed project. Such an evaluation is necessary to understand the potential impacts from temporary, long-term, or cumulative degradation of air quality.

Recommendations:
EPA asks that the EA describe and estimate air emissions emitted from construction and operational activities, as well as proposed mitigation measures to minimize those emissions. We recommend an evaluation of the following measures to reduce emissions of criteria air pollutants and hazardous air pollutants (air toxics):

- ***Existing Conditions*** – EPA recommends the EA provide a detailed discussion of ambient air conditions, National Ambient Air Quality Standards, and criteria pollutant nonattainment areas in the vicinity of the project.

- ***Quantify Emissions*** – We suggest the EA estimate emissions of criteria and hazardous air pollutants (air toxics) from the proposed project, discuss the timeframe for release of these emissions over the lifespan of the project and describe and estimate emissions from potential construction activities, as well as proposed mitigation measures to minimize these emissions. The EA should also consider any expected air quality/visibility impacts to Class I Federal Areas identified in 40 CFR Part 81, Subpart D.

- ***Specify Emission Sources*** – EPA asks that the EA specify all emission sources by pollutant from mobile sources (on and off-road), stationary sources (including portable and temporary emission

units), fugitive emission sources, area sources, and ground disturbance. This source specific information should be used to identify appropriate mitigation measures and areas in need of the greatest attention.

Water Quality Comments

EPA recommends that impacts caused by discharges into nearby creeks that drain into nearby rivers be considered to minimize impacts to water quality. EPA recommends implementing green stormwater and green infrastructure practices wherever possible when designing the infrastructure surrounding the HQ. More information on green stormwater/infrastructure methods can be found here:
https://www.epa.gov/sites/production/files/2015-09/documents/green_infrastructure_roadshow.pdf

EPA asks that during construction best management practices (BMPs) be followed to prevent water quality degradation from construction activities. These BMPs are described in the following document:
https://www.epa.gov/sites/production/files/documents/DryCreekRancheraCaseStudy.pdf

EPA further recommends replanting/seeding all areas of land that are disturbed/impacted during the construction. EPA suggest replanting with turfgrasses/groundcover that are native to the project location. The native vegetation conserves water, prevents soil erosion, runoff, and ultimately protects the water quality of the watershed. Information can be found here:
https://www.caee.utexas.edu/prof/maidment/CE365KSpr14/Docs/LowImpactDevelopment.pdf

Hazardous, Toxic, and Radioactive Waste (HTRW) Comments

EPA recommends the lead agency conduct a site-specific field study to identify any potential Hazardous, Toxic, and Radioactive Waste sites on or near the proposed project location. Once identified the EA should evaluate the impacts of the project to the HTRW sites.

Environmental Justice Comments

EPA recommends using the following reports/guidance to supplement the applicable requirements for considering and analyzing impact to minority, low-income and/or disadvantage populations for the proposed action:

Promising Practice Reports available at: https://www.epa.gov/sites/production/files/2016-08/documents/nepa_promising_practices_document_2016.pdf;

Environmental Justice: Guidance Under the National Environmental Policy Act available at: https://www.epa.gov/sites/production/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf; and EJSCREEN Screening and Mapping Tool at: https://www.epa.gov/ejscreen; and NEPAssist at: https://www.epa.gov/nepa/nepassist.

EPA recommends implementation of the Justice 40 Initiative pursuant to Section 223 of Executive Order 14008 and to support and to advance equity for all in line with Executive Order 13958 as warranted.

We appreciate the opportunity to review this notice of intent to prepare an EA. If you have any questions, please contact Michael Jansky, the project review lead, at (214) 665-7451 or jansky.michael@epa.gov.

Sincerely,

ROBERT HOUSTON

Digitally signed by ROBERT HOUSTON
DN: c=US, o=U.S. Government, ou=Environmental Protection Agency, cn=ROBERT HOUSTON, 0.9.2342.19200300.100.1.1=68001003655693
Date: 2021.08.20 11:27:58 -05'00'

for Jonna Polk
Director
Office of Communities, Tribes and Environmental Assessment

From:	Greiner, Rick, NMENV
To:	Warf, Jennifer
Cc:	Busam, Michael
Subject:	[EXTERNAL] RE: Environmental Assessment (EA) for United States Space Command (USSPACECOM) Headquarters (HQ) facility
Date:	Monday, August 2, 2021 9:57:55 AM

Thank you!

From: Warf, Jennifer [redacted]
Sent: Monday, August 2, 2021 6:03 AM
To: Greiner, Rick, NMENV [redacted]
Cc: Busam, Michael [redacted]
Subject: RE: Environmental Assessment (EA) for United States Space Command (USSPACECOM) Headquarters (HQ) facility

Mr. Greiner,

This request is scoping-level. Our EA is on a pretty aggressive timeline/schedule, so ideally a response within 30 days will allow us the opportunity to take the information you provide under consideration in the development of the Draft EA.

Jen

Jennifer E. Warf
Associate Vice President
National DoD IAP Leader / Mid-Atlantic Department Manager
Impact Assessment & Permitting (IAP)
[redacted]

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From: Greiner, Rick, NMENV [redacted]
Sent: Friday, July 30, 2021 6:34 PM
To: Warf, Jennifer <[redacted]>
Subject: [EXTERNAL] Environmental Assessment (EA) for United States Space Command (USSPACECOM) Headquarters (HQ) facility

Dear Jennifer,

Regarding your request for assistance in identifying any potential areas of environmental to be assessed in the above referenced EA, is this request of a scoping-level nature? I want to make sure I request the level of detail you are expecting. Is there a time frame in which you expect to receive comments? Thanks much, Rick

Rick Greiner, PG | Science Coordinator
New Mexico Environment Department

[redacted]
[redacted] | #IamNMED

Science | Innovation | Collaboration | Compliance

FOR COVID-19 INFORMATION & GUIDANCE: https://cv.nmhealth.org/

--

From: Richard Meadows
To: Warf, Jennifer
Subject: [EXTERNAL] US Space Command EA comments
Date: Monday, August 2, 2021 12:52:36 PM
Attachments: image001.png

Jennifer,

I have reviewed your letter dated July 21, 2021 to our County Manager regarding the six alternative sites including Kirtland AFB for the new Space Command headquarters. As part of the EA, I would like to request a traffic study be prepared for the site for Gibson Blvd and the I-25/ Gibson interchange. There have been a few large developments locating along Gibson Blvd in the past year and the Gibson Blvd interchange needs to be replaced. If you haven't already, you should contact NMDOT District 3 Engineer [redacted]

Thanks,

Richard Meadows, AICP
Technical Planning Manager
Bernalillo County Public Works/ Technical Services
415 Silver Ave SW
[redacted]

From: Dan McGregor
To: Warf, Jennifer
Subject: [EXTERNAL] FW: US Space Command - Kirtland AFB EA information
Date: Monday, August 2, 2021 6:13:19 PM
Attachments: image003.png

From: Dan McGregor
Sent: Monday, August 2, 2021 4:05 PM
To: [redacted]
Subject: US Space Command - Kirtland AFB EA information

Ms. Warf

Thank you for contacting Bernalillo County regarding the on-going EA effort for the US Space Command at Kirtland AFB.

One of my coworkers will be contacting you regarding traffic mitigation issues at the northeast intersection of Kirtland AFB.

Please be advised that the air photo used to identify the site location is dated and the traffic routing from Louisiana and through the Gibson gate at Kirtland AFB has been significantly modified. This was done to address straight approach security concerns as well as to incorporate recent significant stormwater drainage and retention concerns.

There is a large stormwater basin located in the northwest corner of the study area now and the significantly increased impervious area from the project will need to be addressed to ensure that the recently constructed drainage feature has the capacity to accept stormwater runoff, with attended water quality concerns, from the proposed facility. Please contact the local flood control agency (AMAFCA) in this regard.

Respectfully

Daniel McGregor
Natural Resource Services Section Manager
Bernalillo County Public Works
[redacted]

The mission of Natural Resource Services is to steward Bernalillo County's natural resources. We do this by educating the public about protection and conservation of these resources, assisting with prudent development, monitoring, and providing technical input to the county's polices and projects

Obenland, Benjamin

From: WANDERSCHEID, JUDITH L CIV USSF USSPACECOM USSPACECOM/J4 [redacted]
Sent: Friday, August 20, 2021 11:15 AM
To: [redacted]
Cc: Warf, Jennifer; CLARK, MELISSA B GS-14 USAF AFGSC 377 MSG/CEIE; SCHNEIDER, GARY J GS-15 USAF AFGSC 377 MSG/CE; ROSE, STEVEN T GS-15 USAF USSPACECOM 21 MSG/J4; ARENSON, STEVEN L GS-14 USAF HAF U S AIR FORCE HQ/SAF/IEI
Subject: [EXTERNAL] Response to Your Question_USSPACECOM Permanent HQ Alternatives

Mr McGregor,

I am able to provide clarification to your questions below. In Jan 2021, the Secretary of the Air Force (SecAF) announced that Huntsville is the "Preferred Alternative" for the permanent USSPACECOM HQ location. [Note that USSPACECOM (United States Space Command) is a different entity than USSF (Space Force), and USSF is headquartered in the National Capitol Region.] Five "Reasonable Alternatives" were also named by the Secretary for the permanent USSPACECOM HQ location: Cape Canaveral Spaceport, FL; Port San Antonio, TX; Kirtland AFB, NM; Offutt AFB, NE; and Peterson AFB, CO. All six locations were identified during the Air Force's basing process as reasonable for meeting mission requirements. Under the National Environmental Policy Act, the Air Force is required to assess the potential environmental impacts of establishing a permanent HQ at the Preferred and Reasonable Alternative locations.

Respectfully,
Lynne

Lynne Wanderscheid, GS-14
USSPACECOM/J47
Deputy Division Chief, Infrastructure and Engineering

[redacted]

1670 Newport Rd
Colorado Springs, CO 80916

SIPR: [redacted]
JWICS: [redacted]

From: Dan McGregor [redacted]
Sent: Thursday, August 19, 2021 5:41 PM
To: Warf, Jennifer [redacted]
Cc: Clay Campbell [redacted] Brian J. Lopez [redacted]
Subject: [EXTERNAL] RE: US Space Command - Kirtland AFB EA information

Ms. Warf

A quick question for you on this. I thought back at first of the year, DOD had announced that the Space Force headquarters was to be at Huntsville.

So a bit confused here on the EA request announcing six possible alternative sites, with KAFB being one of the six.

The County Manager's office has requested that I clarify whether the determination for Huntsville has been rescinded and/or why the EA request process is continuing for the alternative sites?

Thanks for any information or insight you may have on the selection process and the current status particularly in regards to Kirtland AFB.

Respectfully

Dan McGregor
[redacted]

From:	Warf, Jennifer
To:	Parkinson, David W.
Cc:	Rael, Lawrence; WANDERSCHEID, JUDITH L CIV USSF USSPACECOM USSPACECOM/J4; Busam, Michael; Obenland, Benjamin; Kyzar, Carrie
Subject:	RE: Environmental Assessment for USSPACECOM HQ
Date:	Thursday, August 5, 2021 9:10:52 AM

Mr. Parkinson,

To ensure we have a productive teleconference and have the appropriate individuals on the call, could you please provide a brief description of the potential areas of impact that you wish to discuss?

Once we have this, we can confirm attendees and identify potential times for a telecon.

Thanks for your help.
Jen

Jennifer E. Warf
Associate Vice President
National DoD IAP Leader / Mid-Atlantic Department Manager
Impact Assessment & Permitting (IAP)
M [redacted]

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From: Parkinson, David W. [redacted]
Sent: Wednesday, August 4, 2021 7:41 PM
To: Warf, Jennifer [redacted]
Cc: Rael, Lawrence [redacted] WANDERSCHEID, JUDITH L CIV USSF USSPACECOM USSPACECOM/J4 [redacted] Busam, Michael [redacted] Obenland, Benjamin [redacted]
Subject: [EXTERNAL] RE: Environmental Assessment for USSPACECOM HQ

Ms. Warf and Ms. Wandersheid,

Thank you! How soon would you anticipate this meeting would need to occur? We are pretty flexible on our end in the coming weeks.

I am happy to set up a zoom or conference call but I am not aware of your protocols with civilian entities.

Thank you,

David Parkinson
Constituent Services Representative | Mayor's Office

1 Civic Plaza NW #11
Albuquerque, NM 87102
[redacted]
cabq.gov

ONE ALBUQUERQUE city of albuquerque

From: Warf, Jennifer [redacted]
Sent: Wednesday, August 4, 2021 3:02 PM
To: Parkinson, David W. [redacted]
Cc: Rael, Lawrence [redacted] WANDERSCHEID, JUDITH L CIV USSF USSPACECOM USSPACECOM/J4 [redacted] Busam, Michael [redacted] Obenland, Benjamin [redacted]
Subject: RE: Environmental Assessment for USSPACECOM HQ

Mr. Parkinson:

I am looping in Ms. Lynne Wandersheid, our main POC with US Space Command.

I would suggest if we schedule a call that we coordinate a time with her as well. I think she should be part of this call.

Jen

Jennifer E. Warf
Associate Vice President
National DoD IAP Leader / Mid-Atlantic Department Manager
Impact Assessment & Permitting (IAP)
[redacted]

Click here to connect with me on LinkedIn

From: Parkinson, David W. [redacted]
Sent: Wednesday, August 4, 2021 4:51 PM
To: Warf, Jennifer [redacted]
Cc: Rael, Lawrence [redacted]
Subject: [EXTERNAL] Environmental Assessment for USSPACECOM HQ

Ms. Warf,

On behalf of the City of Albuquerque's Chief Operations Officer Lawrence Rael (cc'd here), I am writing to notify you that he has received the correspondence from Executive Director Steven Rose regarding the USAF Environmental Assessment. COO Rael would like to schedule a phone call with you to assist in identifying any potential areas of environmental impact that may be assessed in the analysis.

When would be a good time to connect and set up the phone call? I am reachable at either of my numbers listed below.
Thank you!

David Parkinson
Constituent Services Representative | Mayor's Office

1 Civic Plaza NW #11
Albuquerque, NM 87102
[redacted]
cabq.gov

ONE ALBUQUERQUE city of albuquerque

United States Department of the Interior

FISH AND WILDLIFE SERVICE
9325 South Alda Road
Wood River, Nebraska 68883

In Reply Refer to:
USAF-USSPACECOM HQ
(06E22000-2021-CPA-0075)

July 7, 2021

Ms. Jennifer Warf
AECOM
12420 Milestone Center Drive, Suite 150
Germantown, Maryland 20879

Dear Ms. Warf:

This responds to your May 28, 2021, letter (see Enclosure One) requesting technical assistance from the U.S. Fish and Wildlife Service (Service) to identify potential areas of environmental impact resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (proposed project). As we understand it, our technical assistance will be used by the U.S. Air Force to complete their Environmental Assessment of the proposed project in compliance with the National Environmental Policy Act.

The Service has a responsibility to conserve fish and wildlife resources for the benefit of the American public under the following authorities: 1) Endangered Species Act; 2) Fish and Wildlife Coordination Act; 3) Bald and Golden Eagle Protection Act; and 4) Migratory Bird Treaty Act. Below we provide our comments under these authorities relative to the construction and operation of the proposed project should it occur at Offutt Air Force Base in Bellevue, Nebraska in Sarpy County.

ENDANGERED SPECIES ACT

Pursuant to section 7(a)(2) of the ESA, every federal agency, shall in consultation with the Service, ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a federally listed species or result in the destruction or adverse modification of federally designated critical habitat. If a proposed project may affect federally listed species or federally designated critical habitat, section 7 consultation is required.

In accordance with section 7 of ESA, we have determined that the following federally listed species may occur or be affected as a result of the proposed project:

Listed Species	Expected Occurrence
Northern Long-eared Bat (*Myotis septentrionalis*)	Forested habitats, man-made structures, and mines

Northern Long-Eared Bat

The Northern Long-eared Bat (NLEB) was listed as threatened in May 2015, with a 4(d) rule that became effective in January 2016. The 4(d) rule provides protection for the NLEB during its most vulnerable life stages in areas of its range affected by the fungal disease, White-nose Syndrome (WNS), the primary cause of the species' decline. The areas affected by WNS are collectively known as the WNS zone under the 4(d) rule. Within the WNS zone, incidental take (unintentional harm to bats incidental to otherwise lawful activities) is prohibited if: 1) it occurs within a known hibernaculum; 2) results in tree removal within 0.25-mile of a known hibernaculum; or 3) cuts or destroys a known maternity roost tree or the trees within 150 feet of a maternity roost tree during the NLEB pup season (June 1 through July 31). Federal agencies are still obligated to consult with the Service on projects that "may affect" the NLEB using the framework outlined in the Service's January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted for Take Prohibitions*; or through a standard section 7 consultation. More information is available at http://www.fws.gov/midwest/endangered/mammals/nleb/.

The State of Nebraska is within the known range of the NLEB. During the summer, NLEBs typically roost singly or colonially in cavities, underneath bark, crevices, or hollows of both live and dead trees and/or snags. Males and non-reproductive females may also roost near hibernacula like caves and mines. This bat is opportunistic in selecting roosts, using tree species based on presence of cavities, crevices, or peeling bark. NLEBs also occasionally roost in structures like barns and sheds particularly when suitable tree roosts are unavailable. They forage for insects in upland and lowland woodlots and tree-lined corridors along water. During the winter, NLEBs predominately hibernate in caves and abandoned mines. Additional habitat types and hibernacula may be identified as new information is obtained.

The proposed project area contains suitable maternity roost trees and structures for roosting. Therefore, we recommend that no tree removal or structure removal occur during the NLEB active season (April 1 to October 31) or, at a minimum, not occur during the species' maternity roost season (June 1 through July 31) to minimize impacts to pups at roosts not yet identified.

State Fish and Wildlife Resources

All federally listed species are also state-listed under the Nebraska Nongame and Endangered Species Conservation Act (Statue 37-806), a state law administered by the Nebraska Game and Parks Commission. There may be additional state-listed species affected by the proposed project that are not federally listed. To determine if the proposed project may affect state-listed species, the Service recommends that the U.S. Air Force contact Melissa Marinovich and Jessica Tapp at

the Nebraska Game and Parks Commission Planning and Program Division located at 2200 North 33rd Street, Lincoln, Nebraska by emailing ngpc.envreview@nebraska.gov.

REVIEW, COMMENTS, AND RECOMMENDATIONS ON THE PROPOSED PROJECT ACTION UNDER OTHER FISH AND WILDLIFE STATUTES

Bald and Golden Eagle Protection Act

The bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) are protected from a variety of harmful actions via take prohibitions in both the MBTA[1] and the Eagle Act. The Eagle Act, enacted in 1940 and amended several times, prohibits take of bald eagles and golden eagles, including their parts, nests, young or eggs, except where otherwise permitted pursuant to federal regulations. Incidental take of eagles from actions such as electrocutions from power lines or wind turbine strikes are prohibited unless specifically authorized via an eagle incidental take permit from the Service. The Eagle Act provides penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Eagle Act defines take to include the following actions: "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest or disturb." The Service expanded this definition by regulation to include the term "destroy" to ensure that "take" also encompasses destruction of eagle nests. Also the Service defined the term disturb which means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.

The Service has developed guidance for the public regarding means to avoid take of bald and golden eagles:

- The 2007 *National Bald Eagle Management Guidelines* serve to advise landowners, land managers, and others who share public and private lands with bald eagles when and under what circumstances the protective provisions of the Eagle Act may apply. They provide conservation recommendations to help people avoid and/or minimize such impacts to bald eagles, particularly where they may constitute "disturbance," which is prohibited by the Eagle Act.

[1] On December 22, 2017, the Department of the Interior's (DOI) Office of the Solicitor Memorandum M-37050 titled The Migratory Bird Treaty Act Does Not Prohibit Incidental Take https://www.doi.gov/sites/doi.gov/files/uploads/m-37050.pdf) concludes that the MBTA's prohibitions on pursuing, hunting, taking, capturing, killing, or attempting to do the same apply only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs. The MBTA list of protected species includes bald and golden eagles, and the law has been an effective tool to pursue incidental take cases involving eagles. However, the primary law protecting eagles is the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S. Code § 668), since the bald eagle was delisted under the Endangered Species Act in 2007. Memorandum-37050 does not affect the ability of the Service to refer entities for prosecution that have violated the take prohibitions for eagles established by the Eagle Act.

https://www.fws.gov/migratorybirds/pdf/management/nationalbaldeaglenanagementguidelines.pdf

The Service also has promulgated new permit regulations under the Eagle Act:

- New eagle permit regulations, as allowed under the Eagle Act, were promulgated by the Service in 2009 (74 FR 46836; Sept. 11, 2009) and revised in 2016 (81 FR 91494; Dec. 16, 2016). The regulations authorize the limited take of bald and golden eagles where the take to be authorized is associated with otherwise lawful activities. These regulations also establish permit provisions for intentional take of eagle nests where necessary to ensure public health and safety, in addition to other limited circumstances. The revisions in 2016 included changes to permit issuance criteria and duration, definitions, compensatory mitigation standards, criteria for eagle nest removal permits, permit application requirements, and fees in order to clarify, improve implementation and increase compliance while still protecting eagles.
  https://www.gpo.gov/fdsys/pkg/FR-2016-12-16/pdf/2016-29908.pdf

The Service's Office of Law Enforcement carries out its mission to protect eagles through investigations and enforcement, and by fostering relationships with individuals, companies, industries and agencies that have taken effective steps to avoid take, including incidental take of these species, and encouraging others to implement measures to avoid take. The Office of Law Enforcement focuses its resources on investigating individuals and entities that take eagles without identifying and implementing all reasonable, prudent and effective measures to avoid that take. Those individuals and entities are encouraged to work closely with Service biologists to identify available protective measures, and to implement those measures during all activities or situations where their action or inaction may result in the take of an eagle(s).

Migratory Bird Treaty Act

The conservation and management of migratory birds and their habitats continues to be a priority for the Service. As such, we are providing our recommendations to conserve and minimize impacts to migratory birds and their habitats. Most migratory bird nesting activity in Nebraska occurs during the period of April 1 to July 15 (primary nesting season). However, some migratory birds can nest outside of the primary nesting season. For example, raptors can nest in woodland habitats during February 1 through July 15, whereas American goldfinch, which occurs in a variety of shrubby habitats, normally nests from July to September.

The proposed project area is a previously disturbed property located on Offutt Air Force Base. The project area is currently occupied by baseball fields with manicured grass outfields, a playground with a few standing trees, and a road surface. To avoid/ minimize impacts to migratory birds to the greatest extent practicable, the Service recommends avoiding any tree removal during the primary nesting season. We also recommend employing activity/structure specific conservation measures, as appropriate, to avoid/minimize impacts to birds year-round. A list of recommended conservation measures by activity/ structure are available on our agency's website at:

https://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php.

We appreciate the opportunity to review and comment on this proposed project. Should you have any questions or require additional information relative to our authorities, please contact Ms. Amanda Ciurej within our office at amanda_ciurej@fws.gov or (308) 379-6592.

Sincerely,

Mark Porath

Digitally signed by Mark Porath
Date: 2021.07.08 15:16:37 -05'00'

Mark Porath
Nebraska Project Leader/Field Supervisor
Ecological Services, Mountain-Prairie Region

Enclosure

cc: Michael Busam, Environmental Planner, AECOM
Melissa Marinovich, Assistant Division Administrator, Nebraska Game and Parks Commission
Jessica Tapp, Environmental Analyst Supervisor, Nebraska Game and Parks Commission

Enclosure One

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS, 55TH WING (ACC)
OFFUTT AIR FORCE BASE, NEBRASKA

28 May 2021

Mr. Gary Chesley, P.E.
55 CES/CL
106 Peacekeeper Dr. Suite 2N3
Offutt AFB, NE 68113-4019

Ms. Eliza Hines
US Fish and Wildlife Service
9325 South Alda Road
Wood River, NE 68883

Dear Ms. Hines,

The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). The proposed HQ facility would accommodate approximately 1,816 personnel in a multistory office/administrative building with approximately 460,000 square feet (SF) of functional space and approximately 310,000 SF of parking space.

The US Department of Defense (DoD) established USSPACECOM in 2019 as the eleventh unified combatant command. The purpose of this Proposed Action, accordingly, is to establish a permanent operational USSPACECOM HQ to facilitate a functional combatant command. The Proposed Action is needed due to the current lack of suitable permanent facilities in which USSPACECOM can fulfill its required functions and achieve full operational capability.

The EA will analyze the potential range of environmental impacts that would result from the Proposed Action. The US Air Force is considering six alternative sites for implementation of the Proposed Action: Cape Canaveral Spaceport, Florida; Kirtland Air Force Base (AFB), New Mexico; Offutt AFB, Nebraska; Peterson AFB, Colorado; Port San Antonio, Texas; and US Army Garrison Redstone Arsenal, Alabama (enclosure). The EA will also analyze the No Action Alternative, which reflects the status quo, as a baseline for comparison of potential effects from the Proposed Action.

With the exception of the Cape Canaveral Spaceport and Port San Antonio sites, the alternative sites are on DoD installations owned and maintained by the federal government. All of the sites are currently vacant and have undergone varying levels of prior disturbance. No occupied buildings or facilities (including housing) would be displaced by the Proposed Action. The Peterson AFB and Redstone Arsenal sites are very similar to the sites that were previously analyzed in the US Air Force's 2019 EA for basing and construction of interim and permanent USSPACECOM HQ facilities.

The EA will be prepared in compliance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code 4321, et seq.), the Council on Environmental Quality NEPA Implementing Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and the Air Force and Army Environmental Impact Analysis Processes (32 CFR 989, 32 CFR 651). To support development of the EA, the US Air Force is also conducting site-specific field studies as necessary for wetlands, sensitive species, and cultural resources pursuant to the federal Clean Water Act of 1972, Endangered Species Act of 1973, and National Historic Preservation Act of 1966.

As part of this EA, we request your assistance in identifying any potential areas of environmental impact to be assessed in this analysis. If you have additional information regarding the Proposed Action and alternatives for inclusion and consideration during the NEPA compliance process, we would appreciate receiving such information. To ensure that the Air Force has sufficient time to consider your input, please contact Jennifer Warf within 30 days of receipt of this letter by email to: Jennifer.Warf@aecom.com; or by mail to: AECOM, ATTN: Jennifer Warf, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Sincerely,

CHESLEY.GARY.D.1140580828 Digitally signed by CHESLEY.GARY.D.1140580828 Date: 2021.05.28 13:31:24 -05'00'

GARY D. CHESLEY, P.E.
Director, 55th Civil Engineer Squadron

Enclosure:
Proposed Action Site Alternative Maps

Maximum Limits of Disturbance (104.7 Acres)

Permanent Site Boundary (244.3 Acres)

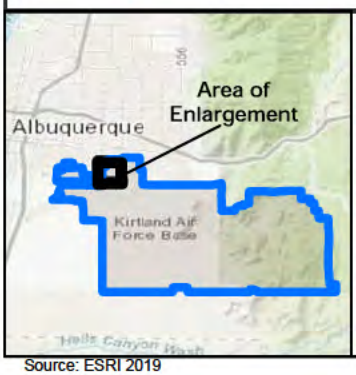
USSPACECOM

Cape Canaveral Spaceport
Cape Canaveral, FL

0 250 500 1,000 Feet

N

Source: ESRI 2019



Proposed Permanent Site Boundary (59.1 Acres)

Kirtland Air Force Base

USSPACECOM

Kirtland Air Force Base
Albuquerque, NM

0 300 600 1,200 Feet

N

Source: ESRI 2019

Proposed Permanent Site Boundary (10.9 Acres)

Offutt Air Force Base

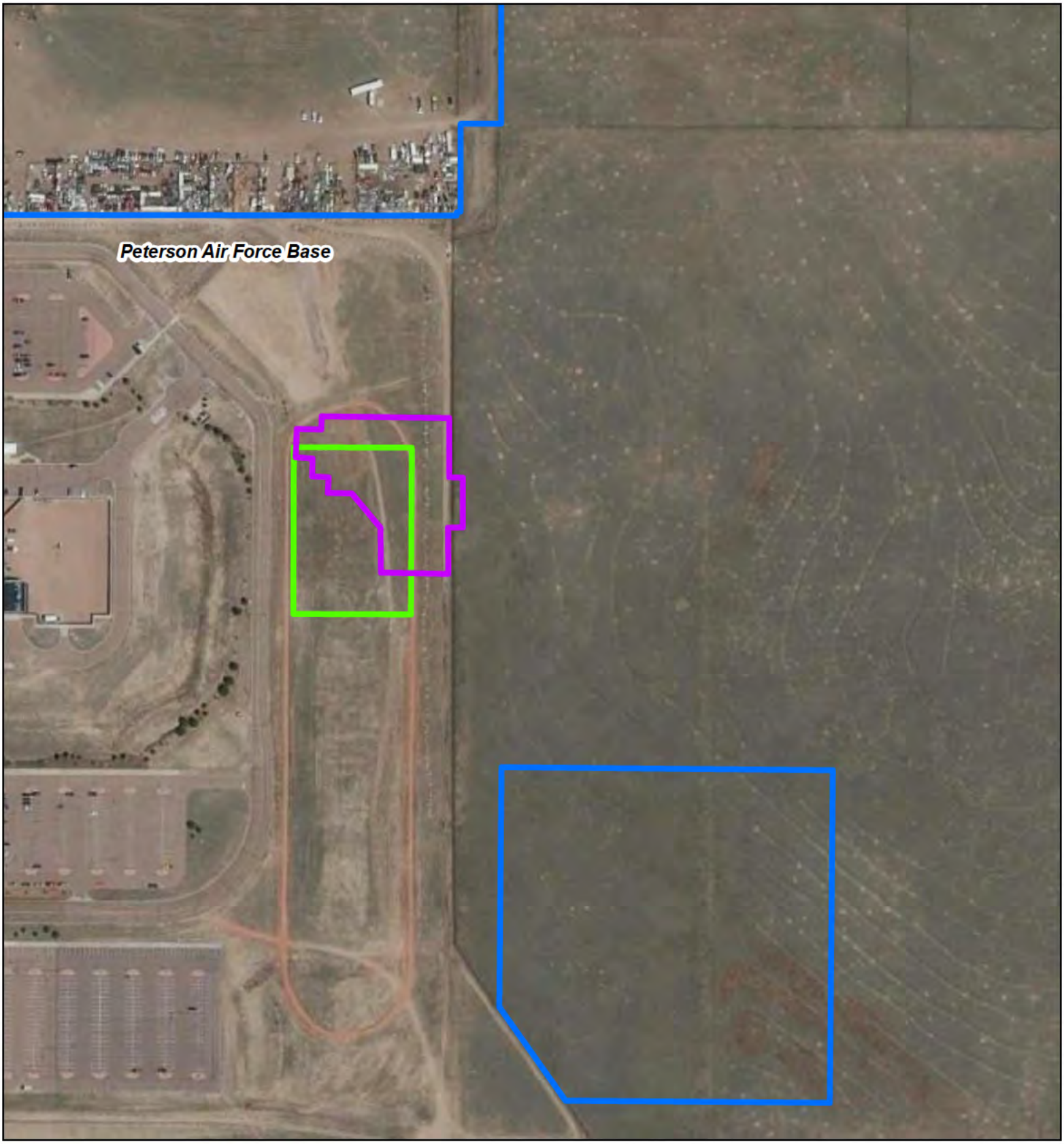
USSPACECOM

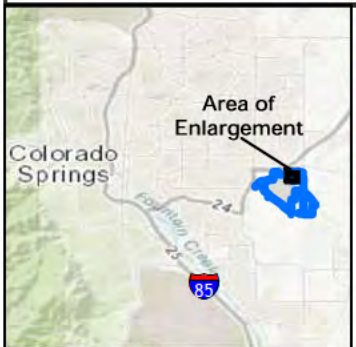
Offutt Air Force Base
Offutt AFB, NE

0 150 300 600 Feet

N

Source: ESRI 2019





Proposed Permanent Site Boundary (2021) (2.56 Acres)

Previously Studied Site Boundary (2019)

Peterson Air Force Base

USSPACECOM

Peterson Air Force Base
Colorado Springs, CO

0 125 250 500 Feet

N

Source: ESRI 2019

Proposed Permanent Site Boundary (32.5 Acres)

USSPACECOM

Port San Antonio
San Antonio, TX

0 250 500 1,000 Feet

N

Source: ESRI 2019

Proposed Permanent Site Boundary (2021) (59.9 Acres)

Previously Studied Site Boundary (2019)

Redstone Arsenal

USSPACECOM

Redstone Arsenal
Huntsville, AL

0 250 500 1,000 Feet

N

Source: ESRI 2019

From: Robichaud, Jeffery
To: Busam, Michael; Tapp, Joshua
Cc: Warf, Jennifer
Subject: [EXTERNAL] RE: Request for Information: Proposed USSPACECOM Headquarters at Offutt Air Force Base
Date: Wednesday, June 2, 2021 2:00:52 PM
Attachments: 20210602_USSPACECOMEA_Offutt_USEPA_Signed.pdf

Michael I no longer have responsibility for the NEPA program, that would be Josh Tapp who I have cc'd here.

From: Busam, Michael [redacted]
Sent: Wednesday, June 2, 2021 12:27 PM
To: Robichaud, Jeffery [redacted]
Cc: Warf, Jennifer [redacted]
Subject: Request for Information: Proposed USSPACECOM Headquarters at Offutt Air Force Base

Mr. Robichaud,

The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). One of the six alternative sites is located at Offutt Air Force Base in Nebraska.

Please see the attached Stakeholder Letter for greater detail regarding this Proposed Action and EA process.

As part of this EA, the Air Force requests your assistance in identifying any potential areas of environmental impact to be assessed in this analysis. If you have additional information regarding the Proposed Action and alternatives for inclusion and consideration during the EA process, we would appreciate receiving such information. To ensure that the Air Force has sufficient time to consider your input, please contact Jennifer Warf within 30 days of receipt of this letter by email to: [redacted]; or by mail to: AECOM, ATTN: Jennifer Warf, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Thank you,
Michael Busam

Michael Busam, AWB®
Environmental Planner
Impact Assessment & Permitting (IAP) Department
[redacted]

AECOM
12420 Milestone Center Drive, Suite 150
Germantown, MD 20876
T 301.250.2934
F 301.820.3409
www.aecom.com
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From:	Tener, Scott (FAA)
To:	Warf, Jennifer
Subject:	[EXTERNAL] Comment: Request for Information: Proposed USSPACECOM Headquarters at Offutt Air Force Base
Date:	Thursday, June 3, 2021 12:32:58 PM

We generally do not provide comments from an environmental perspective. However, we provide the following for your consideration:

Airspace Considerations
The project may require formal notice and review for airspace considerations under 14 CFR Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*. To determine if you need to file with FAA, go to http://oeaaa.faa.gov and click on the "Notice Criteria Tool" found at the left-hand side of the page.

Several items may need to be checked such as any structures, towers, poles, objects, and temporary construction equipment that exceed the notice criteria. For projects involving long routes, multiple locations will need to be checked. We recommend checking the route at 1-mile intervals and at increases in elevation.

If after using the tool, you determine that filing with FAA is required, we recommend a 120-day notification to accommodate the review process and issue our determination letter. Proposals may be filed at http://oeaaa.faa.gov. More information on this process may be found at: http://www.faa.gov/airports/central/engineering/part77/

Please let me know if you have any questions,

Scott Tener
Environmental Specialist

FAA Central Region Airports Division
901 Locust St., Room 364
Kansas City, Missouri 64106-2325
[redacted]
http://www.faa.gov/airports/central/

From: Busam, Michae[redacted]
Sent: Wednesday, June 2, 2021 12:29 PM
To: Tener, Scott (FAA) [redacted]
Cc: Warf, Jennifer [redacted]
Subject: Request for Information: Proposed USSPACECOM Headquarters at Offutt Air Force Base

Mr. Tener,

The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the

potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). One of the six alternative sites is located at Offutt Air Force Base in Nebraska.

Please see the attached Stakeholder Letter for greater detail regarding this Proposed Action and EA process.

As part of this EA, the Air Force requests your assistance in identifying any potential areas of environmental impact to be assessed in this analysis. If you have additional information regarding the Proposed Action and alternatives for inclusion and consideration during the EA process, we would appreciate receiving such information. To ensure that the Air Force has sufficient time to consider your input, please contact Jennifer Warf within 30 days of receipt of this letter by email to: [redacted]; or by mail to: AECOM, ATTN: Jennifer Warf, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Thank you,
Michael Busam

Michael Busam, AWB®
Environmental Planner
Impact Assessment & Permitting (IAP) Department
[redacted]

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Germantown, MD 20876
T 301.250.2934
F 301.820.3409
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From:	Weiser, Britt - NRCS, Lincoln, NE
To:	Warf, Jennifer
Cc:	Vander Wilt, Jeffrey - NRCS, Huron, SD; Weiser, Britt - NRCS, Lincoln, NE; Petersen, Jamie - NRCS, Lincoln, NE; Busam, Michael
Subject:	[EXTERNAL] FW: Request for Information: Proposed USSPACECOM Headquarters at Offutt Air Force Base
Date:	Friday, June 4, 2021 12:29:41 PM
Attachments:	20210602_USSPACECOMEA_Offutt_USDA_Signed.pdf

Dear Ms. Warf,

For the Offutt Air Force Base proposed location, the Nebraska Natural Resources Conservation Service (NRCS) has no comment as this action is not associated with an NRCS-assisted program or action. Based on a review of the request letter, the project's action would not affect NRCS program administration or implementation on these lands.

In addition, it has been determined that a Farmland Conversion Impact Rating form (AD-1006) will not be needed on this project since the project site is within the city limits, already developed, and no additional cropland will be taken out of production, thus, NRCS has determined that your project was found to be cleared of FPPA significant concerns.

Thank you for the opportunity to review and comment on this matter.

Britt Weiser

State Resource Conservationist
NRCS, Lincoln, Nebraska
[redacted]

From: Vander Wilt, Jeffrey - NRCS, Huron, SD [redacted]
Sent: Wednesday, June 2, 2021 2:19 PM
To: Weiser, Britt - NRCS, Lincoln, NE [redacted]
Cc: Petersen, Jamie - NRCS, Lincoln, NE [redacted]
Subject: FW: Request for Information: Proposed USSPACECOM Headquarters at Offutt Air Force Base

Britt,

Please ensure we provide a response by the first of July.

Thanks,

Jeff Vander Wilt
Acting STC for Nebraska
[redacted]

From: Busam, Michael [redacted]
Sent: Wednesday, June 2, 2021 12:34 PM

To: Vander Wilt, Jeffrey - NRCS, Huron, SD [redacted]
Cc: Warf, Jennifer [redacted]
Subject: Request for Information: Proposed USSPACECOM Headquarters at Offutt Air Force Base

Mr. Vander Wilt,

The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). One of the six alternative sites is located at Offutt Air Force Base in Nebraska.

Please see the attached Stakeholder Letter for greater detail regarding this Proposed Action and EA process.

As part of this EA, the Air Force requests your assistance in identifying any potential areas of environmental impact to be assessed in this analysis. If you have additional information regarding the Proposed Action and alternatives for inclusion and consideration during the EA process, we would appreciate receiving such information. To ensure that the Air Force has sufficient time to consider your input, please contact Jennifer Warf within 30 days of receipt of this letter by email to: [redacted]; or by mail to: AECOM, ATTN: Jennifer Warf, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Thank you,
Michael Busam

Michael Busam, AWB®
Environmental Planner
Impact Assessment & Permitting (IAP) Department
[redacted]

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NEBRASKA
GAME PARKS
2200 N. 33rd St. • P.O. Box 30370 • Lincoln, NE 68503-0370 • Phone: 402-471-0641

June 29, 2021

Jennifer Warf
AECOM
12420 Milestone Center Dr.
Suite 150
Germantown, MD 20876

RE: Preparation of an Environmental Assessment, USSPACECOM, Potential Site at Offutt AFB, Sarpy County, Nebraska

Dear Ms. Warf:

Nebraska Game and Parks Commission (NGPC) staff members have reviewed the information for the proposal identified above. This review was requested pursuant to the National Environmental Policy Act (NEPA). These comments are related to the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters facility evaluation of a potential site location at Offutt Air Force Base in Sarpy County, Nebraska.

The proposed project would not impact any NGPC State Park, State Recreation Area, or State Wildlife Management Areas, as no NGPC owned or managed properties are located within the immediate project area. The proposed Nebraska site would be located in an area that has been previously disturbed, lacks native vegetation, and is surrounded by urban development. Therefore, the project does not appear that it would have any major impacts on fish or wildlife resources at this location.

Based on our review of the information provided, aerial photographs, and the Nebraska Natural Heritage database, the project is located within the range the state-listed threatened northern long-eared bat (*Myotis septentrionalis*) and the state-listed threatened western prairie fringed orchid (*Platanthera praeclara*). However, we have no records of these species, nor does there appear to be any suitable habitat for these species within the proposed project area. The project is not likely to have any adverse impacts on the aforementioned state-listed threatened species, or any other state-listed endangered or threatened species.

In general, NGPC has concerns for impacts to wetlands, streams and riparian habitats. We recommend that impacts to wetlands, streams, and associated riparian corridors be avoided and minimized, and that any unavoidable impacts to these habitats be mitigated. If any fill materials will be placed into any wetlands or streams as a result of the proposed project, the U.S. Army Corps of Engineers should be contacted to determine if a 404 permit is needed. Based on aerial review of the proposed Nebraska project location, it does not appear that any wetlands, streams, or riparian areas would be impacted by this project, but a wetland determination should be conducted to ensure no impacts.

Thank you for opportunity to review this proposal. Please contact me if you have any questions regarding these comments at 402-471-5422 or melissa.marinovich@nebraska.gov.

Sincerely,

Melissa Marinovich
Assistant Division Administrator
Planning and Programming Division

ec: Micheal Busam (AECOM)
Nebraska USFWS

NEBRASKA
Good Life. Great Water.
DEPT. OF NATURAL RESOURCES

Project Review

DATE: June 22, 2021
TO: Jennifer Warf, AECOM
FROM: John Miller, NeDNR
SUBJECT: USSPACECOM HQ facilities.

As requested, the Nebraska Department of Natural Resources (NeDNR) has reviewed the proposed project and identified no potential impacts to jurisdictional dams, floodplain management, registered groundwater wells, stream gages, or surface water rights.

If you have any questions about this review, please feel free to contact me at [redacted] or [redacted].

Cc: Mike Thompson, NeDNR

From: Planning & Building Department
To: Busam, Michael
Subject: [EXTERNAL] Automatic reply: [EXT] Request for Information: Proposed USSPACECOM Headquarters at Offutt Air Force Base
Date: Wednesday, June 2, 2021 1:56:20 PM

Hello,

The Sarpy County Planning and Building Department is in receipt of your email and will provide a response soon. Due to COVID-19 restrictions affecting our office, we ask that you please allow 48 hours for a response. Additionally, we ask that you please limit calling or emailing within this time period as the repeated or duplicate communication lengthens our response time.

In the meantime, please see the links below to find answers to your general questions.

Planning Home<https://urldefense.com/v3/__https://www.sarpy.com/offices/planning-department/applications-forms-fees__;!!ETWISUBM!gAcipnzguS4myvb51s2tQzqug2T0YQkU6VxevsN0yHJF_mviI1j4SITWNvR1j5wkoQ$ > | Permit and Inspections FAQ<https://urldefense.com/v3/__https://www.sarpy.com/offices/planning-department/planning-frequently-asked-questions__;!!ETWISUBM!gAcipnzguS4myvb51s2tQzqug2T0YQkU6VxevsN0yHJF_mviI1j4SITWNvQQ0DJuPw$ > | Regulations<https://urldefense.com/v3/__https://www.sarpy.com/offices/planning-department/regulations__;!!ETWISUBM!gAcipnzguS4myvb51s2tQzqug2T0YQkU6VxevsN0yHJF_mviI1j4SITWNvTWZBUa7w$ > | Forms<https://urldefense.com/v3/__https://www.sarpy.com/offices/planning-department/applications-forms-fees__;!!ETWISUBM!gAcipnzguS4myvb51s2tQzqug2T0YQkU6VxevsN0yHJF_mviI1j4SITWNvR1j5wkoQ$ > | Which jurisdiction am I in?<https://urldefense.com/v3/__https://maps.sarpy.com/html5viewer/index html?Viewer=SIMS__;!!ETWISUBM!gAcipnzguS4myvb51s2tQzqug2T0YQkU6VxevsN0yHJF_mviI1j4SITWNvR5YV_nVQ$ >

NRCS

Natural Resources Conservation Service
Denver Federal Center
Building 56, Room 2604
P.O. Box 25426
Denver, CO 80225

SUBJECT: Farmland Protection Policy Act June 23rd, 2021

Lt Col Timothy J. Fryar
Commander, 21st Civil Engineer Squadron
580 Goodfellow Street
Peterson AFB, CO 80914

RE: Establishment of Permanent United States Space Command (USSPACECOM) Headquarters (HQ) Facility

Lt Col Fryar,

The Farmland Protection Policy Act (FPPA) is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to non-agricultural use. It assures that to the extent possible federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland.

For the purpose of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to the FPPA requirements does not have to be currently used for cropland. Projects are subject to the FPPA requirements if they may irreversibly convert farmland to non-agriculture use and are completed by a federal agency or with assistance from a federal agency.

All aspects of this project as submitted do not occur on areas of prime farmland as defined by the FPPA. The proposed project is not subject to the FPPA. NRCS encourages the use of accepted erosion control practices during the construction and installation of these projects.

If you have any further questions, please call (720) 544-2855.

Thank you,

T. Riley Dayberry
Asst. State Soil Scientist
thomas.dayberry@usda.gov

cc:
Eugene Backhaus - State Resource Conservationist, NRCS, Denver CO
Clint Evans – State Conservationist, NRCS, Denver CO
William Shoup - State Soil Scientist, NRCS, Denver CO

Farmland Classification—El Paso County Area, Colorado
(USSPACECOM PETERSON AFB 2021)

Map Scale: 1:2,000 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 25 50 100 150

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

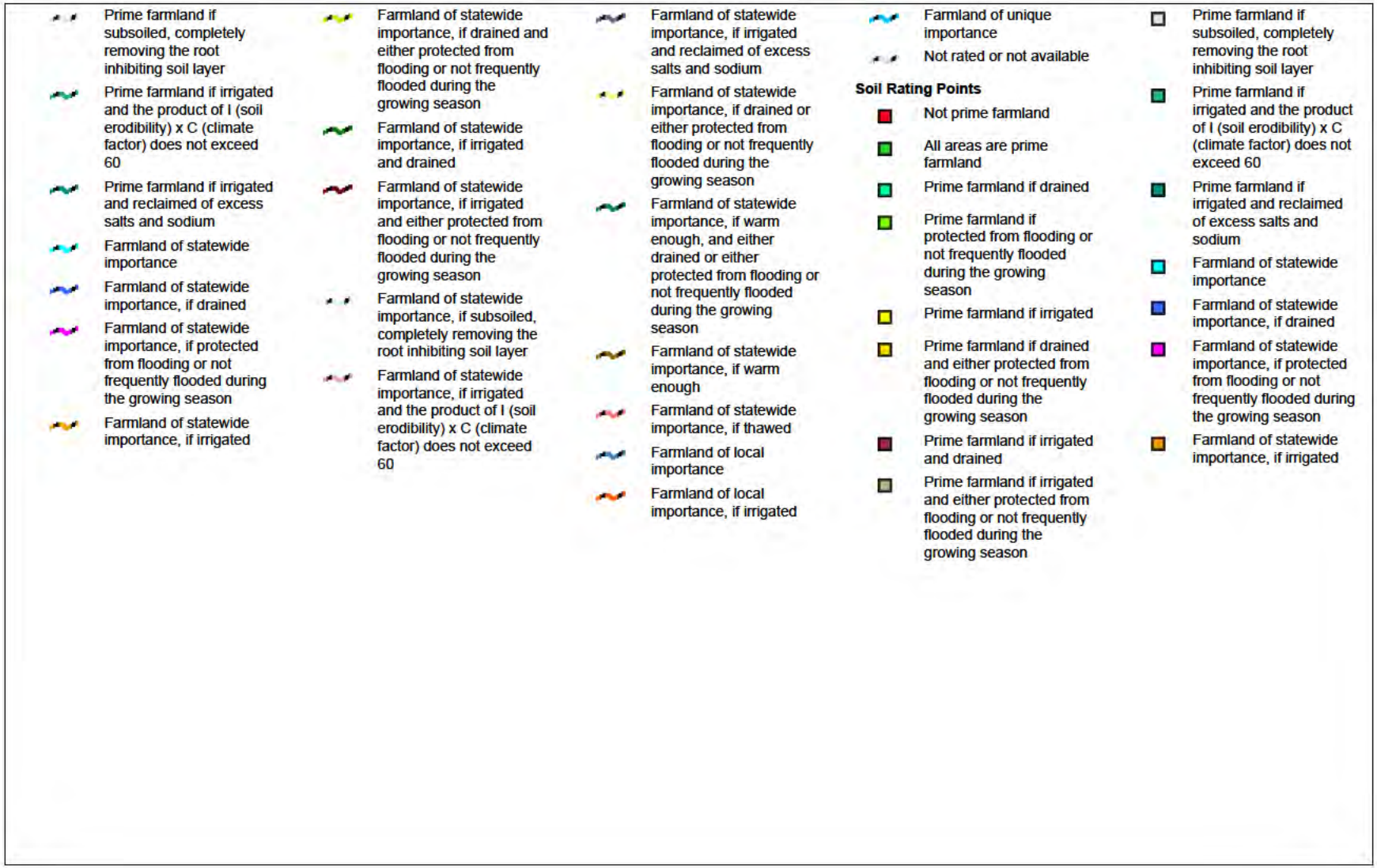
Soils

Soil Rating Polygons

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated
- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if hawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Soil Rating Lines

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season


Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Points
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
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- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Political Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: El Paso County Area, Colorado
Survey Area Data: Version 18, Jun 5, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 19, 2018—Sep 23, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
8	Blakeland loamy sand, 1 to 9 percent slopes	Not prime farmland	21.1	100.0%
Totals for Area of Interest			**21.1**	**100.0%**

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

From:	Zubke - CDA, Beverly
To:	Busam, Michael
Cc:	TOMLINSON, ROBERT R GS-13 USSF SPOC 21 CES/CEIE; Olga Robak - CDA
Subject:	[EXTERNAL] Re: Request for Information: Proposed USSPACECOM Headquarters at Peterson AFB
Date:	Wednesday, June 16, 2021 1:15:14 PM

Hi Michael,

Thank you for reaching out and sharing this with us. Not sure we have much insight on the impacts but looping in our PIO just in case there is need to get this information out to our stakeholders, Olga Robak.

Thank you!
Bev

On Wed, Jun 16, 2021 at 9:08 AM Busam, Michael [redacted] wrote:

> Ms. Zubke,
>
> The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). One of the six alternative sites is located at Peterson Air Force Base (AFB) in Colorado.
>
> Please see the attached Stakeholder Letter for greater detail regarding this Proposed Action and EA process.
>
> As part of this EA, the Air Force requests your assistance in identifying any potential areas of environmental impact to be assessed in this analysis. If you have additional information regarding the Proposed Action and alternatives for inclusion and consideration during the EA process, we would appreciate receiving such information. To ensure that the Air Force has sufficient time to consider your input, please contact Mr. Robert Tomlinson within 30 days of receipt of this letter by email to: robert.tomlinson@spaceforce.mil; or by mail to: Robert Tomlinson, 21 CES/CEIE, 580 Goodfellow Street, Suite 2370, Peterson AFB, CO 80914-2370.
>
> Thank you,
>
> Michael Busam
>
> **Michael Busam, AWB®**

Environmental Planner

Impact Assessment & Permitting (IAP) Department

[redacted]

[redacted]

[redacted]

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F 301.820.3409

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--

Beverly Zubke
Executive Assistant, Kate Greenberg - Commissioner
Executive Assistant, Steve Silverman - Deputy Commissioner

WORKING REMOTELY

[redacted]

305 Interlocken Parkway, Broomfield CO 80021

[redacted] I www.colorado.gov/ag

The COVID-19 Vaccine is safe. Learn more here and consider doing your part to keep our community safe.

Please consider the environment before printing this e-mail.

From: cdphe_cora_hmwmd - CDPHE, CDPHE
To: Busam, Michael
Subject: [EXTERNAL] Fwd: Request for Information: Proposed USSPACECOM Headquarters at Peterson AFB
Date: Tuesday, June 22, 2021 6:28:51 PM

Good afternoon, Michael,
As Rachel explained, we are all happy to assist. Please find this LINK to the 296 documents for Peterson Air Force Base/PET within our database. Please let me know if you have any questions or if you find what you need.
Thank you very much,
Pearl Campos

---------- Forwarded message ---------
From: **Blomberg - CDPHE, Rachel** [redacted]
Date: Tue, Jun 22, 2021 at 4:19 PM
Subject: Re: Request for Information: Proposed USSPACECOM Headquarters at Peterson AFB
To: cdphe_cora_hmwmd - CDPHE, CDPHE [redacted], [redacted]
Cc: Talbert - CDPHE, Jennifer [redacted]

Hi Michael,
Your e-mail was forwarded to me as I am the project manager for CDPHE's PFAS response efforts at Peterson AFB.

Peterson AFB has multiple PFAS-impacted sites across the base and is currently moving into the Remedial Investigation phase of our response. You can find detailed reports of the groundwater, surface water, sediment, surface and subsurface soil analytical results at each impacted area in the Final Site Inspection Report as well as the Expanded Site Inspection Report for PFAS.

I also know that there are a handful of sites that have been closed out before I started working for CDPHE. I would look for any documents in the records with "closure" in the title to determine what contaminants might remain under Colorado soil or groundwater standards.

I hope myself and our records center can help you locate what you need.

Best,
Rachel

On Mon, Jun 21, 2021 at 10:38 AM cdphe_cora_hmwmd - CDPHE, CDPHE [redacted] wrote:

> Good morning, Rachel,
> I thought you'd be interested in this letter requesting information regarding this site. Specifically, the last paragraph. Any input you can provide, Rachel, is very much appreciated. Here is a LINK to the 296 documents for Peterson Air Force Base/PET. I'm hoping that you can direct a response to Michael and cc myself for CORA, if possible.

Thank you very much,
Pearl Campos

- From: **Busam, Michael** <af>

Date: Wed, Jun 16, 2021 at 9:11 AM
Subject: Request for Information: Proposed USSPACECOM Headquarters at Peterson AFB
To: [redacted]
Cc: TOMLINSON, ROBERT R GS-13 USSF SPOC 21 CES/CEIE
[redacted]

To whom it may concern:

The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). One of the six alternative sites is located at Peterson Air Force Base (AFB) in Colorado.

Please see the attached Stakeholder Letters for greater detail regarding this Proposed Action and EA process. The Air Force intends to coordinate with the Federal Facilities-HMWM and Air Pollution Control divisions.

As part of this EA, the Air Force requests your assistance in identifying any potential areas of environmental impact to be assessed in this analysis. If you have additional information regarding the Proposed Action and alternatives for inclusion and consideration during the EA process, we would appreciate receiving such information. To ensure that the Air Force has sufficient time to consider your input, please contact Mr. Robert Tomlinson within 30 days of receipt of this letter by email to: robert.tomlinson@spaceforce.mil; or by mail to: Robert Tomlinson, 21 CES/CEIE, 580 Goodfellow Street, Suite 2370, Peterson AFB, CO 80914-2370.

Thank you,

Michael Busam

Michael Busam, AWB®

Environmental Planner

Impact Assessment & Permitting (IAP) Department

[redacted]

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Germantown, MD 20876

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F 301.820.3409

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--

I am working from home to help stop the spread of COVID-19, please contact me at [redacted]

Rachel Blomberg, P.E.
Project Manager
Federal Facilities Remediation and Restoration Unit

[redacted]
4300 Cherry Creek Drive S., Denver, CO 80246
[redacted] | www.colorado.gov/pacific/cdphe

--

HMWMD Records have migrated to a new platform, Hyland OnBase. You can search records now via the OnBase Public Access Viewer.
See User Guides for tips on searching here: HMWMD User Guides

Visit the HMWMD Records page for additional information on HMWMD programs and records procedures.

From: CPWCommission, DNR
To: Busam, Michael
Subject: [EXTERNAL] Re: Request for Information: Proposed USSPACECOM Headquarters at Peterson AFB
Date: Tuesday, June 22, 2021 6:52:05 PM

Hello,

Thank you for your comments. Your comments will be shared with the Commission as part of the public input process, and will be forwarded to the appropriate department.

On Wed, Jun 16, 2021 at 9:11 AM Busam, Michael [redacted] wrote:

> To whom it may concern:
>
> The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). One of the six alternative sites is located at Peterson Air Force Base (AFB) in Colorado.
>
> Please see the attached Stakeholder Letter for greater detail regarding this Proposed Action and EA process.
>
> As part of this EA, the Air Force requests your assistance in identifying any potential areas of environmental impact to be assessed in this analysis. If you have additional information regarding the Proposed Action and alternatives for inclusion and consideration during the EA process, we would appreciate receiving such information. To ensure that the Air Force has sufficient time to consider your input, please contact Mr. Robert Tomlinson within 30 days of receipt of this letter by email to: robert.tomlinson@spaceforce.mil; or by mail to: Robert Tomlinson, 21 CES/CEIE, 580 Goodfellow Street, Suite 2370, Peterson AFB, CO 80914-2370.
>
> Thank you,
>
> Michael Busam
>
> **Michael Busam, AWB®**
>
> **Environmental Planner**
>
> **Impact Assessment & Permitting (IAP) Department**
>
> [redacted]

[redacted]

[redacted]

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From: Ashley Busch
To: Busam, Michael
Subject: [EXTERNAL] RE: Request for Information: Proposed USSPACECOM Headquarters at Peterson AFB
Date: Tuesday, June 22, 2021 5:09:53 PM
Attachments: image001.png
image002.png
image003.png

Hi Michael,

I apologize for the slow reply. It took us a while to find this, but we eventually found out this is not at the county level, but at the state level of government. Please visit this website for more information. https://www.codot.gov/programs/environmental/nepa-program

I hope this helps!

Sincerely,

Ashley Busch
Executive Administrative Specialist
El Paso County Public Health
1675 W. Garden of the Gods Road, Suite 2044
Colorado Springs, CO 80907
[redacted]
www.elpasocountyhealth.org

To find a COVID-19 vaccine provider in El Paso County, you can:
- Visit El Paso County Public Health's Provider Page
- Call 211
- Text "vaccine" for English or "vacuna" for Spanish to 667873

From: Ashley Busch **On Behalf Of** HealthInfo
Sent: Friday, June 18, 2021 4:26 PM
To: Peggy Rivera [redacted]; Valerie Palmer [redacted]; Becca Schumann [redacted]
Cc: Kim Demers [redacted]
Subject: FW: Request for Information: Proposed USSPACECOM Headquarters at Peterson AFB

Hi again,

I'm not sure if this one goes to you or not. Could you assist with this inquiry from the Peterson Air Force Base?

Warmly,

Ashley Busch
Executive Administrative Specialist
El Paso County Public Health
1675 W. Garden of the Gods Road, Suite 2044
Colorado Springs, CO 80907
[redacted]
www.elpasocountyhealth.org

To find a COVID-19 vaccine provider in El Paso County, you can:
- Visit El Paso County Public Health's Provider Page
- Call 211
- Text "vaccine" for English or "vacuna" for Spanish to 667873

From: Busam, Michael [redacted]
Sent: Wednesday, June 16, 2021 9:15 AM
To: HealthInfo [redacted]
Cc: TOMLINSON, ROBERT R GS-13 USSF SPOC 21 CES/CEIE [redacted]
Subject: Request for Information: Proposed USSPACECOM Headquarters at Peterson AFB

To whom it may concern:

The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative

sites in the US (Proposed Action). One of the six alternative sites is located at Peterson Air Force Base (AFB) in Colorado.

Please see the attached Stakeholder Letter for greater detail regarding this Proposed Action and EA process.

As part of this EA, the Air Force requests your assistance in identifying any potential areas of environmental impact to be assessed in this analysis. If you have additional information regarding the Proposed Action and alternatives for inclusion and consideration during the EA process, we would appreciate receiving such information. To ensure that the Air Force has sufficient time to consider your input, please contact Mr. Robert Tomlinson within 30 days of receipt of this letter by email to: robert.tomlinson@spaceforce.mil; or by mail to: Robert Tomlinson, 21 CES/CEIE, 580 Goodfellow Street, Suite 2370, Peterson AFB, CO 80914-2370.

Thank you,
Michael Busam

Michael Busam, AWB®
Environmental Planner
Impact Assessment & Permitting (IAP) Department
[redacted]

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From: Nancy Prieve
To: TOMLINSON, ROBERT R GS-13 USSF SPOC 21 CES/CEIE
Subject: [Non-DoD Source] Permanent USSPACECOM HQ Facility EA
Date: Friday, June 18, 2021 3:17:49 PM

Mr. Tomlinson,

The El Paso County Environmental Division has no comments on this project.

Nancy Prieve
El Paso County Community Services Department
Environmental Division
Natural Resources Specialist
3255 Akers Drive
Colorado Springs, CO 80922
[redacted]

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1201 ELM STREET, SUITE 500
DALLAS, TEXAS 75270-2102

July 15, 2021

Steven T. Rose
Executive Director
US Space Command Logistics and Engineering
Peterson AFB, Colorado 80914

Dear Mr. Rose:

The U.S. Environmental Protection Agency (EPA) has reviewed the solicitation of views on locating and constructing the United States Space Command's Headquarters (HQ) at the Port San Antonio site. Our review is provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations (40 CFR Parts 1500 – 1508), and our NEPA review authority under Section 309 of the Clean Air Act.

EPA is offering the following comments for your consideration:

Water Quality:
EPA recommends implementing green stormwater and green infrastructure practices wherever possible when designing the infrastructure surrounding the HQ. More info on green stormwater/infrastructure methods can be found here: https://www.epa.gov/sites/production/files/2015-09/documents/green_infrastructure_roadshow.pdf

EPA recommends that, during construction, best management practices (BMPs) are followed to prevent water quality degradation from construction activities. These BMPs are described in the following document: https://www.epa.gov/sites/production/files/documents/DryCreekRancheraCaseStudy.pdf

EPA recommends replanting/seeding all areas of land that are disturbed/impacted during the construction. EPA recommends replanting with turfgrasses/groundcover that are native to the Central Texas region. The native vegetation conserves water, prevents soil erosion, runoff, and ultimately protects the water quality of the watershed. Information can be found in the following document: https://www.caee.utexas.edu/prof/maidment/CE365KSpr14/Docs/LowImpactDevelopment.pdf

Environmental Justice Analysis:
EPA recommends use the following reports/guidance to supplement the applicable requirements for considering and analyzing impact to minority, low-income and/or disadvantage populations for the proposed action: Promising Practice Reports available at: https://www.epa.gov/sites/production/files/2016-08/documents/nepa_promising_practices_document_2016.pdf;

Environmental Justice: Guidance Under the National Environmental Policy Act available at: https://www.epa.gov/sites/production/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf; EJSCREEN Screening and Mapping Tool at: https://www.epa.gov/ejscreen; and NEPAssist at: https://www.epa.gov/nepa/nepassist.

We appreciate the opportunity to review this notice of intent to prepare an EIS. If you have any questions, please contact Eli Martinez, the project review lead, at (214) 665-2119 or martinez.eli@epa.gov.

Sincerely,

Polk, Jonna

Digitally signed by Polk, Jonna
DN: cn=Polk, Jonna, email=Polk.Jonna@epa.gov
Date: 2021.07.16 08:22:29 -05'00'

Jonna Polk
Director
Office of Communities, Tribes and Environmental Assessment

United States Department of Agriculture

Natural Resources
Conservation Service

State Office

101 S. Main Street
Temple, TX 76501
Voice 254.742.9800
Fax 254.742.9819

June 16, 2021

US Space Command Logistics and Engineering
Peterson AFB, CO 80914

Attention: Steven T. Rose

Subject: Proposed USSPACECOM Headquarters at Port San Antonio

Thank you for the opportunity to provide input on the potential environmental effects of constructing the USSPACECOM Headquarters facility in San Antonio, Texas.

The soils in the study area have a few soil factors that you should be aware of. Approximately 90% of the soils in the area have high shrink swell characteristics, resulting in very limited ratings in the construction of driveways, parking lots, and small commercial building less than 3 stories. The study area does not contain any hydric soils, ponded or flooded soils, and there are no restrictive soil layers within 2 meters of the soil surface. We have enclosed a Web Soil Survey map illustrating the location of the soils as well as the ratings for related interpretations. We encourage you to consider this information during the construction of the proposed facility and take measures to protect the soils and water quality.

If you have any questions, please contact me at by email at ashley.anderson@usda.gov

Sincerely,

Ashley Anderson
Soil Scientist

Soil Map—Bexar County, Texas
(USSPACECOM HQ location, Port San Antonio)

Map Scale: 1:3,920 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bexar County, Texas
Survey Area Data: Version 24, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 22, 2018—Jan 4, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LvA	Lewisville silty clay, 0 to 1 percent slopes	31.5	100.0%
Totals for Area of Interest		**31.5**	**100.0%**

Selected Soil Interpretations

This report allows the customer to produce a report showing the results of the soil interpretation(s) of his or her choice. It is useful when a standard report that displays the results of the selected interpretation(s) is not available.

When customers select this report, they are presented with a list of interpretations with results for the selected map units. The customer may select up to three interpretations to be presented in table format.

For a description of the particular interpretations and their criteria, use the "Selected Survey Area Interpretation Descriptions" report.

Report—Selected Soil Interpretations

Selected Soil Interpretations–Bexar County, Texas					
Map symbol and soil name	Pct. of map unit	ENG - Local Roads and Streets		ENG - Small Commercial Buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value
LvA—Lewisville silty clay, 0 to 1 percent slopes					
Lewisville	90	Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00
		Low strength	1.00		

Data Source Information

Soil Survey Area: Bexar County, Texas
Survey Area Data: Version 24, Jun 11, 2020

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Carter P. Smith
Executive Director

July 22, 2021

Jennifer Warf
AECOM
12420 Milestone Center Drive, Suite 150
Germantown, MD 20876

RE: United States Department of Air Force Environmental Assessment evaluating construction and operation of permanent USSPACECOM HQ facility, Port of San Antonio, Bexar County, Texas

Dear Ms. Warf:

Texas Parks and Wildlife Department (TPWD) received the review request regarding the proposed project referenced above. The United States Department of Air Force (USDAF) is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts associated with the project.

Project Description

The proposed project would construct a new, permanent USSPACECOM HQ facility at one of six alternative sites in the United States. The proposed facility would accommodate approximately 1,816 personnel in a building providing approximately 460,000 square feet (SF) of functional space and 310,000 SF of parking space. One of the six alternative sites is a 32.5-acre tract within the Port of San Antonio in San Antonio, Bexar County, Texas. The recently constructed multistory Port of San Antonio Tech Building 2 and associated parking area is located on approximately one-third (10 acres) of the site proposed for the USSPACECOM HQ facility in San Antonio.

TPWD staff reviewed the information provided and offers the following comments and recommendations.

Federal Regulations

Migratory Bird Treaty Act (MBTA)

The Migratory Bird Treaty Act (MBTA) prohibits direct and affirmative purposeful actions that reduce migratory birds, their eggs, or their nests, by killing or capturing, to human control, except when specifically authorized by the Department of the Interior. This protection applies to most native bird species, including ground nesting species.

Open grassland and mature trees scattered across the San Antonio alternative project location provide potential loafing, feeding, and nesting habitat for tree and ground nesting species.

Recommendation: TPWD recommends that any necessary vegetation clearing or soil excavation within the project area or in areas needed to provide heavy equipment access to the site be scheduled to occur outside of the March 15 through September 15 migratory bird nesting season. Contractors should be made aware of the potential of encountering migratory birds (either nesting or wintering) in the proposed project site and be instructed to avoid negatively impacting them.

If vegetation clearing must be scheduled to occur during the nesting season, TPWD recommends the vegetation to be impacted should be surveyed for active nests by a qualified biologist prior to disturbance. Nest surveys should be conducted no more than five days prior to scheduled clearing to ensure recently constructed nests are identified. If active nests are observed during surveys, TPWD recommends a 150-foot buffer of vegetation remain around the nests until the young have fledged or the nest is abandoned.

State Regulations

Parks and Wildlife Code – Chapter 64, Birds

State law prohibits any take or possession of nongame birds, including their eggs and nests. Laws and regulations pertaining to state-protection of nongame birds are contained in Chapter 64 of the Texas Parks and Wildlife (TPW) Code; specifically, Section 64.002 provides that no person may catch, kill, injure, pursue, or possess a bird that is not a game bird. TPW Code Section 64.003, regarding destroying nests or eggs, provides that, no person may destroy or take the nests, eggs, or young and any wild game bird, wild bird, or wild fowl. TPW Code Chapter 64 does not allow for incidental take.

Recommendation: Please review the *Federal Regulations: Migratory Bird Treaty Act* section above for recommendations as they are applicable for Chapter 64 of the Parks and Wildlife Code compliance.

General Construction Recommendations

The information provided did not included information regarding components of typical building and parking lot construction and post-construction beneficial management practices (BMPs); therefore, TPWD is providing the following general construction recommendation to assist in project planning.

Recommendation: If outdoor lighting is proposed to be included on the administration building or in the parking area, impacts from light pollution should be mitigated by using the appropriate lighting, facility design, and operation controls. In general, TPWD recommends outdoor lighting be down-

shielded, motion activated, and incorporate appropriate lighting technologies and BMPs described at the International Dark Sky Association website.

Recommendation: TPWD recommends preserving as much native vegetation on the site as possible. Additionally, for post-construction landscaping, TPWD recommends referring to the Lady Bird Johnson Wildflower Center Native Plant Database (available online) for regionally adapted native species that would be appropriate for post-construction landscaping of disturbed areas and project sites. TPWD recommends the exclusive use of a mixture of native grasses, forbs, shrubs, and trees in landscaping efforts.

Recommendation: For soil stabilization and/or revegetation of disturbed areas within the proposed project area, TPWD recommends erosion and seed/mulch stabilization materials that avoid entanglement hazards to snakes and other wildlife species. Because the mesh found in many erosion control blankets or mats pose an entanglement hazard to wildlife, TPWD recommends the use of no-till drilling, hydromulching and/or hydroseeding due to a reduced risk to wildlife. If erosion control blankets or mats will be used, the product should contain no netting or contain loosely woven, natural fiber netting in which the mesh design allows the threads to move, therefore allowing expansion of the mesh openings. Plastic mesh matting and hydromulch containing microplastics should be avoided.

Landscaping for Monarch Butterflies

Significant declines in the population of migrating monarch butterflies (*Danaus plexippus*) have led to widespread concern about this species and the long-term persistence of the North American monarch migration. As part of an international conservation effort, TPWD has developed a Texas Monarch and Native Pollinator Conservation Plan. One of the broad categories of action in the plan is to augment larval feeding and adult nectaring opportunities. The plan is available on TPWD's website.

Recommendation: For disturbed sites within the monarch migration corridor, TPWD recommends revegetation efforts include planting or seeding native milkweed (*Asclepias* spp.) and nectar plants as funding and seed availability allow. Where appropriate and sustainable, TPWD recommends landscaping plans incorporate monarch-friendly plants. Information about monarch biology, migration, and butterfly gardening can be found online at the Monarch Watch website.

Additional information and guidance regarding pollinator conservation can be found in the U.S. Air Force Pollinator Conservation Reference Guide (2017).

I appreciate the opportunity to review and comment on this project. Please contact me at (361) 825-3240 or **russell.hooten@tpwd.texas.gov** if we may be of further assistance.

Sincerely,

Russell Hooten
Wildlife Habitat Assessment Program
Wildlife Division

/rh 46850

References

USFWS. 2017. *U.S. Air Force Pollinator Conservation Reference Guide*, Air Force Civil Engineer Center, San Antonio, TX, 182 pp. + Appendix A (Species maps and profiles) and B (Restoration and landscaping information).

From: Zee, Stacey (FAA)
To: Busam, Michael
Cc: Warf, Jennifer; Czelusniak, Daniel (FAA); Maday, Randal (FAA); Parks, Annette (FAA)
Subject: [EXTERNAL] FW: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport
Date: Tuesday, June 15, 2021 5:55:29 PM
Attachments: 20210615_USSPACECOMEA_CapeCanaveral_FAA_Signed.pdf

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Hi Michael –

Passing this off to our Environmental Program Lead, Daniel Czelusniak. Also copying Annette Parks, our USAF coordinator and Randy Maday, our Spaceport Licensing Program Lead.

We'll get something back to you within the month.

From: Busam, Michael [redacted]
Sent: Tuesday, June 15, 2021 3:55 PM
To: Zee, Stacey (FAA) [redacted]
Cc: Warf, Jennifer [redacted]
Subject: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport

Ms. Zee,

The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). One of the six alternative sites is located at Cape Canaveral Spaceport in Florida.

Please see the attached Stakeholder Letter for greater detail regarding this Proposed Action and EA process.

As part of this EA, the Air Force requests your assistance in identifying any potential areas of environmental impact to be assessed in this analysis. If you have additional information regarding the Proposed Action and alternatives for inclusion and consideration during the EA process, we would appreciate receiving such information. To ensure that the Air Force has sufficient time to consider your input, please contact Jennifer Warf within 30 days of receipt of this letter by email to: [redacted]; or by mail to: AECOM, ATTN: Jennifer Warf, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Thank you,
Michael Busam

Michael Busam, AWB®
Environmental Planner
Impact Assessment & Permitting (IAP) Department
[redacted]

[redacted]

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From: Busam, Michael
To: Warf, Jennifer; Davis, Lucas L
Subject: RE: [EXTERNAL] RE: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport
Date: Wednesday, June 23, 2021 7:53:00 AM
Attachments: 20210615_USSPACECOMEA_CapeCanaveral_USFWS_Signed.pdf

Mr. Davis,

While we continue to prepare additional project materials, I have attached the original Stakeholder Letter attachment from the referenced email below.

Thank you,
Michael

Michael Busam, AWB®
Environmental Planner
Impact Assessment & Permitting (IAP) Department
[redacted]

From: Warf, Jennifer [redacted]
Sent: Tuesday, June 22, 2021 4:51 PM
To: Davis, Lucas L [redacted]
Cc: Busam, Michael [redacted]
Subject: RE: [EXTERNAL] RE: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport

Mr. Davis,

This is currently underway. I hope to be able to share this with you next week.

Jen

Jennifer E. Warf
Associate Vice President
National DoD IAP Leader / Mid-Atlantic Department Manager
Impact Assessment & Permitting (IAP)
[redacted]

From: Davis, Lucas L [redacted]
Sent: Tuesday, June 22, 2021 4:31 PM
To: Warf, Jennifer [redacted]
Subject: [EXTERNAL] RE: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport

Hi Jennifer,

I was forwarded the email below, but there were no attachments. Can you provide me with the referenced attachment and any other details on the proposed action so that I can review and provide comments.

Thanks,

Lucas Davis
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Florida Ecological Services Field Office
7915 Baymeadows Way, Suite 200
Jacksonville, Florida 32256-7517

[redacted]

From: Dziergowski, Annie [redacted]
Sent: Tuesday, June 22, 2021 11:58 AM
To: Davis, Lucas L [redacted]
Subject: FW: [EXTERNAL] Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport

---

From: Williams, Larry O [redacted]
Sent: Tuesday, June 22, 2021 11:27 AM
To: Busam, Michael [redacted]
Cc: Warf, Jennifer [redacted] Dziergowski, Annie [redacted]
Basili, Gianfranco D [redacted]
Subject: Re: [EXTERNAL] Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport

Hello Michael,
Thank you for contacting us about this project. Annie Dziergowski will provide any input we have, and she can provide that input directly to Jennifer. I've copied Annie here.

Best regards,

Larry

From: Busam, Michael [redacted]
Sent: Tuesday, June 15, 2021 4:47 PM
To: Williams, Larry O [redacted]
Cc: Warf, Jennifer [redacted]

Subject: [EXTERNAL] Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Mr. Williams,

The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). One of the six alternative sites is located at Cape Canaveral Spaceport in Florida.

Please see the attached Stakeholder Letter for greater detail regarding this Proposed Action and EA process.

As part of this EA, the Air Force requests your assistance in identifying any potential areas of environmental impact to be assessed in this analysis. If you have additional information regarding the Proposed Action and alternatives for inclusion and consideration during the EA process, we would appreciate receiving such information. To ensure that the Air Force has sufficient time to consider your input, please contact Jennifer Warf within 30 days of receipt of this letter by email to: [redacted]; or by mail to: AECOM, ATTN: Jennifer Warf, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Thank you,
Michael Busam

Michael Busam, AWB®
Environmental Planner
Im__ct Assessment & Permitting (IAP) Department
[redacted]

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From: Evitt, Ashley
To: Busam, Michael
Subject: [EXTERNAL] RE: Re: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport
Date: Monday, June 21, 2021 4:02:34 PM

Thank you, Michael. We will look into this and get back to you.

Thank you,

Ashley

From: Busam, Michael [redacted]
Sent: Monday, June 21, 2021 2:43 PM
To: Evitt, Ashley [redacted]
Subject: RE: Re: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport

Hi Ashley,

Using the Brevard County Property Appraiser, our parcel is:
Account: 2318808; Parcel ID: 23-35-04-00-7.

This link will take you to the specific parcel: https://www.bcpao.us/map/?r=2318808

Thank you,
Michael

Michael Busam, AWB®
Environmental Planner
Im_act Assessment & Permitting (IAP) Department
[redacted]

From: Evitt, Ashley [redacted]
Sent: Monday, June 21, 2021 2:05 PM
To: Busam, Michael [redacted]
Subject: [EXTERNAL] Re: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport

Good afternoon, Mr. Busam,

Thank you for contacting the Florida Department of Environmental Protection. Your email was forwarded to me for follow up. Could you please provide me the address or parcel number so that we can properly evaluate your request?

Thank you,

FL-DEP-LOGO

Ashley Evitt
Ombudsman/Media & External Affairs
Florida Department of Environmental Protection
Central District
[redacted]

From: Busam, Michael [redacted]
Sent: Tuesday, June 15, 2021 3:57 PM
To: DEP CD [redacted]
Cc: Warf, Jennifer [redacted]
Subject: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport

To whom it may concern:

The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). One of the six alternative sites is located at Cape Canaveral Spaceport in Florida.

Please see the attached Stakeholder Letter for greater detail regarding this Proposed Action and EA process.

As part of this EA, the Air Force requests your assistance in identifying any potential areas of environmental impact to be assessed in this analysis. If you have additional information regarding the Proposed Action and alternatives for inclusion and consideration during the EA process, we would appreciate receiving such information. To ensure that the Air Force has sufficient time to consider your input, please contact Jennifer Warf within 30 days of receipt of this letter by email to: [redacted]; or by mail to: AECOM, ATTN: Jennifer Warf, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Thank you,
Michael Busam

Michael Busam, AWB®
Environmental Planner
Impact Assessment & Permitting (IAP) Department
[redacted]

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Obenland, Benjamin

From: Stahl, Chris [redacted]
Sent: Tuesday, August 10, 2021 3:18 PM
To: Warf, Jennifer
Cc: State_Clearinghouse
Subject: [EXTERNAL] State Clearance Letter for FL202106169263C- Environmental Assessment To Evaluate The Potential Environmental Impacts Resulting From The Construction And Operation Of A Permanent USSPACECOM HQ Facility Cape Canaveral Space Port, Brevard Count...
Attachments: Cape Canaveral Space Port Permanent Usspacecom Headquarters_44760_07162021.pdf

August 10, 2021

Jennifer Warf
AECOM
12420 Milestone Center Drive
Germantown, Maryland 20876

RE: Department of Defense, Department of the Air Force, United States Space Command, Environmental Assessment to Evaluate the Potential Environmental Impacts Resulting from the Construction and Operation pf a Permanent USSPACECOM HQ Facility Cape Canaveral Space Port, Brevard County, Florida
SAI # FL202106169263C

Dear Jennifer:

Florida State Clearinghouse staff has reviewed the original proposal as well as the additional riprap placement site under the following authorities: Presidential Executive Order 12372; § 403.061(42), Florida Statutes; the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. §§ 4321-4347, as amended.

The proposed project at the Cape Canaveral Spaceport appears to require an Environmental Resource Permit (ERP). Early coordination with St Johns River Water Management District's ERP staff is encourage prior to any site work. For questions or assistance, please contact Marc von Canal, Environmental Resource Program Manager, at [redacted] or [redacted]

Staff from the Florida Department of Environmental Protection's central District have determined that the proposed project will require a DEP Domestic Wastewater Collection/Transmission System and Drinking Water Main Extension Permit.

The Florida Fish and Wildlife Conservation Commission has reviewed the proposed action and independently submitted comments for your consideration. These have been attached to this letter and are incorporated hereto.

If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all

activities involving subsurface disturbance in the vicinity of the discovery. The applicant shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section at (850)-245-6333. Project activities shall not resume without verbal and/or written authorization. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statutes.

Based on the information submitted and minimal project impacts, the state has no objections to the subject project and, therefore, it is consistent with the Florida Coastal Management Program (FCMP). Thank you for the opportunity to review the proposed plan. If you have any questions or need further assistance, please don't hesitate to contact me at [redacted]

Sincerely,

Chris Stahl

Chris Stahl, Coordinator
Florida State Clearinghouse
Florida Department of Environmental Protection
3800 Commonwealth Blvd., M.S. 47
Tallahassee, FL 32399-2400
[redacted]

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July 16, 2021

Chris Stahl
Florida State Clearinghouse
Florida Department of Environmental Protection
3800 Commonwealth Boulevard, M.S. 47
Tallahassee, FL 32399
Chris.Stahl@floridadep.gov

Re: USSPACECOM HQ Facility (SAI # FL202106169263C), Cape Canaveral, Brevard County

Dear Mr. Stahl:

Florida Fish and Wildlife Conservation Commission (FWC) staff reviewed the request from the United States (U.S.) Department of the Air Force for assistance in identifying potential environmental impacts at the Cape Canaveral Spaceport location to be evaluated in the Environmental Assessment for the proposed USSPACECOM Headquarters (HQ) facility. The following comments and recommendations are provided for your consideration in accordance with Chapter 379, Florida Statutes, the National Environmental Policy Act (NEPA), and the Coastal Zone Management Act/Florida's Coastal Management Program.

Project Description

The U.S. Department of the Air Force is preparing an Environmental Assessment to evaluate the potential environmental impacts resulting from the construction and operation of a proposed USSPACECOM HQ facility at one of six alternative sites in the U.S. The proposed facility would consist of a multistory building with associated infrastructure. The Cape Canaveral Spaceport location being considered in Florida is 104.7 acres located immediately east of Challenger Memorial Parkway and three-quarters of a mile northeast of Interstate 95 in Brevard County. The land covers on the site consists of scrub (39.8 acres), mesic flatwoods (36.4 acres), marsh (10.6 acres), shrub and brushland (10.5 acres), reservoir (5.0 acres), freshwater forested wetland (1.9 acres), cypress (0.4 acres), and industrial (0.1 acres).

Potentially Affected Resources

No fish and wildlife information was provided with the request. FWC staff conducted a geographic information system (GIS) analysis of the project area and found that the project area is located near, within, or adjacent to:

- One or more wood stork (*Mycteria americana*, Federally Threatened [FT]) nesting core foraging areas (CFA). The CFA consists of a 15-mile radius around the nesting colony.

- U.S. Fish and Wildlife Service (USFWS) Consultation Area for:
  - Florida scrub-jay (*Aphelocoma coerulescens*, FT)
  - Audubon's crested caracara (*Polyborus plancus audubonii*, FT)
  - Everglade snail kite (*Rostrhamus sociabilis plumbeus*, Federally Endangered)

- Potential habitat for the following federally and state-listed species:
  - Eastern indigo snake (*Drymarchon corais couperi*, FT)
  - Gopher tortoise (*Gopherus polyphemus*, State Threatened [ST])

- Florida sandhill crane (*Antigone canadensis pratensis*, ST)
- Florida pine snake (*Pituophis melanoleucus mugitus*, ST)

Comments and Recommendations

Gopher Tortoise

The proposed site may have potential habitat for the gopher tortoise. The applicant should refer to the FWC's Gopher Tortoise Permitting Guidelines (Revised July 2020) (http://www.myfwc.com/license/wildlife/gopher-tortoise-permits/) for survey methodology and permitting guidance prior to any development activity. Specifically, the permitting guidelines include methods for avoiding impacts as well as options and state requirements for minimizing, mitigating, and permitting potential impacts of the proposed activities. If you have any questions regarding gopher tortoise permitting, please contact Eric Seckinger by phone at (850) 921-1029 or at Eric.Seckinger@MyFWC.com.

Florida Sandhill Crane

The scrub and brushland found on the proposed Cape Canaveral Spaceport site may provide foraging habitat for the Florida sandhill crane, and the freshwater wetland on the site may provide potential nesting habitat for this species. FWC staff recommends that surveys for nesting Florida sandhill cranes be conducted prior to construction activities and during the December through August breeding season. If construction occurs over several years, it may be necessary to conduct surveys each year as Florida sandhill cranes do not nest in the same location every year. If active nests are identified onsite, the Florida Sandhill Crane Species Conservation Measures and Permitting Guidelines recommend that the nest site be buffered by 400 feet to avoid disturbance by human activities. If nesting is discovered after construction has begun or if maintaining the recommended buffer is not possible, the applicant can contact FWC staff identified below to discuss potential permitting needs. Additional information and guidance for conducting Florida sandhill crane surveys can be found in the Florida Sandhill Crane Species Conservation Measures and Permitting Guidelines (https://myfwc.com/media/11565/final-florida-sandhill-crane-species-guidelines-2016.pdf).

Florida Pine Snake

Suitable habitat for the Florida pine snake may occur on the proposed site. Florida pine snakes are naturally secretive in nature and can spend up to 80 percent of their time in underground refuges like stump holes, gopher tortoise burrows, and the burrows of nine-banded armadillos and mice. This species is often associated with southeastern pocket gophers (*Geomys pinetis*); however, they can persist and thrive in areas without this species. Florida pine snakes are active from March through October but show the greatest activity in May, June, July, and October when they move more frequently and travel farther distances. Additional information can be found in the Florida Pine Snake Species Conservation Measures and Permitting Guidelines (https://myfwc.com/media/11571/floridapinesnakeguidelines-2018.pdf). If a Florida pine snake is observed during construction, FWC staff recommends that work activities cease, and the snake be allowed to leave on its own accord. It would also contribute to FWC's research efforts if sightings could be reported to the staff member at the close of this letter, preferably with a photograph and GPS coordinates.

Federal Species

The proposed Cape Canaveral Spaceport site may also contain habitat suitable for the federally listed species identified above. FWC staff recommends coordination with the USFWS North Florida Ecological Services Office (ESO) as necessary for information regarding potential impacts to these species. The USFWS North Florida ESO can be contacted at (904) 731-3336.

FWC staff appreciates the opportunity to provide input on this project and looks forward to working with the applicant throughout the permitting process. For specific technical questions regarding the content of this letter, please contact Michelle Sempsrott at (407) 452-1995 or by email at Michelle.Sempsrott@MyFWC.com. All other inquiries may be sent to ConservationPlanningServices@MyFWC.com.

Sincerely,

Jason Hight, Acting Director
Office of Conservation Planning Services

jh/mls
Cape Canaveral Space Port Permanent USSPACECOM Headequarters_44760_07162021

cc: Jennifer Warf, AECOM, [redacted]

From:	Busacca, Peggy
To:	Warf, Jennifer
Cc:	Busam, Michael
Subject:	[EXTERNAL] FW: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport
Date:	Wednesday, June 23, 2021 10:42:28 AM
Attachments:	12009C0215G.pdf

Jennifer,

Please see the information provided below.

Peggy Busacca
Community Development Director
City of Titusville
PO Box 2806
555 S. Washington Avenue
Titusville, FL 32781-2806
[redacted]

We are interested in your opinion. The Community Development Customer Service Survey can be found at https://www.titusville.com/FormCenter/Community-Development-7/Customer-Satisfaction-Survey-55

Please note: Florida has a very broad public records law. Most written communications to or from City employees regarding City business are public records available to the public and media upon request. Your e-mail communications may therefore be subject to public disclosure.

From: Galindo, Eddy
Sent: Wednesday, June 23, 2021 10:22 AM
To: Busacca, Peggy [redacted] Parrish, Bradley [redacted] Reller, Sandra [redacted]
Subject: RE: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport

- Portions of the proposed Cape Canaveral Spaceport location are currently designated as "Conservation" on the City's Future Land Use Map which may be indicative of wetlands on-site. A wetland delineation should be completed to determine the extent of wetlands at the site.

- Gopher tortoises and their burrows and other protected species are commonly found in the surrounding area. Please see the Florida Fish and Wildlife Gopher Tortoise Permit Map for recent State permit activity.
- The subject property does not appear to be in a special flood hazard area or floodway per NFIP FIRM Panel 0215G.

From: Busacca, Peggy
Sent: Wednesday, June 23, 2021 8:02 AM
To: Parrish, Bradley [redacted]; Galindo, Eddy [redacted]
Reller, Sandra [redacted]
Subject: FW: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport

---

From: Busam, Michael [redacted]
Sent: Tuesday, June 15, 2021 4:37 PM
To: Busacca, Peggy [redacted]
Cc: Warf, Jennifer [redacted]
Subject: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport

Ms. Busacca,

The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). One of the six alternative sites is located at Cape Canaveral Spaceport in Florida.

Please see the attached Stakeholder Letter for greater detail regarding this Proposed Action and EA process.

As part of this EA, the Air Force requests your assistance in identifying any potential areas of environmental impact to be assessed in this analysis. If you have additional information regarding the Proposed Action and alternatives for inclusion and consideration during the EA process, we would appreciate receiving such information. To ensure that the Air Force has sufficient time to consider your input, please contact Jennifer Warf within 30 days of receipt of this letter by email to: [redacted]; or by mail to: AECOM, ATTN: Jennifer Warf, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Thank you,
Michael Busam

Michael Busam, AWB®

Environmental Planner
Im_act Assessment & Permitting (IAP) Department
[redacted]

AECOM
12420 Milestone Center Drive, Suite 150
Germantown, MD 20876
T 301.250.2934
F 301.820.3409
www.aecom com
~~Imagine it. Delivered.~~

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations (BFEs) shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures.** Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Transverse Mercator State Plane Florida East FIPS 0901. The **horizontal datum** was NAD83 HARN, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane Coordinate System used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum.** For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NINGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was provided in digital format by Brevard County and the Florida Division of Emergency Management. The ortho photography is dated 2009.

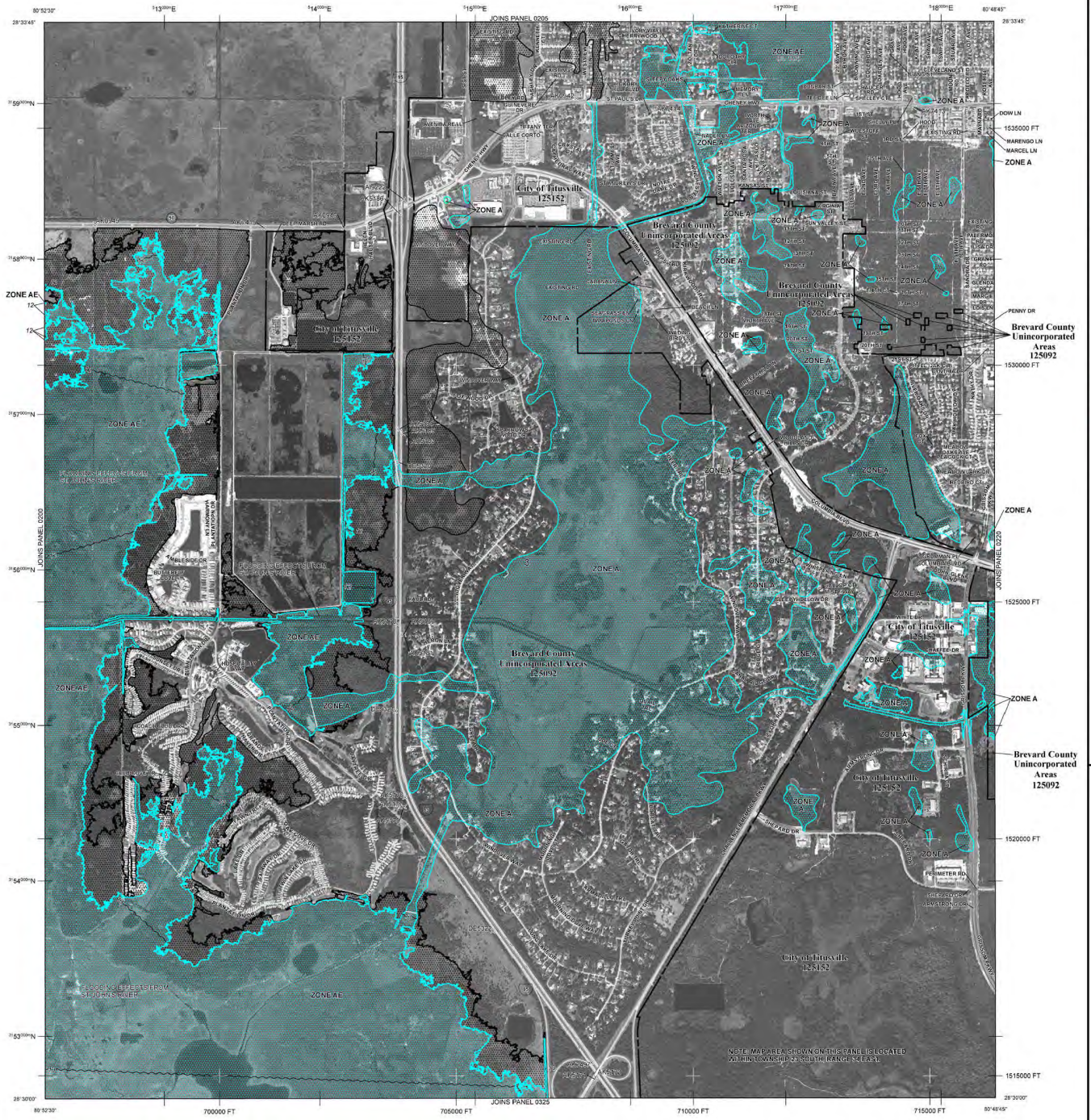
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products or the National Flood Insurance Program in general, please call the **FEMA Mapping Information eXchange** at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Map Service Center website at http://www.msc.fema.gov/. Available products may include previously issued Letters of Map Change, a Flood Insurance Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website or by calling the FEMA Map Information eXchange.

The **"profile base lines"** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the "profile base line", in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- A — A — Cross section line
- 23 — 23 — Transect line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4276000 mE — 1000-meter Universal Transverse Mercator grid ticks, zone 17
- 6000000 FT — 5000-foot grid values: Florida State Plane coordinate system, East Zone (FIPSZONE = 901), Transverse Mercator projection
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories List on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
April 3, 1989

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
March 17, 2014 - to update corporate limits, to add Special Flood Hazard Areas, to change Special Flood Hazard Areas, to update roads and road names, to reflect updated topographic information, to incorporate previously issued Letters of Map Revision, and to change zone designations.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

500 0 500 1,000 1,500 2,000 FEET
300 0 300 600 METERS

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0215G

FIRM

FLOOD INSURANCE RATE MAP

BREVARD COUNTY, FLORIDA AND INCORPORATED AREAS

PANEL 215 OF 825

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BREVARD COUNTY	125092	0215	G
TITUSVILLE, CITY OF	125152	0215	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 12009C0215G

MAP REVISED MARCH 17, 2014

Federal Emergency Management Agency

From: Busam, Michael
To: Calkins, Tad
Cc: Warf, Jennifer
Subject: RE: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport
Date: Wednesday, June 16, 2021 1:38:00 PM

Tad,

The City of Titusville Planning Department is included on our stakeholder list. They were included in the request for information.

Thanks,
Michael

Michael Busam, AWB®
Environmental Planner
Im__ct Assessment & Permitting (IAP) Department
[redacted]

From: Calkins, Tad [redacted]
Sent: Wednesday, June 16, 2021 1:33 PM
To: Busam, Michael [redacted]
Cc: Warf, Jennifer [redacted]
Subject: [EXTERNAL] RE: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport

Mr. Busam,

The subject property is incorporated limits of the City of Titusville were they included for the request for information?

Tad

From: Busam, Michael [redacted]
Sent: Tuesday, June 15, 2021 3:52 PM
To: Calkins, Tad [redacted]
Cc: Warf, Jennifer [redacted]
Subject: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport

Mr. Calkins,

The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). One of the six alternative sites is located at Cape Canaveral Spaceport in Florida.

Please see the attached Stakeholder Letter for greater detail regarding this Proposed Action and EA process.

As part of this EA, the Air Force requests your assistance in identifying any potential areas of environmental impact to be assessed in this analysis. If you have additional information regarding the Proposed Action and alternatives for inclusion and consideration during the EA process, we would appreciate receiving such information. To ensure that the Air Force has sufficient time to consider your input, please contact Jennifer Warf within 30 days of receipt of this letter by email to: [redacted]; or by mail to: AECOM, ATTN: Jennifer Warf, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Thank you,
Michael Busam

Michael Busam, AWB®
Environmental Planner
Im__ct Assessment & Permitting (IAP) Department
[redacted]

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Germantown, MD 20876
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F 301.820.3409
www.aecom.com
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From:	Brian Baluta
To:	Warf, Jennifer; Busam, Michael
Cc:	McDaniel, Aaron
Subject:	[EXTERNAL] RE: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport
Date:	Tuesday, June 29, 2021 5:04:57 PM

Focus areas of the study should include:

- State and Federally protected species to include, but not limited to gopher tortoise, crested caracara, Florida scrub jay, eastern indigo snake, and wood stork.
- Wetlands.
- Cultural (Native American).
- Seminole Tribe of Florida requires Section 106 consultation for all Federally funded projects.

From: Warf, Jennifer [redacted]
Sent: Tuesday, June 29, 2021 5:02 PM
To: Brian Baluta [redacted]; Busam, Michael [redacted]
Cc: McDaniel, Aaron [redacted]
Subject: RE: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport

Email is fine.

Jennifer E. Warf
Associate Vice President
National DoD IAP Leader / Mid-Atlantic Department Manager
Impact Assessment & Permitting (IAP)
[redacted]

Click here to connect with me on LinkedIn

From: Brian Baluta [redacted]
Sent: Tuesday, June 29, 2021 2:51 PM
To: Busam, Michael [redacted]; Warf, Jennifer [redacted]
Cc: McDaniel, Aaron [redacted]
Subject: [EXTERNAL] RE: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport

Michael, Jennifer,

Is there a preferred format for sharing the requested input or will the body of an email suffice?

Many thanks,

BB

Brian Baluta
Director
Communications & Partner Relations
Economic Development Commission
of Florida's Space Coast

Riverview Tower – Suntree Blvd. & U.S. 1
6525 3rd Street, Suite 304
Rockledge, FL 32955
[redacted]
www.SpaceCoastEDC.org

From: Busam, Michael [redacted]
Sent: Tuesday, June 15, 2021 3:54 PM
To: Brian Baluta [redacted]
Cc: Warf, Jennifer [redacted]
Subject: Request for Information: Proposed USSPACECOM Headquarters at Cape Canaveral Spaceport

Mr. Baluta,

The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). One of the six alternative sites is located at Cape Canaveral Spaceport in Florida.

Please see the attached Stakeholder Letter for greater detail regarding this Proposed Action and EA process.

As part of this EA, the Air Force requests your assistance in identifying any potential areas of environmental impact to be assessed in this analysis. If you have additional information regarding the Proposed Action and alternatives for inclusion and consideration during the EA process, we would appreciate receiving such information. To ensure that the Air Force has sufficient time to consider your input, please contact Jennifer Warf within 30 days of receipt of this letter by email to: [redacted]; or by mail to: AECOM, ATTN: Jennifer Warf, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Thank you,
Michael Busam

Michael Busam, AWB®
Environmental Planner
Im ct Assessment & Permitting (IAP) Department
[redacted]

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APPENDIX B:

NATIVE AMERICAN CONSULTATION

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Subject	**Memorandum for Record: Tribal Consultation Record**
Date	October 18, 2021
Prepared by	United States (US) Department of the Air Force (DAF)
Project Name	US Space Command (USSPACECOM) Environmental Assessment (EA) for the Establishment of Permanent Headquarters

Consistent with National Historic Preservation Act of 1966 implementing regulations (36 Code of Federal Regulations Part 800), Department of Defense Instruction 4710.02, *Interactions with Federally-Recognized Tribes*, Air Force Instruction 90-2002, *Air Force Interaction with Federally-Recognized Tribes*, and Air Force Manual 32-7003, *Environmental Conservation*, the DAF requested to consult with federally recognized tribes that are historically affiliated with the geographic region of each Alternative site being considered for the Proposed Action regarding the potential to affect properties of cultural, historical, or religious significance to the tribes.

Tribes Affiliated with the Proposed Action Alternative Locations

The DAF requested to consult with the following tribes:

Absentee Shawnee Tribe of Oklahoma
Alabama-Coushatta Tribe of Texas
Alabama-Quassarte Tribal Town
Apache Tribe of Oklahoma
Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation, Montana
Cherokee Nation
Cheyenne and Arapaho Tribes, Oklahoma
Cheyenne River Sioux Tribe
Chickasaw Nation of Oklahoma
Comanche Nation, Oklahoma
Coushatta Tribe of Louisiana
Crow Nation
Eastern Band of Cherokee Indians
Eastern Shawnee Tribe of Oklahoma
Eastern Shoshone Tribe of Wind River Reservation
Flandreau Santee Sioux Tribe of South Dakota
Fort Belknap Indian Community
Fort Sill Apache Tribe of Oklahoma
Hopi Tribe
Jicarilla Apache Tribe
Kialegee Tribal Town
Kiowa Tribe of Oklahoma
Lower Brule Sioux Tribe of the Lower Brule Reservation, SD
Mescalero Apache Tribe
The Miccosukee Tribe of Indians of Florida
The Mississippi Band of Choctaw Indians
Muscogee (Creek) Nation of Oklahoma
Navajo Nation
Northern Arapaho Tribe
Northern Cheyenne Tribe
Oglala Sioux Tribe
Ohkay Owingeh Pueblo
Omaha Tribe of Nebraska
Pawnee Nation of Oklahoma
Poarch Band of Creek Indians
Ponca Tribe of Nebraska
Pueblo of Acoma
Pueblo of Cochiti
Pueblo of Isleta
Pueblo of Jemez
Pueblo of Laguna
Pueblo of Nambe
Pueblo of Picuris, Penasco
Pueblo of Pojoaque

Pueblo of San Felipe
Pueblo of San Ildefonso
Pueblo of Sandia
Pueblo of Santa Ana
Pueblo of Santa Clara
Pueblo of Santo Domingo
Pueblo of Taos
Pueblo of Tesuque
Pueblo of Zia
Pueblo of Zuni
Rosebud Sioux Tribe
San Carlos Apache Tribe
Santee Sioux Nation
Seminole Nation of Oklahoma
The Seminole Tribe of Florida
Shawnee Tribe
Southern Ute Indian Tribe
Spirit Lake Nation
Standing Rock Sioux Tribe
Thlopthlocco Tribal Town
Three Affiliated Tribes of the Mandan, Hidatsa & Arikara Nation
Tonkawa Tribe of Indians of Oklahoma
Tunica-Biloxi Indian Tribe
United Keetoowah Band of Cherokee
Upper Sioux Indian Community
Ute Indian Tribe of the Uintah & Ouray Reservation
Ute Mountain Ute Tribe
White Mountain Apache Tribe
Wichita & Affiliated Tribes
Winnebago Tribe of Nebraska
Yankton Sioux Tribe
Ysleta del Sur Pueblo

Requests to Consult

The DAF requested to initiate consultation with each tribe first via formal letters sent on either June 18, 2021 or July 23, 2021. These letters introduced the Proposed Action, identified the Alternative locations being considered and the Areas of Potential Effects for both archaeological resources and architectural resources, summarized known on-site cultural resources, and requested to initiate government-to-government consultation with the tribes concerning the Proposed Action. A sample of these letters is attached to this memorandum.

On August 25, 2021, the DAF followed up via email with tribes that did not respond to the DAF's first attempt to initiate consultation. A copy of that email is attached to this memorandum.

Finally, between September 21 and 30, 2021, the DAF called all tribes which had not yet responded to the DAF's requests to initiate consultation. A record of these phone calls is included in the Administrative Record for this project.

Responses from Tribes

All responses the DAF received from tribes regrading this Proposed Action are included in the Administrative Record.

SAMPLE CONSULTATION LETTER

DEPARTMENT OF DEFENSE
UNITED STATES SPACE COMMAND

June 11, 2021

Steven T. Rose, GS-15
Executive Director
US Space Command Logistics and Engineering
Peterson AFB, CO 80914

Tribal Historic Preservation Officer
Tonkawa Tribe of Indians of Oklahoma
1 Rush Buffalo Road
Tonkawa, OK 74653

To whom it may concern:

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations, and the United States Department of Air Force (DAF) and Army NEPA regulations, the DAF is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the United States (Proposed Action). U.S. Army Garrison Redstone Arsenal, Alabama is the DAF's Preferred Alternative. Other alternative locations being analyzed include Peterson Air Force Base (AFB), Colorado; Offutt AFB, Nebraska; Kirtland AFB, New Mexico; Cape Canaveral Spaceport, Florida; and Port San Antonio, Texas.

The purpose of the Proposed Action (herein "Undertaking" pursuant to the National Historic Preservation Act [NHPA]) is to establish a permanent operational USSPACECOM HQ to facilitate a functional combatant command. The Undertaking is needed due to the current lack of suitable permanent facilities in which USSPACECOM can fulfill its required functions and achieve full operational capability. The proposed HQ facility would accommodate approximately 1,816 personnel in a multistory office/administrative building with approximately 460,000 square feet (SF) of functional space and approximately 310,000 SF of parking space. The total personnel number accounts for approximately 1,400 USSPACECOM military and civilian employees to be based at the final selected location, as well as a reasonably expected number of National Agency Representatives and contractor personnel supporting USSPACECOM missions who would be co-located with the permanent, HQ and, therefore, are included in the environmental analysis.

Pursuant to Section 106 of the NHPA of 1966 (36 Code of Federal Regulations Part 800), as amended, the DAF would like to initiate government-to-government consultation concerning the Undertaking to allow you and your designee the opportunity to identify any comments, concerns, and suggestions you might have. As we move forward through this process, we welcome your participation and input.

One of the alternatives under consideration is located on Port San Antonio in the state of Texas. Due to your Tribe's stated interest in Bexar County as identified using the Tribal Directory

Assessment Tool (https://egis.hud.gov/TDAT/), we are sharing the details of the APE at the Port San Antonio location. If this location is selected over the Preferred Alternative, DAF has determined that the Area of Potential Effects (APE) for archaeological resources would be defined as the 32.48 acres of the proposed site in which the USSPACECOM HQ facility could be constructed. The APE for architectural resources is defined as a 0.25-mile (1,320-foot) radius around the boundary of the proposed site. USSPACECOM is currently conducting research and investigations to identify historic properties within the APE and determine the potential effects, if any, of the proposed Undertaking. All work conforms to the professional guidelines set forth in the *Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48CFR44716, as amended and annotated) and is in compliance with the regulations issued by the Advisory Council on Historic Preservation (36 CFR 800) and as defined in 13 Texas Administrative Code (TAC) 26.3 and by the Council of Texas Archeologists (CTA) and the Texas Historical Commission (THC).

As noted above, the DAF would like to initiate government-to-government consultation pursuant to Section 106 of the NHPA concerning this Undertaking, and is seeking concurrence on the APE for Port San Antonio, as defined.

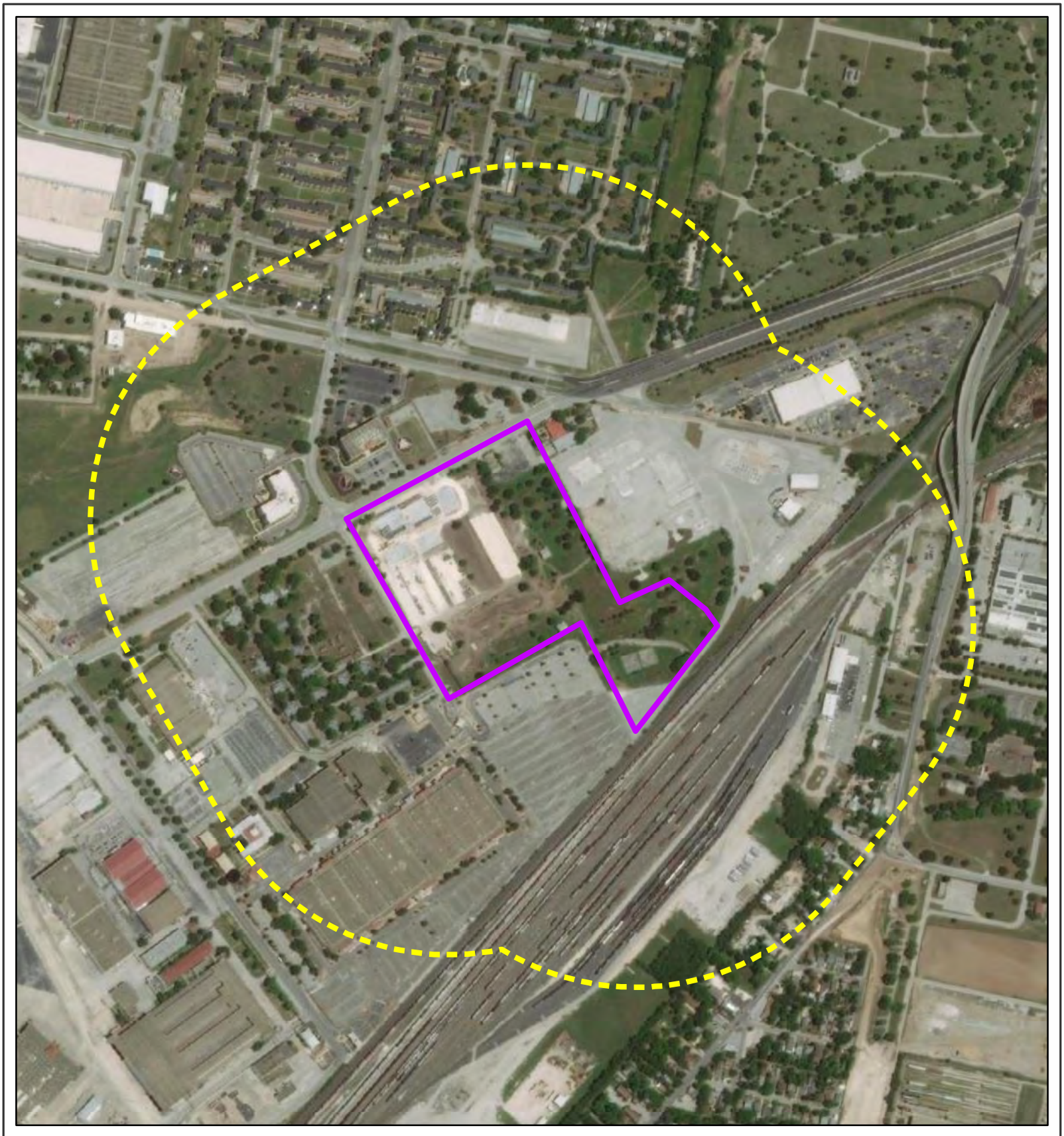
If you would like to meet to discuss the proposed project or proceed with the Section 106 consultation, please contact Ms. Lynne Wanderscheid by email to: judith.wanderscheid@usspacecom.mil; by mail to: US Space Command Logistics and Engineering, Peterson AFB, CO 80914; or by phone at (719) 552-1597.

Sincerely,

STEVEN T. ROSE, GS-15
Executive Director
US Space Command Logistics and Engineering

Attachment:
Proposed Location of Undertaking at Port San Antonio

cc:
Mr. Richard Trevino



Source: ESRI 2019

Proposed Permanent Site Boundary (32.5 Acres) (Archaeological APE)

Aboveground APE

USSPACECOM

Port San Antonio
San Antonio, TX

0 250 500 1,000 Feet

N

Obenland, Benjamin

From: WANDERSCHEID, JUDITH L CIV USSF USSPACECOM USSPACECOM/J4 [redacted]
Sent: Wednesday, August 25, 2021 6:15 PM
Subject: [EXTERNAL] Proposed Establishment of Permanent USSPACECOM HQ

Good afternoon,

The Department of the Air Force (DAF) requests to initiate government-to-government consultation with your tribe under Section 106 of the National Historic Preservation Act. The DAF previously contacted your tribe for this purpose via letter(s) in either June or July 2021. Please note, however, that the letter(s) may not have been addressed to you specifically.

The DAF is preparing an Environmental Assessment to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) headquarters (HQ) facility at one of six alternative sites in the United States (Proposed Action):

1. US Army Garrison Redstone Arsenal in Madison County, Alabama (Preferred Alternative)
2. Kirtland Air Force Base (AFB) in Bernalillo County, New Mexico
3. Offutt AFB in Sarpy Count, Nebraska
4. Peterson Space Force Base in El Paso County, Colorado
5. Port San Antonio in Bexar County, Texas
6. Cape Canaveral Spaceport in Brevard County, Florida

The DAF understands that your tribe may be interested in consulting on this Proposed Action due to either your prior interest in one or more of the military installations or due to the geographic locations of the alternatives. The DAF would be happy to provide additional information regarding this Proposed Action, specific site location alternatives, and associated cultural resources investigations upon request. You may reply to me to initiate (or decline) consultation for this Proposed Action, and I can connect you with location-specific Points of Contact based on your area(s) of interest.

Very respectfully,
Lynne Wanderscheid

Lynne Wanderscheid, GS-14
USSPACECOM/J47
Deputy Division Chief, Infrastructure and Engineering

[redacted]

1670 Newport Rd
Colorado Springs, CO 80916

SIPR: [redacted]
JWICS: [redacted]

APPENDIX C:

AIR CONFORMITY APPLICABILITY MODEL REPORTS

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DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

1. General Information

- Action Location

Base: GENERIC BASE
State: Alabama
County(s): Madison
Regulatory Area(s): NOT IN A REGULATORY AREA

- Action Title: Establishment of Permanent Headquarters for United States Space Command - Alternative 1: Redstone Arsenal, Huntsville, Alabama

- Project Number/s (if applicable):

- Projected Action Start Date: 4 / 2025

- Action Purpose and Need:

A permanent, centralized USSPACECOM HQ facility from which to coordinate this mission has not been established. Peterson SFB, Colorado currently serves as the provisional location for the USSPACECOM HQ pending selection of a permanent location (Air Force, 2020a). Personnel and operations are also hosted in interim facilities at other locations including four leased commercial facilities in Colorado Springs, Colorado, and various government facilities at DoD installations across the nation. These interim facilities distribute USSPACECOM functions across multiple sites, preventing operations from being fully consolidated and cohesive. They also consist of less functional workspaces (e.g., multiple personnel sharing a single-person workspace, and café-style workstations that do not provide standard workstation amenities such as designated telephones, file cabinet storage, semi-privacy, and desk space) that are not purpose-built to support a Unified Combatant Command. These current facilities are not conducive to efficient operations, lead to delays in response times, and lack adequate dedicated access to facilities allowing for processing of classified information. The lack of a permanent, purpose-built HQ facility prevents USSPACECOM from operating efficiently.

The purpose of the Proposed Action, therefore, is to establish a permanent operational USSPACECOM HQ facility to facilitate an operationally efficient combatant command. The Proposed Action is needed because USSPACECOM currently lacks a centralized, permanent, purpose-built HQ facility.

- Action Description:

The Proposed Action includes construction and operation of a HQ facility that would be specifically designed to accommodate the functional requirements of USSPACECOM. Approximately 1,450 personnel would be assigned to the proposed HQ facility, although staffing levels could vary depending on mission and operational requirements. Additionally, USSPACECOM may support contractors and mission partners who would be co-located with the permanent HQ and, therefore, the impact of 1,800 personnel is included in this EA. The proposed HQ would consist of approximately 464,000 square feet of office, administrative, and functional interior space across multiple stories. The main HQ building would be supported by approximately 402,000 square feet of vehicle parking in surface lots and/or parking structures. The facility would meet administrative space standards in accordance with Air Force Manual (AFMAN) 32-1084, Facility Requirements.

Functions and components of the proposed HQ facility would include the following:

- Operations center(s)
- Associated offices, conference rooms, and administrative areas
- Training and exercise space
- Sensitive Compartmented Information Facility (SCIF) space
- Communications and infrastructure equipment
- Kitchen and dining area
- Loading dock and shipping/receiving area

- Point of Contact

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Name: Paul Sanford
Title: Environmental Planner
Organization: AECOM
Email: paul.sanford@aecom.com
Phone Number: 813-675-6843

- Activity List:

Activity Type		Activity Title
2.	Construction / Demolition	Permanent Headquarters for United States Space Command - Alt 1 - Redstone Arsenal, AL
3.	Heating	Permanent Headquarters for United States Space Command - Alt 1 - Redstone Arsenal, AL
4.	Emergency Generator	Permanent Headquarters for United States Space Command - Alt 1 - Redstone Arsenal, AL
5.	Personnel	Permanent Headquarters for United States Space Command - Alt 1 - Redstone Arsenal, AL

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

2. Construction / Demolition

2.1 General Information & Timeline Assumptions

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

- Activity Title: Permanent Headquarters for United States Space Command - Alt 1 - Redstone Arsenal, AL

- Activity Description:
• Clear and grade 499,750 square feet of land for parking, access road, and building construction, and 130,680 square feet for contractor staging and storage
• Haul 23,349 cubic yards of graded fill material and vegetation debris to offsite location
• Trench 2,040 linear feet for shared gas/telecom/electric joint trench utility connections – 2 feet wide by 5 feet deep
• Trench 2,040 linear feet for domestic water supply connections – 1.5 feet wide by 2.5 feet deep
• Trench 380 linear feet for stormwater piping – 3 feet wide by 3 feet deep
• Trench 2.040 linear feet for sanitary sewer piping – 1 foot wide by 27 inches deep
• Excavate a 216,821-square foot, 7-foot average depth detention pond
• Haul 60,273 cubic yards of unsuitable trenching and general excavation material to offsite location, import 4,060 cubic yards of fill material onto site
• Construct a 460,000-square foot, 5 story USSPACECOM headquarters building
• Apply architectural coatings to 464,000 square feet of headquarters building
• Pave 225 linear feet of 22-feet wide new access roadway
• Pave 402,000 square feet of new parking area

- Activity Start Date
Start Month: 4
Start Month: 2025

- Activity End Date
Indefinite: False

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End Month: 5
End Month: 2026

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	5.770254
SO_x	0.007673
NO_x	2.444887
CO	2.651241
PM 10	8.458202

Pollutant	Total Emissions (TONs)
PM 2.5	0.085778
Pb	0.000000
NH_3	0.006449
CO_2e	785.6

2.1 Site Grading Phase

2.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date
Start Month: 4
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 1
Number of Days: 0

2.1.2 Site Grading Phase Assumptions

- General Site Grading Information
Area of Site to be Graded (ft^2): 630430
Amount of Material to be Hauled On-Site (yd^3): 0
Amount of Material to be Hauled Off-Site (yd^3): 23349

- 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
Excavators Composite	1	8
Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Scrapers Composite	2	8
Tractors/Loaders/Backhoes Composite	3	8

- 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)

Excavators Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0559	0.0013	0.2269	0.5086	0.0086	0.0086	0.0050	119.70
Graders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0676	0.0014	0.3314	0.5695	0.0147	0.0147	0.0061	132.89
Other Construction Equipment Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0442	0.0012	0.2021	0.3473	0.0068	0.0068	0.0039	122.60
Rubber Tired Dozers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.1671	0.0024	1.0824	0.6620	0.0418	0.0418	0.0150	239.45
Scrapers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.1495	0.0026	0.8387	0.7186	0.0334	0.0334	0.0134	262.81
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0335	0.0007	0.1857	0.3586	0.0058	0.0058	0.0030	66.872

- 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	000.294	000.002	000.221	003.370	000.006	000.006		000.023	00325.374
LDGT	000.376	000.003	000.389	004.772	000.008	000.007		000.024	00418.504
HDGV	000.739	000.005	000.983	014.997	000.018	000.016		000.045	00770.173
LDDV	000.101	000.003	000.131	002.585	000.004	000.004		000.008	00316.802
LDDT	000.237	000.004	000.371	004.398	000.007	000.006		000.008	00448.891
HDDV	000.458	000.013	004.584	001.678	000.167	000.154		000.028	01498.941
MC	002.697	000.003	000.706	013.124	000.026	000.023		000.054	00394.164

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 Trenching/Excavating Phase

2.2.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date

Start Month: 5
Start Quarter: 1
Start Year: 2025

- Phase Duration

Number of Month: 0
Number of Days: 20

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2.2.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information

Area of Site to be Trenched/Excavated (ft^2): 319941
Amount of Material to be Hauled On-Site (yd^3): 4090
Amount of Material to be Hauled Off-Site (yd^3): 60303

- Trenching 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
Excavators Composite	2	8
Other General Industrial Equipmen Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8

- 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

2.2.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Excavators Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0559	0.0013	0.2269	0.5086	0.0086	0.0086	0.0050	119.70
Graders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0676	0.0014	0.3314	0.5695	0.0147	0.0147	0.0061	132.89
Other Construction Equipment Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0442	0.0012	0.2021	0.3473	0.0068	0.0068	0.0039	122.60
Rubber Tired Dozers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.1671	0.0024	1.0824	0.6620	0.0418	0.0418	0.0150	239.45
Scrapers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.1495	0.0026	0.8387	0.7186	0.0334	0.0334	0.0134	262.81
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0335	0.0007	0.1857	0.3586	0.0058	0.0058	0.0030	66.872

- 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	000.294	000.002	000.221	003.370	000.006	000.006		000.023	00325.374
LDGT	000.376	000.003	000.389	004.772	000.008	000.007		000.024	00418.504
HDGV	000.739	000.005	000.983	014.997	000.018	000.016		000.045	00770.173
LDDV	000.101	000.003	000.131	002.585	000.004	000.004		000.008	00316.802
LDDT	000.237	000.004	000.371	004.398	000.007	000.006		000.008	00448.891
HDDV	000.458	000.013	004.584	001.678	000.167	000.154		000.028	01498.941
MC	002.697	000.003	000.706	013.124	000.026	000.023		000.054	00394.164

2.2.4 Trenching / Excavating 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_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

2.3 Building Construction Phase

2.3.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 7
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 10
Number of Days: 0

2.3.2 Building Construction Phase Assumptions

- General Building Construction Information
Building Category: Office or Industrial
Area of Building (ft^2): 92800
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

2.3.3 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	0.0680	0.0013	0.4222	0.3737	0.0143	0.0143	0.0061	128.77
Forklifts Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0236	0.0006	0.0859	0.2147	0.0025	0.0025	0.0021	54.449
Generator Sets Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0287	0.0006	0.2329	0.2666	0.0080	0.0080	0.0025	61.057
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0335	0.0007	0.1857	0.3586	0.0058	0.0058	0.0030	66.872
Welders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0214	0.0003	0.1373	0.1745	0.0051	0.0051	0.0019	25.650

- 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	000.294	000.002	000.221	003.370	000.006	000.006		000.023	00325.374
LDGT	000.376	000.003	000.389	004.772	000.008	000.007		000.024	00418.504
HDGV	000.739	000.005	000.983	014.997	000.018	000.016		000.045	00770.173
LDDV	000.101	000.003	000.131	002.585	000.004	000.004		000.008	00316.802
LDDT	000.237	000.004	000.371	004.398	000.007	000.006		000.008	00448.891
HDDV	000.458	000.013	004.584	001.678	000.167	000.154		000.028	01498.941
MC	002.697	000.003	000.706	013.124	000.026	000.023		000.054	00394.164

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

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- 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

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2.4 Architectural Coatings Phase

2.4.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date
Start Month: 5
Start Quarter: 1
Start Year: 2026

- Phase Duration
Number of Month: 0
Number of Days: 20

2.4.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information
Building Category: Non-Residential
Total Square Footage (ft^2): 464000
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

2.4.3 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	000.294	000.002	000.221	003.370	000.006	000.006		000.023	00325.374
LDGT	000.376	000.003	000.389	004.772	000.008	000.007		000.024	00418.504
HDGV	000.739	000.005	000.983	014.997	000.018	000.016		000.045	00770.173
LDDV	000.101	000.003	000.131	002.585	000.004	000.004		000.008	00316.802
LDDT	000.237	000.004	000.371	004.398	000.007	000.006		000.008	00448.891
HDDV	000.458	000.013	004.584	001.678	000.167	000.154		000.028	01498.941
MC	002.697	000.003	000.706	013.124	000.026	000.023		000.054	00394.164

2.4.4 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

2.5 Paving Phase

2.5.1 Paving Phase Timeline Assumptions

- Phase Start Date
Start Month: 3
Start Quarter: 1
Start Year: 2026

- Phase Duration
Number of Month: 0
Number of Days: 20

2.5.2 Paving Phase Assumptions

- General Paving Information
Paving Area (ft^2): 406950

- Paving Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Pavers Composite	1	8
Paving Equipment Composite	2	6
Rollers Composite	2	6

- 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

2.5.3 Paving Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Excavators Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0559	0.0013	0.2269	0.5086	0.0086	0.0086	0.0050	119.70
Graders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0676	0.0014	0.3314	0.5695	0.0147	0.0147	0.0061	132.89
Other Construction Equipment Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0442	0.0012	0.2021	0.3473	0.0068	0.0068	0.0039	122.60
Rubber Tired Dozers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.1671	0.0024	1.0824	0.6620	0.0418	0.0418	0.0150	239.45
Scrapers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.1495	0.0026	0.8387	0.7186	0.0334	0.0334	0.0134	262.81
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0335	0.0007	0.1857	0.3586	0.0058	0.0058	0.0030	66.872

- 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	000.294	000.002	000.221	003.370	000.006	000.006		000.023	00325.374
LDGT	000.376	000.003	000.389	004.772	000.008	000.007		000.024	00418.504
HDGV	000.739	000.005	000.983	014.997	000.018	000.016		000.045	00770.173
LDDV	000.101	000.003	000.131	002.585	000.004	000.004		000.008	00316.802
LDDT	000.237	000.004	000.371	004.398	000.007	000.006		000.008	00448.891
HDDV	000.458	000.013	004.584	001.678	000.167	000.154		000.028	01498.941
MC	002.697	000.003	000.706	013.124	000.026	000.023		000.054	00394.164

2.5.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

PA: Paving Area (ft^2)
0.25: Thickness of Paving Area (ft)
(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd^3 / 27 ft^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_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase
$VOC_P = (2.62 * PA) / 43560$

VOC_P: Paving VOC Emissions (TONs)
2.62: Emission Factor (lb/acre)
PA: Paving Area (ft^2)
43560: Conversion Factor square feet to acre (43560 ft2 / acre)^2 / acre)

3. Heating

3.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

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

- Activity Title: Permanent Headquarters for United States Space Command - Alt 1 - Redstone Arsenal, AL

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Activity Description:

• Install and operate natural gas heating for 464,000 square feet of USSPACECOM headquarters building, using commercial/institutional boilers/furnaces (0.3 – 9.9 MMBtu/hour)

- Activity Start Date

Start Month: 1
Start Year: 2027

- Activity End Date

Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.121402
SO_x	0.013244
NO_x	2.207314
CO	1.854144
PM 10	0.167756

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.167756
Pb	0.000000
NH_3	0.000000
CO_2e	2657.4

3.2 Heating Assumptions

- Heating

Heating Calculation Type: Heat Energy Requirement Method

- Heat Energy Requirement Method

Area of floorspace to be heated (ft^2): 464000
Type of fuel: Natural Gas
Type of boiler/furnace: Commercial/Institutional (0.3 - 9.9 MMBtu/hr)
Heat Value ($MMBtu/ft^3$): 0.00105
Energy Intensity ($MMBtu/ft^2$): 0.0999

- Default Settings Used: Yes

- Boiler/Furnace Usage

Operating Time Per Year (hours): 900 (default)

3.3 Heating Emission Factor(s)

- Heating Emission Factors (lb/1000000 scf)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
5.5	0.6	100	84	7.6	7.6			120390

3.4 Heating Formula(s)

- Heating Fuel Consumption ft^3 per Year

$FC_{HER} = HA * EI / HV / 1000000$

FC_{HER}: Fuel Consumption for Heat Energy Requirement Method
HA: Area of floorspace to be heated (ft^2)
EI: Energy Intensity Requirement ($MMBtu/ft^2$)
HV: Heat Value ($MMBTU/ft^3$)
1000000: Conversion Factor

- Heating Emissions per Year

$HE_{POL} = FC * EF_{POL} / 2000$

HE_{POL}: Heating Emission Emissions (TONs)
FC: Fuel Consumption
EF_{POL}: Emission Factor for Pollutant
2000: Conversion Factor pounds to tons

4. Emergency Generator

4.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

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

- Activity Title: Permanent Headquarters for United States Space Command - Alt 1 - Redstone Arsenal, AL

- Activity Description:
• Install and operate diesel-fired emergency generator for USSPACECOM headquarters building

- Activity Start Date
Start Month: 1
Start Year: 2027

- 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

4.2 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)

4.3 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

4.4 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)

5. Personnel

5.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Madison
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Permanent Headquarters for United States Space Command - Alt 1 - Redstone Arsenal, AL

- Activity Description:

- Add personnel activities at USSPACECOM headquarters
- Average 20 miles roundtrip commute, 5 days per week (default)
- 726 active duty personnel
- 545 civilian personnel
- 545 support contractor personnel

- Activity Start Date

Start Month: 1
Start Year: 2027

- Activity End Date

Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	4.049382
SO_x	0.027345
NO_x	3.454679
CO	45.838457
PM 10	0.078998

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.072103
Pb	0.000000
NH_3	0.251509
CO_2e	3988.5

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

5.2 Personnel Assumptions

- Number of Personnel

Active Duty Personnel:	726
Civilian Personnel:	545
Support Contractor Personnel:	545
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	000.294	000.002	000.221	003.370	000.006	000.006		000.023	00325.374
LDGT	000.376	000.003	000.389	004.772	000.008	000.007		000.024	00418.504
HDGV	000.739	000.005	000.983	014.997	000.018	000.016		000.045	00770.173
LDDV	000.101	000.003	000.131	002.585	000.004	000.004		000.008	00316.802
LDDT	000.237	000.004	000.371	004.398	000.007	000.006		000.008	00448.891
HDDV	000.458	000.013	004.584	001.678	000.167	000.154		000.028	01498.941
MC	002.697	000.003	000.706	013.124	000.026	000.023		000.054	00394.164

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

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 Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: GENERIC BASE
State: Alabama
County(s): Madison
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Establishment of Permanent Headquarters for United States Space Command - Alternative 1: Redstone Arsenal, Huntsville, Alabama

c. Project Number/s (if applicable):

d. Projected Action Start Date: 4 / 2025

e. Action Description:

The Proposed Action includes construction and operation of a HQ facility that would be specifically designed to accommodate the functional requirements of USSPACECOM. Approximately 1,450 personnel would be assigned to the proposed HQ facility, although staffing levels could vary depending on mission and operational requirements. Additionally, USSPACECOM may support contractors and mission partners who would be co-located with the permanent HQ and, therefore, the impact of 1,800 personnel is included in this EA. The proposed HQ would consist of approximately 464,000 square feet of office, administrative, and functional interior space across multiple stories. The main HQ building would be supported by approximately 402,000 square feet of vehicle parking in surface lots and/or parking structures. The facility would meet administrative space standards in accordance with Air Force Manual (AFMAN) 32-1084, Facility Requirements.

Functions and components of the proposed HQ facility would include the following:
- Operations center(s)
- Associated offices, conference rooms, and administrative areas
- Training and exercise space
- Sensitive Compartmented Information Facility (SCIF) space
- Communications and infrastructure equipment
- Kitchen and dining area
- Loading dock and shipping/receiving area

f. Point of Contact:

Name: Paul Sanford
Title: Environmental Planner
Organization: AECOM
Email: paul.sanford@aecom.com
Phone Number: 813-675-6843

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

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

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

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

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

Analysis Summary:

2025

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.266	250	No
NOx	1.755	250	No
CO	1.803	250	No
SOx	0.006	250	No
PM 10	8.433	250	No
PM 2.5	0.061	250	No
Pb	0.000	25	No
NH3	0.005	250	No
CO2e	573.5		

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	5.505	250	No
NOx	0.689	250	No
CO	0.848	250	No
SOx	0.002	250	No
PM 10	0.025	250	No
PM 2.5	0.025	250	No
Pb	0.000	25	No
NH3	0.002	250	No
CO2e	212.1		

2027

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	4.176	250	No
NOx	5.685	250	No
CO	47.708	250	No
SOx	0.045	250	No
PM 10	0.252	250	No
PM 2.5	0.245	250	No
Pb	0.000	25	No
NH3	0.252	250	No
CO2e	6648.6		

2028 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	4.176	250	No
NOx	5.685	250	No
CO	47.708	250	No
SOx	0.045	250	No
PM 10	0.252	250	No
PM 2.5	0.245	250	No
Pb	0.000	25	No
NH3	0.252	250	No
CO2e	6648.6		

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

Sanford, Paul Digitally signed by Sanford, Paul
Date: 2022.06.24 11:43:37 -04'00'

Paul Sanford, Environmental Planner _____ DATE

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 Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: KIRTLAND AFB
State: New Mexico
County(s): Bernalillo
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Establishment of Permanent Headquarters for United States Space Command - Alternative 2: Kirtland Air Force Base, Albuquerque, New Mexico

c. Project Number/s (if applicable):

d. Projected Action Start Date: 4 / 2025

e. Action Description:

The Proposed Action includes construction and operation of a HQ facility that would be specifically designed to accommodate the functional requirements of USSPACECOM. Approximately 1,450 personnel would be assigned to the proposed HQ facility, although staffing levels could vary depending on mission and operational requirements. Additionally, USSPACECOM may support contractors and mission partners who would be co-located with the permanent HQ and, therefore, the impact of 1,800 personnel is included in this EA. The proposed HQ would consist of approximately 464,000 square feet of office, administrative, and functional interior space across multiple stories. The main HQ building would be supported by approximately 402,000 square feet of vehicle parking in surface lots and/or parking structures. The facility would meet administrative space standards in accordance with Air Force Manual (AFMAN) 32-1084, Facility Requirements.

Functions and components of the proposed HQ facility would include the following:
- Operations center(s)
- Associated offices, conference rooms, and administrative areas
- Training and exercise space
- Sensitive Compartmented Information Facility (SCIF) space
- Communications and infrastructure equipment
- Kitchen and dining area
- Loading dock and shipping/receiving area

f. Point of Contact:

Name: Paul Sanford
Title: Environmental Planner
Organization: AECOM
Email: paul.sanford@aecom.com
Phone Number: 831-675-6843

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

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

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

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

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

Analysis Summary:

2025

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.295	100	No
NOx	2.041	100	No
CO	1.880	250	No
SOx	0.006	250	No
PM 10	8.992	100	No
PM 2.5	0.065	250	No
Pb	0.000	25	No
NH3	0.006	250	No
CO2e	608.0		

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	4.765	100	No
NOx	0.707	100	No
CO	0.849	250	No
SOx	0.002	250	No
PM 10	0.025	100	No
PM 2.5	0.024	250	No
Pb	0.000	25	No
NH3	0.001	250	No
CO2e	206.0		

2027

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	4.204	100	No
NOx	5.484	100	No
CO	47.082	250	No
SOx	0.042	250	No
PM 10	0.226	100	No
PM 2.5	0.215	250	No
Pb	0.000	25	No
NH3	0.252	250	No
CO2e	5997.7		

2028 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	4.204	100	No
NOx	5.484	100	No
CO	47.082	250	No
SOx	0.042	250	No
PM 10	0.226	100	No
PM 2.5	0.215	250	No
Pb	0.000	25	No
NH3	0.252	250	No
CO2e	5997.7		

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

Sanford, Paul Digitally signed by Sanford, Paul
Date: 2022.06.24 11:45:01 -04'00'

Paul Sanford, Environmental Planner _____ DATE

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 Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: OFFUTT AFB
State: Nebraska
County(s): Sarpy
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Establishment of Permanent Headquarters for United States Space Command - Alternative 3: Offutt Air Force Base, Bellevue, Nebraska

c. Project Number/s (if applicable):

d. Projected Action Start Date: 4 / 2025

e. Action Description:

The Proposed Action includes construction and operation of a HQ facility that would be specifically designed to accommodate the functional requirements of USSPACECOM. Approximately 1,450 personnel would be assigned to the proposed HQ facility, although staffing levels could vary depending on mission and operational requirements. Additionally, USSPACECOM may support contractors and mission partners who would be co-located with the permanent HQ and, therefore, the impact of 1,800 personnel is included in this EA. The proposed HQ would consist of approximately 464,000 square feet of office, administrative, and functional interior space across multiple stories. The main HQ building would be supported by approximately 402,000 square feet of vehicle parking in surface lots and/or parking structures. The facility would meet administrative space standards in accordance with Air Force Manual (AFMAN) 32-1084, Facility Requirements.

Functions and components of the proposed HQ facility would include the following:
- Operations center(s)
- Associated offices, conference rooms, and administrative areas
- Training and exercise space
- Sensitive Compartmented Information Facility (SCIF) space
- Communications and infrastructure equipment
- Kitchen and dining area
- Loading dock and shipping/receiving area

f. Point of Contact:

Name: Paul Sanford
Title: Environmental Planner
Organization: AECOM
Email: paul.sanford@aecom.com
Phone Number: 813-675-6843

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

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

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

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

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

Analysis Summary:

2025

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.286	250	No
NOx	1.897	250	No
CO	1.852	250	No
SOx	0.006	250	No
PM 10	7.876	250	No
PM 2.5	0.061	250	No
Pb	0.000	25	No
NH3	0.005	250	No
CO2e	570.3		

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	5.511	250	No
NOx	0.730	250	No
CO	0.866	250	No
SOx	0.002	250	No
PM 10	0.026	250	No
PM 2.5	0.025	250	No
Pb	0.000	25	No
NH3	0.002	250	No
CO2e	212.3		

2027

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	4.398	250	No
NOx	6.270	250	No
CO	51.194	250	No
SOx	0.047	250	No
PM 10	0.301	250	No
PM 2.5	0.291	250	No
Pb	0.000	25	No
NH3	0.252	250	No
CO2e	6876.9		

2028 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	4.398	250	No
NOx	6.270	250	No
CO	51.194	250	No
SOx	0.047	250	No
PM 10	0.301	250	No
PM 2.5	0.291	250	No
Pb	0.000	25	No
NH3	0.252	250	No
CO2e	6876.9		

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

Sanford, Paul Digitally signed by Sanford, Paul
Date: 2022.06.24 11:46:08 -04'00'

Paul Sanford, Environmental Planner _____ DATE

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: PETERSEN AFB
State: Colorado
County(s): El Paso
Regulatory Area(s): Colorado Springs, CO

b. Action Title: Establishment of Permanent Headquarters for United States Space Command - Alternative 4: Peterson Air Force Base, Colorado Springs, Colorado

c. Project Number/s (if applicable):

d. Projected Action Start Date: 4 / 2025

e. Action Description:

The Proposed Action includes construction and operation of a HQ facility that would be specifically designed to accommodate the functional requirements of USSPACECOM. Approximately 1,450 personnel would be assigned to the proposed HQ facility, although staffing levels could vary depending on mission and operational requirements. Additionally, USSPACECOM may support contractors and mission partners who would be co-located with the permanent HQ and, therefore, the impact of 1,800 personnel is included in this EA. The proposed HQ would consist of approximately 464,000 square feet of office, administrative, and functional interior space across multiple stories. The main HQ building would be supported by approximately 402,000 square feet of vehicle parking in surface lots and/or parking structures. The facility would meet administrative space standards in accordance with Air Force Manual (AFMAN) 32-1084, Facility Requirements.

Functions and components of the proposed HQ facility would include the following:
- Operations center(s)
- Associated offices, conference rooms, and administrative areas
- Training and exercise space
- Sensitive Compartmented Information Facility (SCIF) space
- Communications and infrastructure equipment
- Kitchen and dining area
- Loading dock and shipping/receiving area

f. Point of Contact:

Name: Paul Sanford
Title: Environmental Planner
Organization: AECOM
Email: paul.sanford@aecom.com
Phone Number: 813-675-6843

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

__X__ not applicable

Conformity Analysis Summary:

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Colorado Springs, CO			
VOC	0.267		
NOx	1.809		
CO	1.793	100	No
SOx	0.006		
PM 10	7.670		
PM 2.5	0.061		
Pb	0.000		
NH3	0.005		
CO2e	566.2		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Colorado Springs, CO			
VOC	5.510		
NOx	0.727		
CO	0.879	100	No
SOx	0.002		
PM 10	0.026		
PM 2.5	0.026		
Pb	0.000		
NH3	0.002		
CO2e	216.9		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Colorado Springs, CO			
VOC	4.080		
NOx	5.355		
CO	45.874	100	No
SOx	0.042		
PM 10	0.246		
PM 2.5	0.235		
Pb	0.000		
NH3	0.252		
CO2e	6055.6		

2028 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Colorado Springs, CO			
VOC	4.080		
NOx	5.355		
CO	45.874	100	No

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

SOx	0.042		
PM 10	0.246		
PM 2.5	0.235		
Pb	0.000		
NH3	0.252		
CO2e	6055.6		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Sanford, Paul Digitally signed by Sanford, Paul
Date: 2022.06.24 11:47:00 -04'00'

Paul Sanford, Environmental Planner DATE

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: LACKLAND AFB
State: Texas
County(s): Bexar
Regulatory Area(s): San Antonio, TX

b. Action Title: Establishment of Permanent Headquarters for United States Space Command - Alternative 5: Port San Antonio, San Antonio, Texas

c. Project Number/s (if applicable):

d. Projected Action Start Date: 4 / 2025

e. Action Description:

The Proposed Action includes construction and operation of a HQ facility that would be specifically designed to accommodate the functional requirements of USSPACECOM. Approximately 1,450 personnel would be assigned to the proposed HQ facility, although staffing levels could vary depending on mission and operational requirements. Additionally, USSPACECOM may support contractors and mission partners who would be co-located with the permanent HQ and, therefore, the impact of 1,800 personnel is included in this EA. The proposed HQ would consist of approximately 464,000 square feet of office, administrative, and functional interior space across multiple stories. The main HQ building would be supported by approximately 402,000 square feet of vehicle parking in surface lots and/or parking structures. The facility would meet administrative space standards in accordance with Air Force Manual (AFMAN) 32-1084, Facility Requirements.

Functions and components of the proposed HQ facility would include the following:
- Operations center(s)
- Associated offices, conference rooms, and administrative areas
- Training and exercise space
- Sensitive Compartmented Information Facility (SCIF) space
- Communications and infrastructure equipment
- Kitchen and dining area
- Loading dock and shipping/receiving area

f. Point of Contact:

Name: Paul Sanford
Title: Environmental Planner
Organization: AECOM
Email: paul.sanford@aecom.com
Phone Number: 813-675-6843

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

__X__ not applicable

Conformity Analysis Summary:

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Antonio, TX			
VOC	0.259	100	No
NOx	1.693	100	No
CO	1.798		
SOx	0.005		
PM 10	8.176		
PM 2.5	0.059		
Pb	0.000		
NH3	0.005		
CO2e	559.4		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Antonio, TX			
VOC	5.504	100	No
NOx	0.686	100	No
CO	0.845		
SOx	0.002		
PM 10	0.025		
PM 2.5	0.025		
Pb	0.000		
NH3	0.002		
CO2e	212.6		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Antonio, TX			
VOC	3.778	100	No
NOx	6.504	100	No
CO	44.627		
SOx	7.184		
PM 10	0.289		
PM 2.5	0.149		
Pb	0.000		
NH3	0.252		
CO2e	7748.2		

2028 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Antonio, TX			
VOC	3.778	100	No
NOx	6.504	100	No
CO	44.627		

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

SOx	7.184		
PM 10	0.289		
PM 2.5	0.149		
Pb	0.000		
NH3	0.252		
CO2e	7748.2		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Sanford, Paul Digitally signed by Sanford, Paul
Date: 2022.06.24 11:47:58 -04'00'

Paul Sanford, Environmental Planner _____ DATE

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 Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: CAPE CANAVERAL AFS
State: Florida
County(s): Brevard
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Establishment of Permanent Headquarters for United States Space Command - Alternative 6: Cape Canaveral Spaceport, Titusville, Florida

c. Project Number/s (if applicable):

d. Projected Action Start Date: 4 / 2025

e. Action Description:

The Proposed Action includes construction and operation of a HQ facility that would be specifically designed to accommodate the functional requirements of USSPACECOM. Approximately 1,450 personnel would be assigned to the proposed HQ facility, although staffing levels could vary depending on mission and operational requirements. Additionally, USSPACECOM may support contractors and mission partners who would be co-located with the permanent HQ and, therefore, the impact of 1,800 personnel is included in this EA. The proposed HQ would consist of approximately 464,000 square feet of office, administrative, and functional interior space across multiple stories. The main HQ building would be supported by approximately 402,000 square feet of vehicle parking in surface lots and/or parking structures. The facility would meet administrative space standards in accordance with Air Force Manual (AFMAN) 32-1084, Facility Requirements.

Functions and components of the proposed HQ facility would include the following:
- Operations center(s)
- Associated offices, conference rooms, and administrative areas
- Training and exercise space
- Sensitive Compartmented Information Facility (SCIF) space
- Communications and infrastructure equipment
- Kitchen and dining area
- Loading dock and shipping/receiving area

f. Point of Contact:

Name: Paul Sanford
Title: Environmental Planner
Organization: AECOM
Email: paul.sanford@aecom.com
Phone Number: 813-675-6843

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

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

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

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

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

Analysis Summary:

2025

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.261	250	No
NOx	1.704	250	No
CO	1.805	250	No
SOx	0.006	250	No
PM 10	8.765	250	No
PM 2.5	0.062	250	No
Pb	0.000	25	No
NH3	0.005	250	No
CO2e	586.4		

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	5.504	250	No
NOx	0.675	250	No
CO	0.849	250	No
SOx	0.002	250	No
PM 10	0.026	250	No
PM 2.5	0.025	250	No
Pb	0.000	25	No
NH3	0.002	250	No
CO2e	215.1		

2027

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	4.197	250	No
NOx	5.514	250	No
CO	48.518	250	No
SOx	0.045	250	No
PM 10	0.246	250	No
PM 2.5	0.235	250	No
Pb	0.000	25	No
NH3	0.251	250	No
CO2e	6846.2		

2028 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	4.197	250	No
NOx	5.514	250	No
CO	48.518	250	No
SOx	0.045	250	No
PM 10	0.246	250	No
PM 2.5	0.235	250	No
Pb	0.000	25	No
NH3	0.251	250	No
CO2e	6846.2		

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

Sanford, Paul Digitally signed by Sanford, Paul
Date: 2022.06.24 11:48:42 -04'00'

Paul Sanford, Environmental Planner _____ DATE

APPENDIX D:

FEDERAL CONSISTENCY DETERMINATION

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DEPARTMENT OF DEFENSE
UNITED STATES SPACE COMMAND

August 9, 2021

Ms. Ann Lazar
Florida Coastal Management Program
3900 Commonwealth Boulevard
Tallahassee, FL 32399

SUBJECT: Federal Consistency Determination
Establishment of Permanent United States Space Command (USSPACECOM) Headquarters (HQ) Facility

Dear Ms. Lazar,

The United States (US) Department of the Air Force (DAF) proposes to construct and operate a permanent USSPACECOM HQ facility (Proposed Action) at one of six alternative sites in the US, one of which is located at Cape Canaveral Spaceport in Titusville, Florida (enclosure). Of note, this location is not on the Cape Canaveral Space Force Station nor in the City of Cape Canaveral. The DAF submits the enclosed Federal Consistency Determination for the Cape Canaveral Spaceport alternative in accordance with the Coastal Zone Management Act (CZMA) and Florida's Coastal Management Program (FCMP); and will also provide the draft environmental assessment through the State Clearinghouse.

An interim USSPACECOM HQ is currently hosted at Peterson Space Force Base (SFB) in Colorado, but personnel and operations are also hosted in other interim facilities scattered at other Department of Defense (DoD) installations across the US. The establishment of a permanent operational USSPACECOM HQ would facilitate a fully functional command and would allow USSPACECOM to fulfill its mission requirements.

The DAF is considering six alternative sites for implementation of the Proposed Action: Cape Canaveral Spaceport, Florida; Kirtland AFB, New Mexico; Offutt AFB, Nebraska; Peterson SFB, Colorado; Port San Antonio, Texas; and US Army Garrison Redstone Arsenal, Alabama (Preferred Alternative).

The proposed location at Cape Canaveral Spaceport is located within Brevard County, which is located within the State of Florida's coastal zone. Therefore, the DAF has prepared this Federal Consistency Determination to evaluate the Proposed Action's effects on coastal resources and its consistency with the enforceable policies of the federally approved FCMP. Based on the analysis presented in the enclosed Federal Consistency Determination, the DAF has determined that the Proposed Action would be consistent to the maximum extent practicable with the enforceable policies of the FCMP.

The DAF respectfully requests your response within **60 days** from the receipt of this document, pursuant to 15 Code of Federal Regulations (CFR) 930.14, to concur or object to this consistency determination, or to request an extension under Section 930.41(b). Your concurrence will be presumed if a response is not received on the 60th day from receipt of this determination. The DAF has contracted AECOM to facilitate the CZMA process. Please direct your response or requests for additional information to Jennifer Warf at AECOM by email: Jennifer.Warf@aecom.com; or by mail to: AECOM, ATTN: Jennifer Warf, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Sincerely

STEVEN T. ROSE, GS-15
Executive Director
US Space Command Logistics and Engineering

Attachment:
Figure 1: Cape Canaveral Spaceport Alternative Location
Federal Consistency Determination

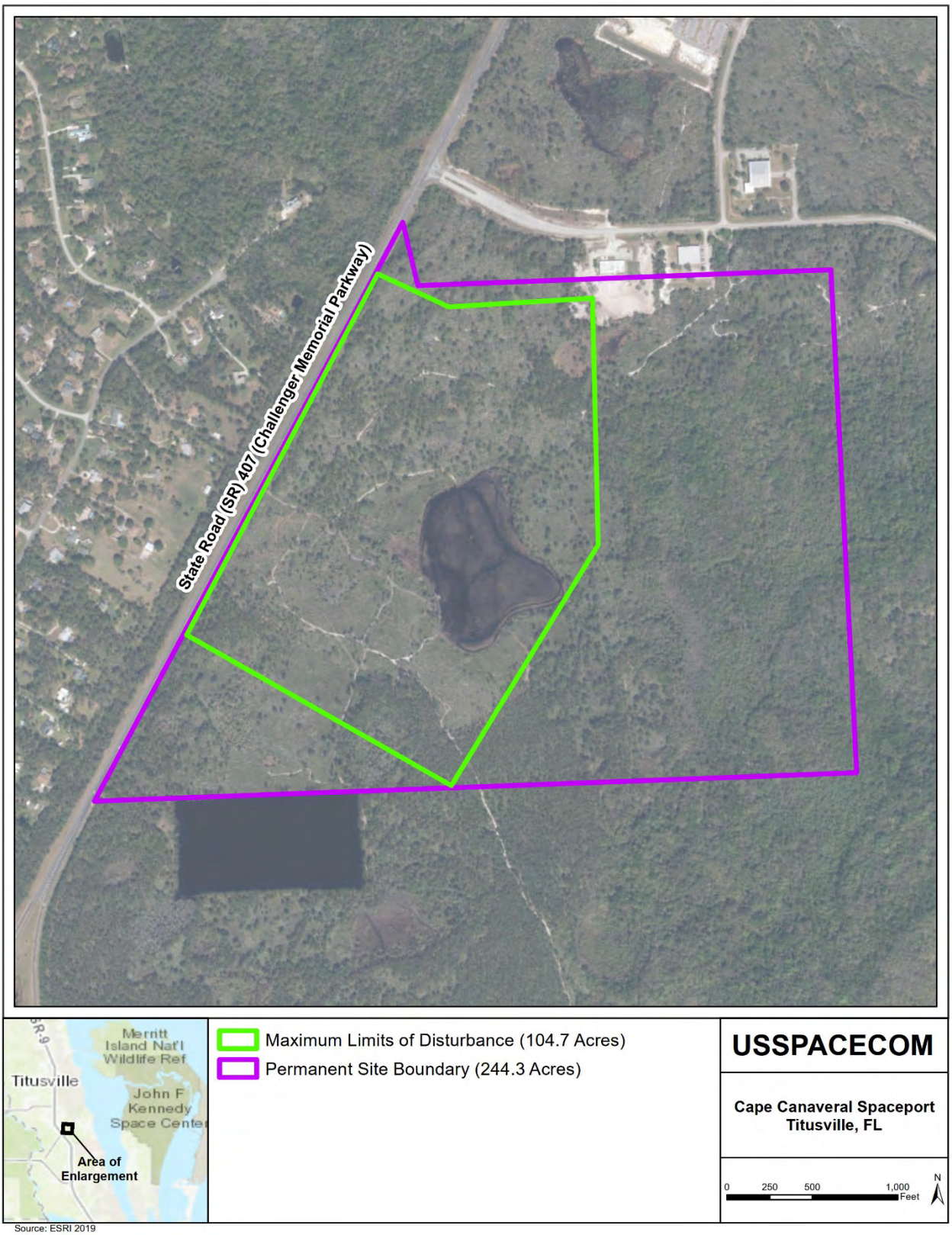

Figure 1: Cape Canaveral Spaceport Alternative Location

FEDERAL CONSISTENCY DETERMINATION

ESTABLISHMENT OF PERMANENT UNITED STATES SPACE COMMAND HEADQUARTERS FACILITY

BREVARD COUNTY, FLORIDA

Introduction

The United States (US) Department of the Air Force (DAF) proposes to establish a permanent US Space Command (USSPACECOM) Headquarters (HQ) facility (Proposed Action) at one of six alternative sites in the US: Cape Canaveral Spaceport, Florida; Kirtland Air Force Base (AFB), New Mexico; Offutt AFB, Nebraska; Peterson SFB, Colorado; Port San Antonio, Texas; and US Army Garrison Redstone Arsenal, Alabama (Preferred Alternative).

The proposed location at Cape Canaveral Spaceport is located within Brevard County, which is located within the State of Florida's coastal zone. Therefore, the Proposed Action could have reasonably foreseeable effects on coastal zone resources and the enforceable policies of the federally approved Florida Coastal Management Program (FCMP). Therefore, the DAF prepared this Federal Consistency Determination in accordance with Section 307(d) of the Coastal Zone Management Act (CZMA) of 1972 and 15 Code of Federal Regulations (CFR) Part 930, Subpart C to evaluate the Proposed Action's effects on those resources and enforceable policies. The DAF has determined that the Proposed Action would be consistent to the maximum extent practicable with the enforceable policies of the FCMP.

The analysis presented here is drawn from the more detailed analysis presented in the Environmental Assessment (EA) that the DAF has prepared to analyze the Proposed Action's potential impacts in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] §§ 4321 et seq.); the Council on Environmental Quality (CEQ) *Regulations Implementing the Procedural Provisions of NEPA* (40 CFR Parts 1500-1508); and the Air Force and Army Environmental Impact Analysis Processes (EIAP) (32 CFR Part 989; 32 CFR 651).

Project Background

In August 2019, USSPACECOM was activated as a Unified Combatant Command with the mission to command and control all US military forces and operations in the domain 62.1 miles (100 kilometers) above the earth's surface and beyond to deter conflict, defeat aggression, deliver space combat power for the Joint/Combined Force, and defend the vital interests of the US with allies and partners. A provisional USSPACECOM HQ is located at Peterson SFB, with personnel and operations also spread out among various Department of Defense (DoD) installations across the US. These interim facilities distribute USSPACECOM functions across multiple sites, preventing operations from being fully consolidated. The lack of a permanent, purpose-built HQ facility prevents USSPACECOM from achieving full operational and functional effectiveness and fulfilling its mission requirements.

Purpose and Need

The *purpose* of the Proposed Action is to establish a permanent operational USSPACECOM HQ to facilitate a fully functional combatant command.

The Proposed Action is *needed* because USSPACECOM currently lacks a centralized, permanent, purpose-built HQ facility to fulfill its mission requirements and achieve full operational capacity.

Proposed Action

The Proposed Action includes construction and operation of a multi-story HQ facility that would be specifically designed to accommodate the functional requirements of USSPACECOM. Approximately 1,816 personnel would be assigned to the proposed HQ facility, which includes both military and civilian assignments, as well as reasonably expected contractor personnel supporting USSPACECOM missions who would be co-located with the permanent HQ. The proposed facility would be approximately 770,000 square feet, consisting of approximately 460,000 square feet of interior space and 310,000 square feet of parking. The proposed HQ facility would require Level 2 Force Protection and would be built within a secure, fenced perimeter at one of the six alternative sites being considered. Should the alternative site at Cape Canaveral Spaceport be selected, additional security measures would be incorporated as it would not be located within an existing DoD installation. The proposed facility would be designed and built in accordance with applicable DoD antiterrorism/force protection requirements.

Construction of the proposed facility would include site preparation activities, identification and extension of utility and infrastructure systems, installation of foundation piles and a foundation slab, erection of structural steel, establishment of vehicle parking areas, and modification or extension of existing roads and pedestrian sidewalks. Construction is expected to begin in fiscal year 2026 and take approximately 5 years to complete.

Once construction is complete, USSPACECOM personnel and operations would be consolidated to the proposed HQ facility from the provisional HQ at Peterson SFB and other interim locations throughout the country. Activities at the proposed facility would generally include office and administrative work to command and control global DoD space operations, support other combatant commands, defend US and allied space operations, gain and maintain space superiority, and develop DoD space capabilities and training.

Alternatives

The DAF is considering six alternative sites for implementation of the Proposed Action:

1) **Alternative 1 – Redstone Arsenal (Preferred Alternative)**: This alternative would locate the proposed USSPACECOM HQ facility at an approximately 60-acre parcel within US Army Garrison Redstone Arsenal in Huntsville, Alabama.

2) **Alternative 2 – Kirtland AFB**: This alternative would locate the HQ facility at an approximately 64-acre parcel within Kirtland AFB in Albuquerque, New Mexico.

3) **Alternative 3 – Offutt AFB**: This alternative would locate the HQ facility at an approximately 11-acre parcel within Offutt AFB in Bellevue, Nebraska.

4) **Alternative 4** – **Peterson SFB**: This alternative would locate the HQ facility at an approximately 13.7-acre parcel within Peterson SFB in Colorado Springs, Colorado. This parcel is separate from the location of the current provisional HQ located at Peterson SFB.

5) **Alternative 5** – **Port San Antonio**: This alternative would locate the HQ facility on an approximately 32.5-acre parcel at an existing office, technology, and industrial campus located in San Antonio, Texas.

6) **Alternative 6** – **Cape Canaveral Spaceport**: This alternative would locate the HQ facility on an approximately 244-acre parcel currently owned by Space Coast Regional Airport in Titusville, Florida. All Proposed Action-related activities would occur within a 105-acre portion of this site (i.e., the proposed maximum limits of disturbance [LOD]).

Enforceable Policies

The State of Florida's federally approved FCMP is administered by the Florida Department of Environmental Protection (FDEP) through the Office of Resilience and Coastal Protection. The FDEP manages and implements the FCMP, in conjunction with nine state agencies and five water management districts. The FCMP consists of a network of 24 Florida Statutes which comprise the enforceable policies. The Florida Statutes pertaining to the coastal zone include the following:

- Beach and Shore Preservation
- Intergovernmental Programs
- State and Regional Planning
- Emergency Management
- State Lands
- State Parks and Preserves
- Land Acquisitions for Conservation or Recreation
- Florida Greenways and Trails Act
- Historical Resources
- Commercial Development and Capital Improvements
- Transportation Administration
- Transportation Finance and Planning
- Water Resources
- Outdoor Recreation and Conservation Lands
- Pollutant Discharge Prevention and Removal
- Energy Resources
- Fish and Wildlife Conservation
- Land and Water Management
- Public Health
- Mosquito Control
- Environmental Control
- Building Construction Standards
- Soil and Water Conservation
- Aquaculture

Table 1 summarizes the applicability of Florida's enforceable policies and the Proposed Action's consistency with the applicable policies. A summary analysis of the Proposed Action's consistency with the applicable enforceable policies is presented below.

Florida Statute (FS) Chapter 267, Historical Resources

The DAF conducted a Phase I cultural resources assessment survey at Cape Canaveral Spaceport in May 2021 in order to identify archaeological and historic architectural properties within the Proposed Action's Area of Potential Effects. During this survey, no architectural structures or historic properties were discovered. One archaeological site was identified, but this site is recommended not eligible for listing in the National Register of Historic Places due to its small size and limited artifacts.

The DAF has consulted with the Florida State Historic Preservation Office (SHPO) in accordance with Section 106 of the National Historic Preservation Act, as well as with federally recognized Native American Tribes that are historically affiliated with the geographic region. In a response dated June 21, 2021, the Florida SHPO determined that the Proposed Action would have no effect on historic properties. In the event archaeological materials are inadvertently discovered during the Proposed Action, ground-disturbing activities would stop immediately, and the DAF would notify the Florida SHPO and any Tribes which have elected to act as consulting parties. With the implementation of appropriate best management practices (BMPs), the Proposed Action would be consistent to the maximum extent practicable with this enforceable policy.

FS Chapter 373, Water Resources

Part II: Permitting of Consumptive Uses of Water

The proposed construction and operation of the permanent USSPACECOM HQ facility on a previously undeveloped parcel of land would generate an additional consumptive use of water, as needed for building utilities and a potable supply. Any use required by this facility, however, would not constitute a new use or require new withdrawals from water resources. The DAF would work closely with existing water utilities to ensure that they are able to meet the anticipated demand of the facility without leading to supply interruptions or significantly reducing water availability. Additionally, the Proposed Action would utilize Florida-friendly landscaping design standards, including for irrigation. The Proposed Action would be consistent to the maximum extent practicable with this enforceable policy.

Part IV: Management and Storage of Surface Waters

Surface waters and wetlands on site were delineated in accordance with guidance provided by the FDEP. Six wetlands were delineated within the proposed LOD, totaling 29.4 acres; in addition, substantial wetland mosaics are present surrounding the LOD, including elsewhere on Cape Canaveral Spaceport. Construction of the Proposed Action would fill up to 29.4 acres of wetlands within the LOD. Wetlands located outside of the proposed LOD may also have the potential to be impacted by construction activities through runoff and discharge of material. The DAF would obtain the appropriate Environmental Resource Permit (ERP) issued by the St. Johns River Water Management District (SJRWMD) as authorized by FDEP, as well as any applicable wetland fill permits from USACE in compliance with Section 404 of the federal Clean Water Act (CWA). The DAF would implement any required mitigation as directed by these permits, such as on-site or off-site wetland replacement or purchase of credits from a wetland mitigation bank, in order to offset

and reduce adverse impacts to wetlands located within the proposed site. Additionally, the Proposed Action would comply with Section 438 of the Energy Independence and Security Act, and would aim to restore the pre-development hydrology of the site to the maximum extent technically feasible. Any on-site stormwater management features, retention ponds, etc. would be developed in accordance with state and local policies and codes. Enforceable policies contained within this section that address restoration priority areas within the SJRWMD, Miami-Dade County, the Lake Belt, other water management districts, the Everglades, Florida Bay, Alligator Alley, Lake Apopka, the Wekiva River System, the Geneva Freshwater Lens, Heartland headwaters, and the Harris Chain of Lakes are not applicable to this Proposed Action. The Proposed Action is consistent to the maximum extent practicable with the applicable enforceable policies.

FS Chapter 376, Pollutant Discharge Prevention and Removal

Hazardous materials and other pollutants, such as petroleum products, would not willfully be dumped or discharged onto the surrounding land or into nearby waters during either construction or operation. No building demolition would occur at the proposed site, so there is no potential to disturb asbestos-containing materials. There is, however, the potential for accidental spills or releases of pollutants or contaminants into the surrounding environment during construction of the Proposed Action. Implementation of standard construction BMPs, such as performing routine inspections of equipment to check for leaks and maintaining spill-containment materials at the project site, would reduce the potential for accidental pollutant discharge. Guidelines would be developed for the clean-up of any pollutants should an accidental release occur. Operation of the permanent USSPACECOM HQ facility is not anticipated to generate industrial contaminants or result in the release of pollutants. The enforceable policies contained within this chapter that address vessels, terminal facilities, agriculture, and brownfields are not applicable. Therefore, the Proposed Action is consistent to the maximum extent practicable with these enforceable policies.

FS Chapter 379, Fish and Wildlife Conservation

Part I: General Provisions

The only applicable enforceable policy contained within this part is 379.2291, also known as the "Florida Endangered and Threatened Species Act." Three federally listed threatened and endangered species, which are also afforded protection under this state law, may potentially be found on the site due to presence of suitable habitat: eastern indigo snake (*Drymarchon couperi*), Florida scrub-jay (*Aphelocoma coerulescens*), and wood stork (*Mycteria americana*). Additionally, six state-listed threatened and endangered species are potentially present at or surrounding the proposed site: Florida pine snake (*Pituophis melanoleucus mugitus*), Florida sandhill crane (*Grus canadensis pratensis*), gopher tortoise (*Aphelocoma coerulescens*), little blue heron (*Egretta caerulea*), tricolored heron (*Egretta. tricolor*), and roseate spoonbill (*Platalea ajaja*). Suitable habitat is present within the proposed site for each of these species. The DAF is consulting with the US Fish and Wildlife Service and Florida Fish and Wildlife Conservation Commission regarding these species and potential impacts. The DAF has determined that the Proposed Action may affect, but would not be likely to adversely affect, the eastern indigo snake,

Florida scrub-jay, gopher tortoise, or wood stork, comprising less-than-significant adverse impacts to these species. The Proposed Action would also have less-than-significant adverse impacts on each of the state-listed species. The DAF would comply with species-specific conservation and permitting guidelines for both federally and state-listed species, including required suitable foraging habitat compensatory mitigation for the wood stork, and implement appropriate BMPs to minimize impacts to these species and their habitats.

The bald eagle (*Haliaeetus leucocephalus*) is also protected by the State of Florida; however, while the proposed site contains suitable habitat, no documented bald eagle nests occur on, or within 660 feet of, the site, and potential impacts to this species would be negligible. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Part II: Marine Life

The only applicable enforceable policy contained within this part is 379.2431, also known as the "Marine Turtle Protection Act." Four federally listed threatened and endangered sea turtles are potentially present in the vicinity of the proposed site: green sea turtle (*Chelonia mydas*), hawksbill sea turtle (*Eretmochelys imbricata*), leatherback sea turtle (*Dermochelys coriacea*), and loggerhead sea turtle (*Caretta caretta*). The DAF has determined, however, that no suitable habitat for these species is present at the proposed site, and these species have no potential to occur at the proposed site. Therefore, the Proposed Action would have no effect on these species. The DAF is consulting with the US Fish and Wildlife Service regarding these species. The Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

FS Chapter 380, Land and Water Management

Part I: Environmental Land and Water Management

Pursuant to the enforceable policies located at FS 380.04, the proposed establishment of the permanent USSPACECOM HQ facility is considered a "development." However, per 380.0651, this facility, as a military installation, would be exempt from the requirements applicable to developments of regional impact that are detailed throughout this section. In addition, the proposed site is not located within an area of critical state concern, so enforceable policies addressing those areas are not applicable. The Proposed Action is consistent to the maximum extent practicable with these enforceable policies.

Part II: Coastal Planning and Management

The proposed site is located within Florida's coastal zone, and the Proposed Action constitutes a federal development project with the DAF serving as the federal proponent. In accordance with the requirements of the CZMA and the FCMP, the DAF has evaluated the potential impacts on Florida's coastal zone and has completed this Federal Consistency Determination to demonstrate compliance with the enforceable policies of the FCMP. Therefore, the Proposed Action is consistent to the maximum extent practicable with these enforceable policies.

FS Chapter 403, Environmental Control

Part I: Pollution Control

Pollutants generated during construction and operation of the Proposed Action would have the potential to impact the surrounding water, air, and land resources. During construction, efforts would be made to minimize accidental releases of contaminants, and existing Spill Prevention and Countermeasure Control Plans (SPCCPs) maintained by the Space Coast Regional Airport would be followed. In the event of a spill that constitutes an environmental emergency, the DAF would notify the FDEP in addition to implementing standard clean-up procedures. Runoff and sedimentation could increase turbidity in nearby waters; a National Pollution Discharge Elimination System (NPDES) Construction General Permit would be obtained and a Stormwater Pollution Prevention Plan (SWPPP) developed to minimize these impacts during construction. Soil disturbance and construction vehicles may result in fugitive dust and exhaust emissions, but these impacts would be temporary, and would be managed with appropriate BMPs such as covering soil stockpiles, spraying water, and ensuring vehicles are not idling. Operation of the USSPACECOM HQ facility would not result in any direct discharges to surface water or groundwater. Wastewater generated at the site would be conveyed to a sanitary sewer facility for treatment, and no industrial operations would occur that could result in accidental spills. The facility would not qualify as a major source emitter with regard to air quality. No intentional dumping or littering of any kind would occur at any point during either construction or operation of the Proposed Action; construction and municipal wastes would be removed from the site and disposed of appropriately, recycled when possible. Therefore, the Proposed Action is consistent to the maximum extent practicable with these enforceable policies.

Part IV: Resource Recovery and Management

Both hazardous and solid wastes would be generated during construction and operation of the Proposed Action. Hazardous wastes primarily would be created during construction; during operation, the disposal of paints, inks, cleaning products, petroleum-based products, and batteries and other end-of-life electronics would constitute hazardous wastes, although this generation would be infrequent. Any hazardous wastes generated during implementation of the Proposed Action would be handled, stored, and disposed of off-site in accordance with applicable federal and state regulations. Quantities of hazardous materials used or wastes generated would remain small relative to the total quantities used, generated, and disposed of at the larger airport site. The DAF would either manage the proposed facility in accordance with the airport's existing SPCCPs, or develop its own SPCCP specific to its operations. The Proposed Action would also create solid wastes which would be disposed of off-site. In accordance with state policy, the DAF would make efforts to recycle waste materials, such as repurposing recyclable construction materials and providing recycling receptacles in the HQ facility, in order to limit the amount of waste disposed of in landfills. Therefore, the Proposed Action is consistent to the maximum extent practicable with these enforceable policies.

FS Chapter 553, Building Construction Standards

Part IV: Florida Building Code

The proposed USSPACECOM HQ facility would be designed and constructed in accordance with applicable DoD United Facilities Criteria and other applicable building codes, including the Florida Building Code. The DAF would obtain the appropriate permit or permit exemption in order to construct the proposed facility. The Proposed Action is consistent to the maximum extent practicable with these enforceable policies.

FS Chapter 582, Soil and Water Conservation

Proposed construction activities would disturb approximately 105 acres within the site boundary. As the Proposed Action would disturb more than 1 acre of land, the DAF would obtain a NPDES Construction General Permit to manage stormwater runoff and erosion on the construction site, and would develop a SWPPP to minimize the impacts of runoff. Adherence to the NPDES permit and SWPPP would also reduce potential impacts to nearby surface waters from sedimentation. Once the proposed HQ facility is operational, undeveloped, disturbed areas would be revegetated, and potential future erosion and sedimentation would also be minimized through the use of stormwater features and green infrastructure. Implementation of such measures would be completed in accordance with Section 438 of the EISA, and would aim to restore the pre-development hydrology of the site to the maximum extent technically feasible, in order to control stormwater and protect soil and water resources. Therefore, the Proposed Action is consistent to the maximum extent practicable with these enforceable policies.

Conclusion

Table 1 summarizes the Proposed Action's consistency with or applicability to the enforceable policies of the FCMP. The DAF has determined that the Proposed Action, which would include appropriate BMPs and minimization measures as well as mitigation measures required by regulation, would be consistent to the maximum extent practicable with the enforceable policies and coastal resources of Florida's federally approved FCMP, pursuant to the CZMA of 1972, as amended, and in accordance with 15 CFR Part 930, Subpart C.

Table 1: Florida's Enforceable Policies

Chapter	Policy Title	Policy References[1]	Applicability or Consistency[2]
161	**Beach and Shore Preservation**		
Part I	Regulation of Construction, Reconstruction, and Other Physical Activity	Florida Statutes (FS) XI, Chapter 161.021, .041, .042, .051, .052, .053, .0531, .0535, .054, .055, .061, .081, .082, .085, .088, .101, .131, .141, .142, .143, .151, .161, .191, .201, .211, .212, .242	Not Applicable (NA)
Part II	Beach and Shore Preservation Districts	FS XI, Chapter 161.41	NA
Part III	Coastal Zone Protection	FS XI, Chapter 161.54, .55, .551, .56, .58	NA
Part IV	Oceans and Coastal Resources Act	FS XI, Chapter 161.71	NA
163	**Intergovernmental Programs**		
Part II	Growth Policy; County and Municipal Planning; Land Development Regulation	FS XI, Chapter 163.3161, .3164, .3177, .3178, .3180(2), .3184, .3187, .3194(1)(a), .3202(2)(a-h), .3220(2)(3)	NA
186	**State and Regional Planning**		
	State and Regional Planning	FS XIII, Chapter 186.001, .002, .003, .004, .006, .007, .008, .009, .031, .501, .502, .503, .504, .506, .507, .508, .509, .511, .515, .801, .803,	NA
252	**Emergency Management**		
Part I	General Provisions	FS XVII, Chapter 252.31, .311, .32, .33, .34, .35, .351, .355, .356, .3568, .357, .358, .36, .363, .365, .37, .371, .372, .373, .38, .385, .39, .40, .41, .42, .43, .44, .45, .46, .47, .50, .51, .52, .55, .60, .61	NA
Part II	Community Right-to-Know Act	FS XVII, Chapter 252.81, .82, .83, .84, .85, .86, .87, .88, .89, .90	NA
Part III	Emergency Management Assistance Compact	FS XVII, Chapter 252.922, .923, .924, .925, .926, .927, .928, .929, .931, .932, .933	NA

Chapter	Policy Title	Policy References[1]	Applicability or Consistency[2]
Part IV	Accidental Release Prevention and Risk Management Planning	FS XVII, Chapter 252.934, .935, .936, .937, .938, .939, .940, .941, .942, .943, .944, .946	NA
253	**State Lands**		
	State Lands	FS XVIII, Chapter 253.001, .002, .02, .025, .03, .0325, .033, .0341, .0345, .0346, .0347, .035, .036, .037, .04, .05, .111, .115, .12, .121, .1221, .1241, .1252, .126, .127, .128, .1281, .129, .135, .14, .141, .21, .29, .34, .36, 37, .38, .381, .382, .39, .40, .41, .42, .43, .431, .44, .45, .451, .47, .51, .511, .512, .52, .53, .54, .55, .56, .57, .571, .60, .61, .62, .66, .665, .67, .68, .70, .71, .72, .73, .74, .75, .763, .77, .781, ., 782, ., 7821, .7822, .7823, .7825, .7827, .783, .784, .785, .80, .81, .82, .83, .86	NA
258	**State Parks and Preserves**		
Part I	Parks	FS XVIII, Chapter 258.007, .008, .037, .08, .083, .10, .156, .157	NA
Part II	Aquatic Preserves	FS XVIII, Chapter 258.37, .39, .391, .392, .3925, .393, .394, .395, .396, .397, .399, .40, .41, .42, .44, .45	NA
Part III	Wild and Scenic Rivers	FS XVIII, Chapter 258.501	NA
259	**Land Acquisitions for Conservation or Recreation**		
	Land Acquisitions for Conservation or Recreation	FS XVIII, Chapter 259.04, .06, .105	NA
260	**Florida Greenways and Trails Act**		
	Florida Greenways and Trails Act	FS XVIII, Chapter 260.018	NA
267	**Historical Resources**		
	Historical Resources	FS XVIII, Chapter 267.021, .031, .061, .11, .115, .12, .13, .14	**Consistent**

Chapter	Policy Title	Policy References[1]	Applicability or Consistency[2]
288	**Commercial Development and Capital Improvements**		
Part XII	Defense Conversion and Transition	FS XII, Chapter 288.972, .975	NA
334	**Transportation Administration**		
	Transportation Administration	FS XXVI, Chapter 334.14	NA
339	**Transportation Finance and Planning**		
	Transportation Finance and Planning	FS XXVI, Chapter 339.175, .241	NA
373	**Water Resources**		
Part I	State Water Resource Plan	FS XXVIII, Chapter 373.012, .013, .016, .019, .023, .026, .033, 0.36, .0363, .0397, .42, .0421, .043, .046, .047, .056, .069, .0691, .0693, .0695, .0698, .073, .076, .079, .083, .084, .085, .086, .087, .088, .089, .093, .096, .099, .106, .107, .109, .113, .1131, .114, .116, .117, .1175, .118, .119, .123, .129, .136, .139, .1391, .1395, .1401, .145, .146, .149, .1501, .1502, .1725, .175, .185, .187, .199, .200	NA
Part II	Permitting of Consumptive Uses of Water	FS XXVIII, Chapter 373.203, .206, .207, .209, .213, .216, .217, .219, .223, .2234, .2235, .224, .226, .227, .228, .229, .2295, .22951,.232, .223, .236, .239, .243, .244, .249, .250	**Consistent**
Part III	Regulation of Wells	FS XXVIII, Chapter 373.302, .303, .306, .309, .313, .314, .316, .319, .323, .324, .325, .326, .329, .333, .335, .336, .337, .342	NA

Chapter	Policy Title	Policy References[1]	Applicability or Consistency[2]
Part IV	Management and Storage of Surface Waters	FS XXVIII, Chapter 373.403, .406, .407, .409, .413, .4131, .4132, .4133, .4135, .4136, .4137, .4138, .4139, .414, .4141, .4142, .4145, .4149, .41492, .41495, .415, .416, .417, .418, .4185, .419, .421, .4211, .422, .423, .426, .427, .4271, .4275, .428, .429, .430, .433, .436, .439, .441, .4415, .443, .451, .453, .4591, .4592, .45922, .45924, .45926, .4593, .45931, .4595, .4596, .4597, .461, .468	**Consistent**
Part V	Finance and Taxation	FS XXVIII, Chapter 373.470, .501, .503, .506, .5071, .543, .546, .553, .559, .563, .566, .569, .573, .576, .579, .583, .586, .591	NA
Part VI	Miscellaneous Provisions	FS XXVIII, Chapter 373.603, .604, .605, .6055, .607, .608, .609, .610, .611, .613, .614, .616, .6161, .617, .618, .619, .62, .621, .63, .69	NA
Part VII	Water Supply Policy, Planning, Production, and Funding	FS XXVIII, Chapter 373.705, .707, .709, .711, .713, .715	NA
Part VIII	Florida Springs and Aquifer Protection Act	FS XXVIII, Chapter 373.801, .802, .803, .805, .807, .811	NA
375	**Outdoor Recreation and Conservation Lands**		
	Outdoor Recreation and Conservation Lands	FS XXVIII, Chapter 375.011, .021, .032, .051, .061, .065, .251, .311, .312, .313, .314	NA
376	**Pollutant Discharge Prevention and Removal**		

Chapter	Policy Title	Policy References[1]	Applicability or Consistency[2]
	Pollutant Discharge Prevention and Removal	FS XXVIII, Chapter 376.021, .031, .041, .051, .065, .07, .0705, .071, .09, .10, .11, .12, .121, .123, .13, .14, .15, .16, .165, .19, .20, .205, .207, .21, .25, .30, .301, .302, .303, .304, .305, .306, .307, .30701, .30702, . 3071, .30713, .30714, .30715, .30716, .3072, .3077, .3078, .30781, .3079, .308, .309, .311, .313, .315, .320, .321, .322, .323, .324, .325, .326, .40, .60, .70, .71, .75, .77, .78, .79, .80, .81, .82, .83, .84, .85	**Consistent**
377	**Energy Resources**		
Part I	Regulation of Oil and Gas Resources	FS XXVIII, Chapter 377.01, .03, .04, .07, .075, .10, .18, .19, .20, .23, .24, .2407, .2408, .2409, .241, .2411, .242, .2421, .2424, .2425, .2426, .243, .2431, .2432, .2433, .244, .245, .247, .25, .26, .27, .28, .29, .30, .31, .32, .33, .34, .35, .36, .37, .371, .38, .39, .40, .41, .42	NA
Part II	Planning and Development	FS XXVIII, Chapter 377.601, .602, .603, .604, .605, .606, .607, .608, .701, .703, .704, .705, .709, .71, .711, .712	NA
Part III	Renewable Energy and Green Government Programs	FS XXVIII, Chapter 377.816	NA
379	**Fish and Wildlife Conservation**		
Part I	General Provisions	FS XXVIII, Chapter 379.101, .102, .1025, .10255, .1026, .103, .104, .105, .106, .201, .203, .204, .205, .208, .209, .211, .2201, .2203, .2213, .2222, .2223, .2224, .2225, .224, .2252, .2253, .2254, .2257, .2258, .2259, .226, .2271, .2272, .2281, .2282, .2291, .2292, .23, .231, .232, .233, 2341, .2342, .2351, .2352, .236, .237	**Consistent**

Chapter	Policy Title	Policy References[1]	Applicability or Consistency[2]
Part II	Marine Life	FS XXVIII, Chapter 379.2401, .2402, .2411, .2412, .2422, .2423, .2424, .2425, .2426, .2431, .2432, .244, .245, .246, .247, .248, .249, .2495, .25, .2511, .2515, .2521, .2522, .2523, .2525, .26	**Consistent**
Part III	Freshwater Aquatic Life	FS XXVIII, Chapter 379.28, .29, .295	NA
Part IV	Wild Animal Life	FS XXVIII, Chapter 379.3001, .3002, .3003, .3004, .3012, .3014, .3015, .302, .303, .304, .305	NA
Part V	Law Enforcement	FS XXVIII, Chapter 379.33, .3311, .3312, .3313, .332, .333, .334, .335, .336, .337, .338, .3381, .339, .3395, .341, .342, .343	NA
Part VI	Licenses for Recreational Activities	FS XXVIII, Chapter 379.35, .3501, .3502, .3503, .3504, .3511, .3512, .352, .353, .354, .356, .357, .3581, .3582	NA
Part VIII	Penalties	FS XXVIII, Chapter 379.401, .4015, .402, .404, .4041, .405, .406, .407, .408, .409, .411, .4115, .412, .413, .414, .501, .502, .503, .504	NA
380	**Land and Water Management**		
Part I	Environmental Land and Water Management	FS XXVIII, Chapter 380.012, .021, .031, .032, .04, .045, .05, .051, .055, .0551, .0552, .0555, .06, .061, .0651, .0655, .0657, .0661, .0662, .0663, .0664, .0665, .0667, .0668, .0669, .0671, .0672, .0673, .0674, .0675, .0685, .07, .08, .085, .11, .115, .12	**Consistent**
Part II	Coastal Planning and Management	FS XXVIII, Chapter 380.20, .205, .21, .22, .23, .24, .25, .26, .27, .276, .285	**Consistent**

Chapter	Policy Title	Policy References[1]	Applicability or Consistency[2]
Part III	Florida Communities Trust	FS XXVIII, Chapter 380.501, .502, .503, .504, .505, .506, .508, .510, .5105, .512, .513, .514, .515	NA
381	**Public Health**		
	Public Health: General Provisions	FS XXIX, Chapter 381.001, .0011, .0012, .006, .0061, .0065, .00651, .0066, .0067	NA
388	**Mosquito Control**		
	Mosquito Control	FS XXIX, Chapter 388.0101, .011, .021, .101, .111, .121, .131, .141, .151, .161, .162, .171, .181, .201, .211, .221, .231, .241, .251, .281, .291, .301, .311, .321, .322, .323, .341, .351, .361, .3711, .381, .391, .401, .4111, .43, .45, .46	NA
403	**Environmental Control**		
Part I	Pollution Control	FS XXIX, Chapter 403.011, .021, .031, .051, .061, .0611, .0615, .0616, .062, .063, .064, .0645, .067, .0671, .0673, .072, .073, .074, .075, .0752, .077, .081, .085, .0855, .086, .0862, .087, .0871, .0872, .0873, .08735, .0875, .0876, .0877, .088, .0881, .0882, .0885, .08852, .0891, .0893, .0896, .091, .092, .111, .121, .131, .135, .141, .151, .161, .1655, .1815, .182, .1834, .1835, .1837, .1838, .191, .201, .231, .251, .281, .291, .301, .311, .321, .331, .341, .351, .361, .371, .381, .391, .401, .411, .412, .413, .4131, .41315, .4132, .4133, .4135, .415, .4151, .4153, .4154, .4155	**Consistent**

Chapter	Policy Title	Policy References[1]	Applicability or Consistency[2]
Part II	Electrical Power Plant and Transmission Line Siting	FS XXIX, Chapter 403.501, .502, .503, .504, .5055, .506, .5063, .5064, .5065, .5066, .50665, .507, .508, .509, .5095, .510, .511, .5112, .5113, .5115, .5116, .512, .513, .514, .515, .516, .517, .5175, .518, .5185, .519, .52, .521, .522, .523, .524, .525, .5251, .5252, .526, .527, .5271, .5272, .5275, .528, .529, .531, .5312, .5315, .5317, .532, .522, .526, .5363, .5363, .537, .539	NA
Part III	Interstate Environmental Control Compact	FS XXIX, Chapter 403.60	NA
Part IV	Resource Recovery and Management	FS XXIX, Chapter 403.702, .703, .7031, .7032, .7033, .704, .7043, .7046, .7047, .7049, .705, .7055, .706, .70605, .7061, .7063, .7065, .707, .7071, .70715, .7072, .708, .7095, .712, .7125, .713, .714, .7145, .715, .716, .717, .718, .7185, .71857, .71852, .7186, .7191, .7192, .7193, .72, .721, .7211, .7215, .722, .7222, .7223, .7225, .7226, .723, .7234, .7236, .7238, .724, .7255, .726, .7265, .727, .728, .73, .74, .75, .751, .753, .7531, .754, .7545, .757, .758, .759, .760, .761, .767, .769, .7721	**Consistent**
Part V	Environmental Regulation	FS XXIX, Chapter 403.801, .802, .803, .804, .8051, .8052, .809, .811, .812, .813, .814, .8141, .815, .816, .8163	NA
Part VI	Water Supply; Water Treatment Plants	FS XXIX, Chapter 403.850, .851, .852, .853, .8532, .8533, .8535, .854, .855, .856, .857, .858, .859, .860, .861, .8615, .862, .863, .864, .8645, .865, .866, .867, .869, .872, .876, .88, .890, .891	NA

Chapter	Policy Title	Policy References[1]	Applicability or Consistency[2]
Part VII	Miscellaneous Provisions	FS XXIX, Chapter 403.90, .905, .927, .9321, .9322, .9323, .9324, .9325, .9326, .9327, .93271, .9328, .9329, .9331, .9332, .9333, .9334, .93345, .9335, .9336, .9337, .9338	NA
Part VIII	Natural Gas Transmission Pipeline Siting	FS XXIX, Chapter 403.9401, .9402, .9403, .9404, .9405, .94055, .9406, .39407, .9408, .9409, .9411, .9412, .9413, .9414, .9415, .9416, .9417, .9418, .9419, .942, .9421, .9422, .9423, .9423, .9424, .9425	NA
Part IX	Expedited Permitting	FS XXIX, Chapter 403.973	NA
553	**Building Construction Standards**		
Part IV	Florida Building Code	FS XXXIII, Chapter 553.79	**Consistent**
582	**Soil and Water Conservation**		
	Soil and Water Conservation	FS XXXV, Chapter 582.01, .02, .10, .11, .12, .13, .14, .15, .16, .18, .19, .20, .28, .29, .30, .31	**Consistent**
597	**Aquaculture**		
	Aquaculture	FS XXXV, Chapter 597.0015, .002, .003, .004, .0041, .010, .020	NA

Source:

Florida Department of Environmental Protection. 2021. "24 Florida Statutes of the Florida Coastal Management Program." Updated January 12, 2021.

Notes:

1. Policy references indicate the enforceable policies of the Florida Coastal Management Program and their location within the 2020 Florida Statutes.
2. "Consistent" indicates consistent, to the maximum extent practicable.

Obenland, Benjamin

From: Stahl, Chris [redacted]
Sent: Tuesday, August 10, 2021 3:18 PM
To: Warf, Jennifer
Cc: State_Clearinghouse
Subject: [EXTERNAL] State Clearance Letter for FL202106169263C- Environmental Assessment To Evaluate The Potential Environmental Impacts Resulting From The Construction And Operation Of A Permanent USSPACECOM HQ Facility Cape Canaveral Space Port, Brevard Count...
Attachments: Cape Canaveral Space Port Permanent Usspacecom Headquarters_44760_07162021.pdf

August 10, 2021

Jennifer Warf
AECOM
12420 Milestone Center Drive
Germantown, Maryland 20876

RE: Department of Defense, Department of the Air Force, United States Space Command, Environmental Assessment to Evaluate the Potential Environmental Impacts Resulting from the Construction and Operation pf a Permanent USSPACECOM HQ Facility Cape Canaveral Space Port, Brevard County, Florida
SAI # FL202106169263C

Dear Jennifer:

Florida State Clearinghouse staff has reviewed the original proposal as well as the additional riprap placement site under the following authorities: Presidential Executive Order 12372; § 403.061(42), Florida Statutes; the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. §§ 4321-4347, as amended.

The proposed project at the Cape Canaveral Spaceport appears to require an Environmental Resource Permit (ERP). Early coordination with St Johns River Water Management District's ERP staff is encourage prior to any site work. For questions or assistance, please contact Marc von Canal, Environmental Resource Program Manager, at [redacted] or [redacted]

Staff from the Florida Department of Environmental Protection's central District have determined that the proposed project will require a DEP Domestic Wastewater Collection/Transmission System and Drinking Water Main Extension Permit.

The Florida Fish and Wildlife Conservation Commission has reviewed the proposed action and independently submitted comments for your consideration. These have been attached to this letter and are incorporated hereto.

If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all

activities involving subsurface disturbance in the vicinity of the discovery. The applicant shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section at (850)-245-6333. Project activities shall not resume without verbal and/or written authorization. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statutes.

Based on the information submitted and minimal project impacts, the state has no objections to the subject project and, therefore, it is consistent with the Florida Coastal Management Program (FCMP). Thank you for the opportunity to review the proposed plan. If you have any questions or need further assistance, please don't hesitate to contact me at [redacted]

Sincerely,

Chris Stahl

Chris Stahl, Coordinator
Florida State Clearinghouse
Florida Department of Environmental Protection
3800 Commonwealth Blvd., M.S. 47
Tallahassee, FL 32399-2400
[redacted]

APPENDIX E:

ENDANGERED SPECIES ACT SECTION 7 CONSULTATION

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DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, REDSTONE
4488 MARTIN ROAD
REDSTONE ARSENAL, ALABAMA 35898-5000

AMIM-REG-ZA (RN 1) 13 July 2021

MEMORANDUM FOR US Fish and Wildlife Service, Alabama Ecological Services Field Office (Field Supervisor/Mr. William Pearson), 1208 Main Street, Daphne, AL 36526-4419

SUBJECT: US Space Command Endangered Species Act Informal Consultation

1. The United States (US) Air Force proposes to construct and operate a permanent headquarters (HQ) facility for the US Space Command (USSPACECOM) (Proposed Action). The Air Force is evaluating six alternative sites in the US, one of which is located at Redstone Arsenal, Alabama. In accordance with Section 7 of the Endangered Species Act of 1973, this correspondence is intended to initiate informal consultation regarding the Proposed Action. The Air Force previously contacted you on June 9, 2021 requesting relevant information for consideration in its Environmental Assessment.

2. As noted in the previous correspondence, the US Department of Defense (DoD) established USSPACECOM in 2019 as the eleventh unified combatant command. The purpose of this Proposed Action, accordingly, is to establish a permanent operational USSPACECOM HQ to facilitate a functional combatant command. The Proposed Action is needed due to the current lack of suitable permanent facilities in which USSPACECOM can fulfill its required functions and achieve full operational capability.

3. The proposed site for the HQ facility at Redstone Arsenal (enclosed) is approximately 60 acres within an upland area and consists of agricultural vegetation (i.e., fenced cattle pasture and hayfields) that is transected with forested hedgerows (approximately three acres) along modified dry ditches. Vegetation in the agricultural area consists of mixed grass blends which provide foraging options for livestock. Common species of vegetation occurring in the forested hedgerows at Redstone Arsenal include mixed oaks (*Quercus sp.*), American beech (*Fagus grandifolia*), and sweetgum (*Liquidambar styraciflua*).

4. The proposed HQ facility would consist of a multistory office/administrative building with approximately 460,000 square feet (SF) of functional interior space and approximately 310,000 SF of parking space. An access road, utilities, and appropriate security measures would also be constructed on-site. The Air Force assumes the entire 60-acre site would be disturbed during construction. Following construction, the site would be landscaped with native species. In total, construction is expected to take two years. Once operational, the HQ facility would accommodate approximately 1,816 personnel.

5. The Air Force queried the United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) database to identify federally listed species with the potential to occur in the Proposed Action area (Consultation Code 04EA1000-2021-SLI-0936) (enclosed). Seven federally listed species were identified by IPaC as having the potential to occur in the Proposed Action area and effect determinations have been made (enclosed).

5. The Air Force queried the United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) database to identify federally listed species with the potential to occur in the Proposed Action area (Consultation Code 04EA1000-2021-SLI-0936) (enclosed). Seven federally listed species were identified by IPaC as having the potential to occur in the Proposed Action area and effect determinations have been made (enclosed).

6. If you have any questions or information relevant to this Proposed Action or the Air Force's effect determinations, please contact Christine Easterwood within 30 days of receipt of this memorandum at 256-842-8697 or christine.f.easterwood.civ@mail.mil.

3 Encls
1. Site Figure
2. Official Species List
3. Species Effect Determinations

GLENN O. MELLOR
COL, SC
Commanding

Proposed Permanent Site Boundary (2021) (59.9 Acres)

Previously Studied Site Boundary (2019)

Redstone Arsenal

USSPACECOM

Redstone Arsenal
Huntsville, AL

0 250 500 1,000 Feet

Encl 1

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Alabama Ecological Services Field Office
1208 B Main Street
Daphne, AL 36526-4419
Phone: (251) 441-5181 Fax: (251) 441-6222

In Reply Refer To:
Consultation Code: 04EA1000-2021-SLI-0936
Event Code: 04EA1000-2021-E-02238
Project Name: Establishment of Permanent Headquarters for United States Space Command (Redstone Arsenal

June 01, 2021

Subject: List of threatened and endangered species that may occur in your proposed project location 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. Please note that new information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. 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.).

Note that due to the volume of emails received by our office, we cannot accept project consultation requests by email.

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. Also 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. 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 process and consultation under 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

Encl 2

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/pdf/management/usfwscommunicationtowerguidance.pdf

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.

We can be reached at:

US Fish and Wildlife Service

1208 Main Street

Daphne, AL 36526

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:

Alabama Ecological Services Field Office
1208 B Main Street
Daphne, AL 36526-4419
(251) 441-5181

Project Summary

Consultation Code: 04EA1000-2021-SLI-0936
Event Code: 04EA1000-2021-E-02238
Project Name: Establishment of Permanent Headquarters for United States Space Command (Redstone Arsenal
Project Type: DEVELOPMENT
Project Description: The United States Department of Air Force (DAF) is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the United States (Proposed Action). U.S. Army Garrison Redstone Arsenal, Alabama is the DAF's Preferred Alternative. Other alternative locations being analyzed include Peterson Air Force Base (AFB), Colorado; Offutt AFB, Nebraska; Kirtland AFB, New Mexico; Cape Canaveral Spaceport, Florida; and Port San Antonio, Texas. The Proposed Action includes construction and operation of a multi-story HQ facility that would be specifically designed to accommodate the functional requirements of USSPACECOM. It would accommodate approximately 1,816 personnel in a typical HQ setting, providing approximately 460,000 square feet of office, administrative, and functional interior space and 310,000 square feet of vehicle parking.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@34.660199399999996,-86.65806768439677,14z

Counties: Madison County, Alabama

Endangered Species Act Species

There is a total of 7 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.

Mammals

NAME	STATUS
Gray Bat *Myotis grisescens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Clams

NAME	STATUS
Pink Mucket (pearlymussel) *Lampsilis abrupta* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7829	Endangered

Crustaceans

NAME	STATUS
Alabama Cave Shrimp *Palaemonias alabamae* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5307	Endangered

Flowering Plants

NAME	STATUS
Morefields Leather Flower *Clematis morefieldii*	Endangered
Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/133	
Prices Potato-bean *Apios priceana*	Threatened
Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7422	

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)

THERE ARE NO FWS MIGRATORY BIRDS OF CONCERN WITHIN THE VICINITY OF YOUR PROJECT AREA.

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 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.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

US Space Command Headquarters Facility – Species Effects Determinations

Gray Bat (*Myotis grisescens*) – Federally Endangered

The gray bat lives exclusively in karst regions of the southeastern US. The gray bat hibernates deep in vertical caves in winter, and roosts in scattered caves adjacent to waterways in summer. The gray bat forages for a variety of flying aquatic and terrestrial insects, often present along rivers or lakes (US Fish and Wildlife Service (USFWS), 2019a). No gray bat colonies exist on Redstone Arsenal; however, this species is known to forage along waterways on the installation (US Army Garrison (USAG) - Redstone, 2017). There is low potential of occurrence on the proposed site due to limited water sources and riparian foraging habitat on and near the site. Intermittent waterways dissect the current pasture land; however, these serve primarily as flash runoff ditches during heavy rain events. Tree clearing along the ditches in the proposed site would not impact prime foraging habitat. Therefore, the Proposed Action ***may affect, but would not be likely to adversely affect,*** the gray bat.

Indiana Bat (*Myotis sodalis*) – Federally Endangered

The Indiana bat hibernates almost exclusively in caves in southern Indiana and other Midwest states. After hibernation, Indiana bats migrate to summer habitat in wooded areas where they roost under loose tree bark on dead or dying trees (USFWS, 2019c; USFWS, 2019d). While the Indiana bat has not been conclusively detected or observed on Redstone Arsenal (possible but unconfirmed acoustic detection occurred in 2016), its presence is assumed due to the presence of several large colonial caves within 10 miles of installation boundaries, the bat's continuous range throughout the eastern US, and presence of appropriate foraging habitat (USAG-Redstone, 2017). Suitable foraging and summer roost habitat also exists in the Proposed Action area. In accordance with the USFWS's *Procedures for Working with the Indiana Bat in Alabama,* the Air Force would restrict tree clearing to only occur between October 15 and March 31 (USFWS, n.d.). With implementation of this time-of-year restriction, the Proposed Action ***may affect, but would not be likely to adversely affect,*** the Indiana bat.

Northern Long-Eared Bat (*Myotis septentrionalis*) – Federally Threatened

The northern long-eared bat (NLEB) hibernates in caves and mines (i.e., hibernacula) during the winter. During the summer, it either roosts in hibernacula, or underneath bark or in cavities or crevices of trees and snags. It may also roost in man-made structures, such as barns or sheds, on occasion. The NLEB forages in the understory of forests (USFWS, 2020). This species was acoustically detected on Redstone Arsenal in 2014 and 2016; although it has not been captured on the installation since 2007 (USAG-Redstone, 2017), the Army assumes its presence. Suitable foraging and summer roost habitat also exists in the Proposed Action area. As discussed for the Indiana bat, the Air Force would restrict tree clearing for the Proposed Action to only occur between October 15 and March 31. With implementation of this time-of-year restriction, the Proposed Action ***may affect, but would not be likely to adversely affect,*** the NLEB.

Pink Mucket (*Lampsiis abrupta*) – Federally Endangered

The pink mucket is a mussel found in mud and sand in silt-free riffles and shoals of major rivers and tributaries. This mussel is typically found buried in sand or gravel with only the edge of its shell exposed (USFWS, 2020). Creeks on Redstone Arsenal are unlikely to provide suitable habitat for the pink mucket due to sedimentation and agricultural runoff (USAG-Redstone, 2017). Further, no streams exist in the Proposed Action area. Therefore, this species has no potential to occur at the proposed site, and the Proposed Action would have ***no effect*** on this species.

Alabama Cave Shrimp (*Palaemonias alabamae*) – Federally Endangered

The Alabama cave shrimp is colorless, largely transparent, and grows to a length of up to 0.8 inches. This species is known to have occurred in only six caves in Madison County, including Bobcat Cave, which is located in the northwestern portion of the installation. Potentially threatened by groundwater degradation, Redstone Arsenal has instituted a groundwater protection buffer zone for this species in the northwest portion of the installation (i.e., north of Martin Road and west of Rideout Road) in consultation with USFWS (USAG-Redstone, 2017). No caves exist in the Proposed Action area, and the Proposed Action area is approximately 0.6 mile east of the buffer zone. Therefore, this species has no potential to occur at the proposed site or be affected by groundwater concerns, so the Proposed Action would have ***no effect*** on this species.

Morefield's Leather Flower (*Clematis morefieldii*) – Federally Endangered

Morefield's leather flower often occurs in seeps in rocky limestone woodlands on the southwest-facing mountain slopes. This species has not been documented on Redstone Arsenal, although potential suitable habitat occurs within the installation's ecologically sensitive areas (USAG-Redstone, 2017). No suitable habitat exists in the Proposed Action area. Therefore, this species has no potential to occur at the proposed site, and the Proposed Action would have ***no effect*** on this species.

Prices Potato-bean (*Apios priceana*) – Federally Threatened

Prices potato-bean inhabits lightly disturbed areas such as forest openings, woodland edges, and where bluffs descend to streams (USFWS, 2019b). This species has been documented at seven sites on Redstone Arsenal, all on Madkin Mountain (USAG-Redstone, 2017). Prices potato-bean is not known to inhabit the proposed site, and given the site's prior use for cattle grazing, presence is unlikely. Therefore, this species is not anticipated to occur at the proposed site and the Proposed Action would have ***no effect*** on this species.

Conclusion

In conclusion, the Air Force requests your review and concurrence with our findings and determinations that implementation of the Proposed Action would have **no effect** on the pink mucket, Alabama cave shrimp, Morefield's leather flower, and Price's potato-bean, and **may affect, but would not be likely to adversely affect,** the gray bat, Indiana bat (with adherence to time-of-year restrictions on tree clearing), and NLEB (with adherence to time-of-year restrictions on tree clearing).

Literature Cited

US Army Garrison - Redstone. 2017. Integrated Natural Resources Management Plan (2017 through 2021) United States Army Garrison – Redstone, Redstone Arsenal, Alabama.

US Fish and Wildlife Service. 2019a. Gray Bat (*Myotis grisescens*) Fact Sheet. Retrieved June 16, 2021, from https://www.fws.gov/midwest/endangered/mammals/grbat_fc.html

_____ 2019b. Price's Potato-bean (*Apios priceana*) Fact Sheet. Retrieved June 16, 2021, from https://www.fws.gov/midwest/endangered/plants/pricesp.html

_____ 2019c. Indiana Bat Fact Sheet. Retrieved October 1, 2019, from https://www.fws.gov/Midwest/endangered/mammals/inba/inbafctsht.html

_____ 2019d. Indiana Bat (*Myotis sodalis*) 5-Year Review: Summary and Evaluation. Retrieved from https://ecos.fws.gov/docs/five_year_review/doc6293.pdf

_____ 2020. Northern Long-Eared Bat (*Myotis septentrionalis*). Retrieved June 4, 2021, from U.S. Fish and Wildlife Service Midwest Region Endangered Species: https://www.fws.gov/midwest/endangered/mammals/nleb/nlebfactsheet.html#:~:text=Summer%20Habitat%3A%20During%20the%20summer,places%2C%20like%20caves%20and%20mines.

_____ 2020. Pink Mucket (*Lampsilis orbiculata*) Fact Sheet. Retrieved June 16, 2020, from https://www.fws.gov/midwest/endangered/clams/pinkm_fc.html

_____ n.d. Indiana Bat in Alabama. Procedures for Working with the Indiana Bat in Alabama. Retrieved June 16, 2021, from https://www.fws.gov/daphne/es/Bats/Procedures%20for%20Working%20with%20the%20Indiana%20Bat%20in%20Alabama.pdf

TA/JMR
2021-TA-1166

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, REDSTONE
4488 MARTIN ROAD
REDSTONE ARSENAL, ALABAMA 35898-5000

AMIM-REG-ZA (RN 1) 13 July 2021

MEMORANDUM FOR US Fish and Wildlife Service, Alabama Ecological Services Field Office (Field Supervisor/Mr. William Pearson), 1208 Main Street, Daphne, AL 36526-4419

SUBJECT: US Space Command Endangered Species Act Informal Consultation

1. The United States (US) Air Force proposes to construct and operate a permanent headquarters (HQ) facility for the US Space Command (USSPACECOM) (Proposed Action). The Air Force is evaluating six alternative sites in the US, one of which is located at Redstone Arsenal, Alabama. In accordance with Section 7 of the Endangered Species Act of 1973, this correspondence is intended to initiate informal consultation regarding the Proposed Action. The Air Force previously contacted you on June 9, 2021 requesting relevant information for consideration in its Environmental Assessment.

2. As noted in the previous correspondence, the US Department of Defense (DoD) established USSPACECOM in 2019 as the eleventh unified combatant command. The purpose of this Proposed Action, accordingly, is to establish a permanent operational USSPACECOM HQ to facilitate a functional combatant command. The Proposed Action is needed due to the current lack of suitable permanent facilities in which USSPACECOM can fulfill its required functions and achieve full operational capability.

3. The proposed site for the HQ facility at Redstone Arsenal (enclosed) is approximately 60 acres within an upland area and consists of agricultural vegetation (i.e., fenced cattle pasture and hayfields) that is transected with forested hedgerows (approximately three acres) along modified dry ditches. Vegetation in the agricultural area consists of mixed grass blends which provide foraging options for livestock. Common species of vegetation occurring in the forested hedgerows at Redstone Arsenal include mixed oaks (*Quercus sp.*), American beech (*Fagus grandifolia*), and sweetgum (*Liquidambar styraciflua*).

4. The proposed HQ facility would consist of a multistory office/administrative building with approximately 460,000 square feet (SF) of functional interior space and approximately 310,000 SF of parking space. An access road, utilities, and appropriate security measures would also be constructed on-site. The Air Force assumes the entire 60-acre site would be disturbed during construction. Following construction, the site would be landscaped with native species. In total, construction is expected to take two years. Once operational, the HQ facility would accommodate approximately 1,816 personnel.

5. The Air Force queried the United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) database to identify federally listed species with the potential to occur in the Proposed Action area (Consultation Code 04EA1000-2021-SLI-0936) (enclosed). Seven federally listed species were identified by IPaC as having the potential to occur in the Proposed Action area and effect determinations have been made (enclosed).

AMIM-REG-ZA (RN 1)
SUBJECT: US Space Command Informal Endangered Species Act Consultation

5. The Air Force queried the United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) database to identify federally listed species with the potential to occur in the Proposed Action area (Consultation Code 04EA1000-2021-SLI-0936) (enclosed). Seven federally listed species were identified by IPaC as having the potential to occur in the Proposed Action area and effect determinations have been made (enclosed).

6. If you have any questions or information relevant to this Proposed Action or the Air Force's effect determinations, please contact Christine Easterwood within 30 days of receipt of this memorandum at 256-842-8697 or christine.f.easterwood.civ@mail.mil.

GLENN O. MELLOR
COL, SC
Commanding

3 Encls
1. Site Figure
2. Official Species List
3. Species Effect Determinations

U.S. Fish and Wildlife Service
1208-B – Daphne, Alabama 36526
Phone: 251-441-5181 Fax: 251-441-6222

Your project site contains suitable spring/summer habitat for the endangered Indiana bat and/or threatened northern long-eared bat. However, you have stated that tree removal will occur between October 15 and March 31; therefore, we concur that your proposed project is not likely to adversely affect the Indiana bat and/or northern long-eared bat. No other federally listed species/critical habitat are known to occur in the project area. IF PROJECT DESIGN CHANGES ARE MADE, PLEASE SUBMIT NEW PLANS FOR REVIEW. We recommend the use of best management practices specific to your project (See http://www.fws.gov/daphne/section7/bmp.html).

JUL 2 1 2021

William J. Pearson, Field Supervisor Date # 9a

JMR
Event to 2021-TA-1166

Reply Delete Junk Block ...

[EXTERNAL] FW: [Non-DoD Source] Re: Informal Consultation - SPACECOM at Redstone Arsenal (UNCLASSIFIED)

Easterwood, Christine F CIV USARMY USAG (USA)
[redacted]
Mon 8/23/2021 9:57 AM
To: Ross, Jason M
Cc: Busam, Michael [redacted]; [redacted]

2021-TA-1166 Stamp Re...
204 KB

CLASSIFICATION: UNCLASSIFIED

Morning Jason!

Please reference Michael Busam's email below, regarding the stamp reply we had for the SPACECOM project at Redstone. We originally agreed that the 9a stamp would be sufficient but they'd like to strengthen their administrative records and have requested either an email from the USFWS concurring that the 9a stamp covers the NLAA finding on gray bats or an updated stamp indicating the same.

Would you be willing and able to do one or t'other?

C

Christine F. Easterwood
Ecologist, CWB®
Installation Management Command
Directorate of Public Works
Bldg 4488, Room A-325
USAG Redstone
Redstone Arsenal, AL 35898
[redacted]

U.S. Fish and Wildlife Service
1208-B Main Street – Daphne, Alabama 36526
Phone: 251-441-5181 Fax: 251-441-6222

Based upon our records and the information provided in your letter, we concur with your findings that no federally listed species/critical habitat will be adversely affected by your project. **If project design changes are made, please submit new plans for review.** We recommend use of best management practices specific to your project (See http://www.fws.gov/daphne/section7/bmp.html).

William J. Pearson, Field Supervisor — AUG 24 2021 — Date — # 3b

"We are the Army's Home – Serving the Rugged Professional"
Redstone Arsenal Website: https://home.army.mil/redstone/index.php

DEPARTMENT OF DEFENSE
UNITED STATES SPACE COMMAND

15 July 2021

Steven T. Rose, GS-15. F. SAME
Executive Director
US Space Command Logistics and Engineering
Peterson AFB, CO 80914

Susan Millsap
U.S. Fish and Wildlife Service
New Mexico Ecological Services Field Office
2105 Osuna Road NE
Albuquerque, NM 87113

Dear Ms. Millsap,

The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). In accordance with Section 7 of the Endangered Species Act of 1973, this correspondence is intended to initiate informal consultation regarding the Proposed Action.

Proposed Action

The US Department of Defense (DoD) established USSPACECOM in 2019 as the eleventh unified combatant command. The purpose of this Proposed Action, accordingly, is to establish a permanent operational USSPACECOM HQ to facilitate a functional combatant command. The Proposed Action is needed due to the current lack of suitable permanent facilities in which USSPACECOM can fulfill its required functions and achieve full operational capability. The proposed HQ facility would accommodate approximately 1,816 personnel in a multistory office/administrative building with approximately 460,000 square feet (SF) of functional space and approximately 310,000 SF of parking space. The total personnel number accounts for approximately 1,400 USSPACECOM military and civilian employees to be based at the final selected location, as well as a reasonably expected number of National Agency Representatives and contractor personnel supporting USSPACECOM missions who would be co-located with the permanent, HQ and, therefore, are included in the environmental analysis.

The EA will analyze the potential range of environmental impacts that would result from the Proposed Action. The US Air Force is considering six alternative sites for implementation of the Proposed Action: Cape Canaveral Spaceport, Florida; Kirtland Air Force Base (AFB), New Mexico; Offutt AFB, Nebraska; Peterson AFB, Colorado; Port San Antonio, Texas; and US Army Garrison Redstone Arsenal, Alabama (Enclosure 1). The EA will also analyze the No Action

Alternative, which reflects the status quo, as a baseline for comparison of potential effects from the Proposed Action.

The EA will be prepared in compliance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code 4321, et seq.), the Council on Environmental Quality NEPA Implementing Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and the Air Force and Army Environmental Impact Analysis Processes (32 CFR 989, 32 CFR 651). To support development of the EA, the US Air Force also conducted site-specific field studies as necessary for wetlands, sensitive species, and cultural resources pursuant to the federal Clean Water Act of 1972, Endangered Species Act of 1973, and National Historic Preservation Act of 1966.

Section 7 Informal Consultation

The proposed site for the HQ facility at Kirtland AFB (Enclosure 1) is approximately 64 acres and is previously disturbed from construction and subsequent demolition of a base housing neighborhood. No buildings or other structures are present on the site, although an existing grid road network remains present. Ground cover between these roads consists of exposed dirt and an early successional community dominated by non-native plants and scattered native plants. Overall, plant cover is sparse, covering approximately 30 to 50 percent of the ground surface. Of this, Russian thistle (Salsola sp.) comprises approximately 80 percent of the plant cover. No water features occur on or near the site.

The Air Force queried the United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) database to identify federally listed species with the potential to occur at the Kirtland AFB site (Consultation Code 02ENNM00-2021-SLI-1173). Five federally listed species have the potential to occur in the Proposed Action area (see Enclosure 2 for the official species list):

New Mexico Meadow Jumping Mouse (*Zapus hudsonius luteus*) – Federally Endangered

The New Mexico meadow jumping mouse is endemic to New Mexico and is a habitat specialist, occupying densely vegetated riparian sites with persistent herbaceous and scrub-shrub vegetation, and areas of tall sedges and forbs (USFWS, 2020a). The Air Force conducted a site visit to the proposed HQ site at Kirtland AFB on May 25, 2021 and confirmed that no suitable habitat for the New Mexico meadow jumping mouse exists on-site. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Mexican Spotted Owl (*Strix occidentalis lucida*) – Federally Threatened

Mexican spotted owl habitat consists of old-growth mixed conifer forests containing Douglas fir (*Pseudotsuga menziesii*) and white fir (*Abies concolor*) trees, as well as rocky canyons. This species nests in tree cavities in old-growth trees and in caves or cliff ledges (USFWS, 2016). The Air Force conducted a site visit to the proposed HQ site at Kirtland AFB on May 25, 2021 and confirmed that no old-growth forests, rocky canyons, or other suitable habitat for the Mexican spotted owl exist on-site. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Rio Grande Silvery Minnow (*Hybognathus amarus*) – Federally Endangered

The Rio Grande silvery minnow is an aquatic species that lives in large streams with a slow current and with a gravel or sand-silt substrate bottom (USFWS, 2021). The Air Force conducted a site visit to the proposed HQ site at Kirtland AFB on May 25, 2021 and confirmed that no suitable habitat for the Rio Grande silvery minnow exists on-site. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*) – Federally Endangered

The southwestern willow flycatcher occupies riparian areas near surface water with tall, dense vegetation, including tamarisk (*Tamarix* spp.) and willow (*Salix* spp.), which are commonly used for nesting. During migration and the winter, this species inhabits semi-open brushy areas that are located near water (NPS, 2016). The Air Force conducted a site visit to the proposed HQ site at Kirtland AFB on May 25, 2021 and confirmed that no suitable habitat for the southwestern willow flycatcher exists on-site. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Yellow-billed Cuckoo (*Coccyzus americanus*) – Federally Threatened

The yellow-billed cuckoo occupies wooded habitat with dense cover near surface waters, specifically scrubby thickets along streams and marshes. This species nests in willow trees and forages near cottonwood (*Populus* spp.) sites (USFWS, 2020b). The Air Force conducted a site visit to the proposed HQ site at Kirtland AFB on May 25, 2021 and confirmed that no suitable habitat for the yellow-billed cuckoo exists on-site. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

In conclusion, the Air Force requests your review and concurrence with our findings and determinations that implementation of the Proposed Action would have **no effect** on the New Mexican meadow jumping mouse, Mexican spotted owl, Rio Grande silvery minnow, southwestern willow flycatcher, and yellow-billed cuckoo.

The Air Force has contracted AECOM Technical Services, Inc. (AECOM) to facilitate the National Environmental Policy Act process, including this informal consultation, for the Proposed Action. If you have any questions or information relevant to this Proposed Action or our effect determinations, please contact Jennifer Warf within 30 days of receipt of this letter by email to: Jennifer.Warf@aecom.com; or by mail to: AECOM, ATTN: Jennifer Warf, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Sincerely

STEVEN T. ROSE, GS-15, F. SAME
Executive Director
US Space Command Logistics and Engineering

Attachments:

1. Proposed Action Site Alternative Maps
2. Official Species List via IPaC

References

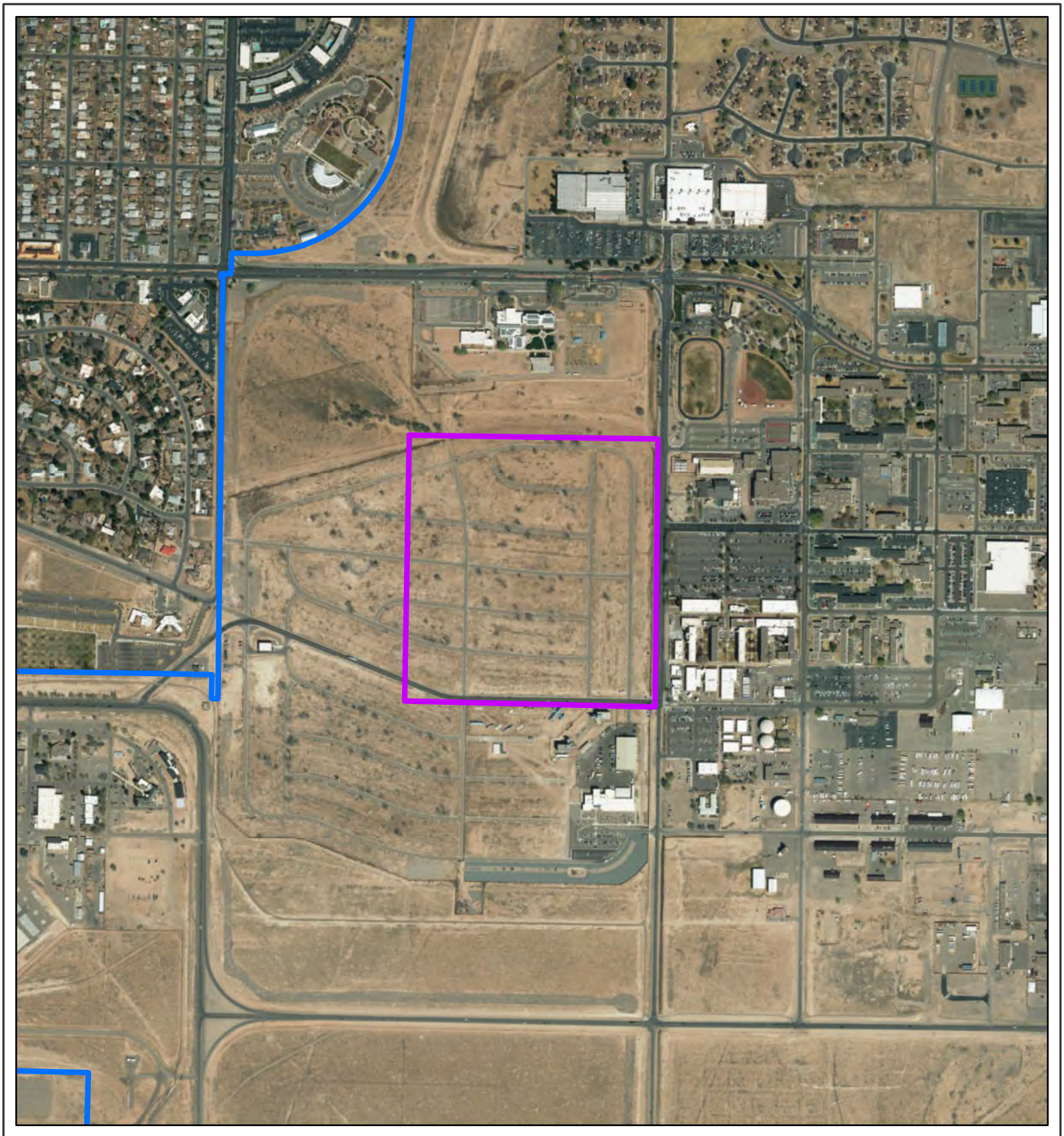
NPS. (2016). *Southwestern Willow Flycatcher*. Retrieved June 18, 2021, from https://www.nps.gov/articles/southwestern-willow-flycatcher.htm

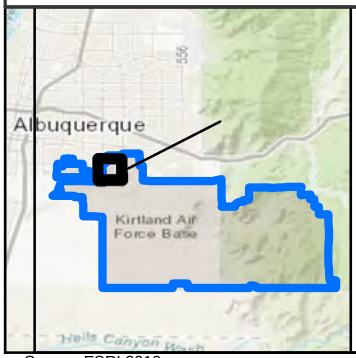
USFWS. (2016). *Mexican Spotted Owl: General Biology and Ecological Relationships*. Retrieved June 18, 2021, from Region 2 Ecological Services: https://www.fws.gov/southwest/es/MSO_Biology.html

USFWS. (2020a). *New Mexico meadow jumping mouse (Zapus hudsonius luteus)*. Retrieved June 18, 2021, from ECOS: https://ecos.fws.gov/ecp/species/7965

USFWS. (2020b). *Yellow-billed cuckoo (Coccyzus americanus)*. Retrieved June 18, 2021, from ECOS: https://ecos.fws.gov/ecp/species/3911

USFWS. (2021). *Rio Grande Silvery minnow*. Retrieved June 18, 2021, from Fish and Aquatic Conservation: https://www.fws.gov/fisheries/freshwater-fish-of-america/rio_grande_silvery_minnow.html





Proposed Permanent Site Boundary (59.1 Acres)

Kirtland Air Force Base

USSPACECOM

Kirtland Air Force Base
Albuquerque, NM

0 300 600 1,200 Feet

N

Source: ESRI 2019

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna Road Ne
Albuquerque, NM 87113-1001
Phone: (505) 346-2525 Fax: (505) 346-2542
http://www.fws.gov/southwest/es/NewMexico/
http://www.fws.gov/southwest/es/ES_Lists_Main2.html

In Reply Refer To: June 01, 2021
Consultation Code: 02ENNM00-2021-SLI-1173
Event Code: 02ENNM00-2021-E-02753
Project Name: Establishment of Permanent Headquarters for United States Space Command (Kirtland AFB)

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Thank you for your recent request for information on federally listed species and important wildlife habitats that may occur in your project area. The U.S. Fish and Wildlife Service (Service) has responsibility for certain species of New Mexico wildlife under the Endangered Species Act (ESA) of 1973 as amended (16 USC 1531 et seq.), the Migratory Bird Treaty Act (MBTA) as amended (16 USC 701-715), and the Bald and Golden Eagle Protection Act (BGEPA) as amended (16 USC 668-668c). We are providing the following guidance to assist you in determining which federally imperiled species may or may not occur within your project area and to recommend some conservation measures that can be included in your project design.

FEDERALLY-LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

Attached is a list of endangered, threatened, and proposed species that may occur in your project area. Your project area may not necessarily include all or any of these species. Under the ESA, it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the Service further. Similarly, it is the responsibility of the Federal action agency or project proponent, not the Service, to make "no effect" determinations. If you determine that your proposed action will have "no effect" on threatened or endangered species or their respective critical habitat, you do not need to seek concurrence with the Service. Nevertheless, it is a violation of Federal law to harm or harass any federally-listed threatened or endangered fish or wildlife species without the appropriate permit.

If you determine that your proposed action may affect federally-listed species, consultation with the Service will be necessary. Through the consultation process, we will analyze information contained in a biological assessment that you provide. If your proposed action is associated with Federal funding or permitting, consultation will occur with the Federal agency under section 7(a)(2) of the ESA. Otherwise, an incidental take permit pursuant to section 10(a)(1)(B) of the ESA (also known as a habitat conservation plan) is necessary to harm or harass federally listed threatened or endangered fish or wildlife species. In either case, there is no mechanism for authorizing incidental take "after-the-fact." For more information regarding formal consultation and HCPs, please see the Service's Consultation Handbook and Habitat Conservation Plans at www.fws.gov/endangered/esa-library/index.html#consultations.

The scope of federally listed species compliance not only includes direct effects, but also any interrelated or interdependent project activities (e.g., equipment staging areas, offsite borrow material areas, or utility relocations) and any indirect or cumulative effects that may occur in the action area. The action area includes all areas to be affected, not merely the immediate area involved in the action. Large projects may have effects outside the immediate area to species not listed here that should be addressed. If your action area has suitable habitat for any of the attached species, we recommend that species-specific surveys be conducted during the flowering season for plants and at the appropriate time for wildlife to evaluate any possible project-related impacts.

Candidate Species and Other Sensitive Species

A list of candidate and other sensitive species in your area is also attached. Candidate species and other sensitive species are species that have no legal protection under the ESA, although we recommend that candidate and other sensitive species be included in your surveys and considered for planning purposes. The Service monitors the status of these species. If significant declines occur, these species could potentially be listed. Therefore, actions that may contribute to their decline should be avoided.

Lists of sensitive species including State-listed endangered and threatened species are compiled by New Mexico state agencies. These lists, along with species information, can be found at the following websites:

Biota Information System of New Mexico (BISON-M): www.bison-m.org

New Mexico State Forestry. The New Mexico Endangered Plant Program: www.emnrd.state.nm.us/SFD/ForestMgt/Endangered.html

New Mexico Rare Plant Technical Council, New Mexico Rare Plants: nmrareplants.unm.edu

Natural Heritage New Mexico, online species database: nhnm.unm.edu

WETLANDS AND FLOODPLAINS

Under Executive Orders 11988 and 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and floodplains, and preserve and enhance their

natural and beneficial values. These habitats should be conserved through avoidance, or mitigated to ensure that there would be no net loss of wetlands function and value.

We encourage you to use the National Wetland Inventory (NWI) maps in conjunction with ground-truthing to identify wetlands occurring in your project area. The Service's NWI program website, www.fws.gov/wetlands/Data/Mapper.html integrates digital map data with other resource information. We also recommend you contact the U.S. Army Corps of Engineers for permitting requirements under section 404 of the Clean Water Act if your proposed action could impact floodplains or wetlands.

MIGRATORY BIRDS

The MBTA prohibits the taking of migratory birds, nests, and eggs, except as permitted by the Service's Migratory Bird Office. To minimize the likelihood of adverse impacts to migratory birds, we recommend construction activities occur outside the general bird nesting season from March through August, or that areas proposed for construction during the nesting season be surveyed, and when occupied, avoided until the young have fledged.

We recommend review of Birds of Conservation Concern at website www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BCC.html to fully evaluate the effects to the birds at your site. This list identifies birds that are potentially threatened by disturbance and construction.

BALD AND GOLDEN EAGLES

The bald eagle (*Haliaeetus leucocephalus*) was delisted under the ESA on August 9, 2007. Both the bald eagle and golden eagle (*Aquila chrysaetos*) are still protected under the MBTA and BGEPA. The BGEPA affords both eagles protection in addition to that provided by the MBTA, in particular, by making it unlawful to "disturb" eagles. Under the BGEPA, the Service may issue limited permits to incidentally "take" eagles (e.g., injury, interfering with normal breeding, feeding, or sheltering behavior nest abandonment). For information on bald and golden eagle management guidelines, we recommend you review information provided at www.fws.gov/midwest/eagle/guidelines/bgepa.html.

On our web site www.fws.gov/southwest/es/NewMexico/SBC_intro.cfm, we have included conservation measures that can minimize impacts to federally listed and other sensitive species. These include measures for communication towers, power line safety for raptors, road and highway improvements, spring developments and livestock watering facilities, wastewater facilities, and trenching operations.

We also suggest you contact the New Mexico Department of Game and Fish, and the New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division for information regarding State fish, wildlife, and plants.

Thank you for your concern for endangered and threatened species and New Mexico's wildlife habitats. We appreciate your efforts to identify and avoid impacts to listed and sensitive species in your project area. For further consultation on your proposed activity, please call 505-346-2525 or email nmesfo@fws.gov and reference your Service Consultation Tracking

Number.

Attachment(s):

- Official Species List
- 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:

New Mexico Ecological Services Field Office
2105 Osuna Road Ne
Albuquerque, NM 87113-1001
(505) 346-2525

Project Summary

Consultation Code: 02ENNM00-2021-SLI-1173
Event Code: 02ENNM00-2021-E-02753
Project Name: Establishment of Permanent Headquarters for United States Space Command (Kirtland AFB)
Project Type: DEVELOPMENT
Project Description: The United States Department of Air Force (DAF) is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the United States (Proposed Action). U.S. Army Garrison Redstone Arsenal, Alabama is the DAF's Preferred Alternative. Other alternative locations being analyzed include Peterson Air Force Base (AFB), Colorado; Offutt AFB, Nebraska; Kirtland AFB, New Mexico; Cape Canaveral Spaceport, Florida; and Port San Antonio, Texas. The Proposed Action includes construction and operation of a multi-story HQ facility that would be specifically designed to accommodate the functional requirements of USSPACECOM. It would accommodate approximately 1,816 personnel in a typical HQ setting, providing approximately 460,000 square feet of office, administrative, and functional interior space and 310,000 square feet of vehicle parking.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@35.0531784,-106.56232785181521,14z

Counties: Bernalillo County, New Mexico

Endangered Species Act Species

There is a total of 5 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.

Mammals

NAME	STATUS
New Mexico Meadow Jumping Mouse *Zapus hudsonius luteus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7965	Endangered

Birds

NAME	STATUS
Mexican Spotted Owl *Strix occidentalis lucida* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8196	Threatened
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Fishes

NAME	STATUS
Rio Grande Silvery Minnow *Hybognathus amarus*	Endangered

Population: Wherever found, except where listed as an experimental population

There is **final** critical habitat for this species. The location of the critical habitat is not available.

Species profile: https://ecos.fws.gov/ecp/species/1391

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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
Brown-capped Rosy-finch *Leucosticte australis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 15 to Sep 15
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
Chestnut-collared Longspur *Calcarius ornatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
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
Grace's Warbler *Dendroica graciae* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 20 to Jul 20
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
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
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

NAME	BREEDING SEASON
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
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.

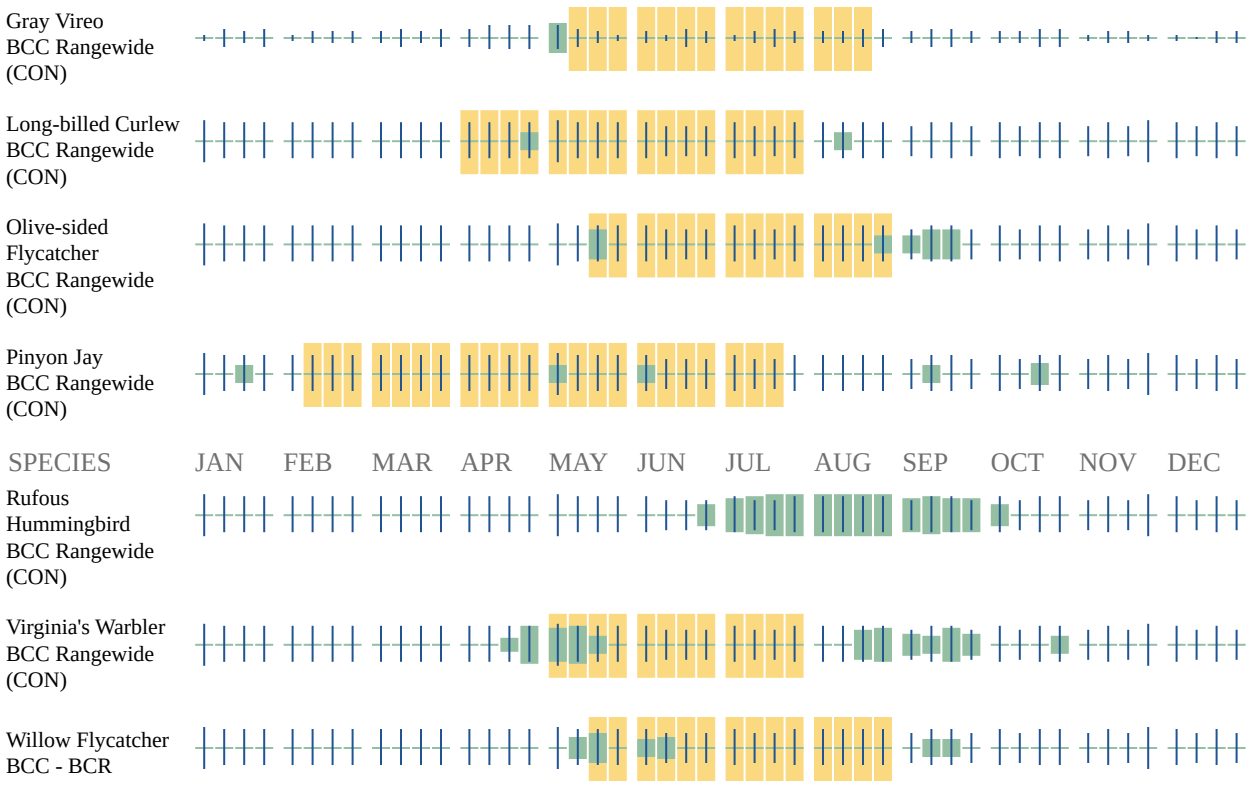
Breeding Season (■)

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 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.

Obenland, Benjamin

From: Rangel, Lauren L [redacted]
Sent: Tuesday, August 24, 2021 2:06 PM
To: Warf, Jennifer
Subject: [EXTERNAL] 02ENNM00-2021-SLI-1173 Establishment of Permanent USSPACECOM HQ (Kirtland AFB)

Hi Jennifer,

Thank you for your letter dated July 15, 2021 requesting informal consultation with the U.S. Fish and Wildlife Service (Service) pursuant to Section 7(a)(2) of the Endangered Species Act (Act) of 1973 (16 U.S.C. 1531 et seq.), as amended. Your request included a biological assessment (BA) which analyzed the effects of the construction and operation of the United States Space Command Headquarters (HQ) at the Kirtland Air Force Base (AFB).

If the proposed site at Kirtland AFB is selected, the United States Space Command HQ would be constructed on 64 acres of previously disturbed land. The United States Air Force surveyed the proposed site on May 25, 2021 and the site was found to have limited (30-50%) plant cover, dominated by non-native Russian thistle (*Salsola* sp.). Due to a lack of suitable habitat, the BA concluded that the construction and operation of the HQ at Kirtland AFB will have "no effect" on the following listed species:

- Mexican spotted owl (*Strix occidentalis lucida*),
- New Mexico meadow jumping mouse (*Zapus hudsonius luteus*),
- Rio Grande silvery minnow (*Hybognathus amarus*),
- Southwestern willow flycatcher (*Empidonax traillii extimus*), and
- Yellow-billed cuckoo (*Coccyzus americanus*).

Additionally, there is no critical habitat located in the project area. Although the Act does not require Federal agencies to consult with the Service if the action agency determines their action will have "no effect" on threatened or endangered species or designated critical habitat (50 CFR 402.12), we appreciate your consideration for the conservation of these species and notification of your "no effect" determinations. Additional guidance on completing project reviews and making effects determinations may be found here.

In addition to your request for concurrence with your "no effect" determination, you requested that we provide information that we wish to be included in the Environmental Assessment. At this time, we do not have any additional comments or suggestions to provide relative to your determinations, or to be included in the EA.

Please contact the Service if: 1) the proposed action is subsequently modified in a manner that causes an effect on listed species or designated Critical Habitat; 2) new information reveals the proposed action may affect federally protected species or designated Critical Habitat in a manner or to an extent not previously considered; or 3) a new species is listed or Critical Habitat is designated under the Endangered Species Act of 1973, as amended (16 USC § 1531 et seq.), that may be affected by the identified action.

Thank you for working to conserve endangered and threatened species and their habitats. If you or your staff have any questions regarding this matter, please contact Lauren Rangel, Fish and Wildlife Biologist, by email at [redacted] You may also contact us by mail at: U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office, 2105 Osuna Road NE, Albuquerque, New Mexico 87113; or by phone at (505) 346-2525.

Thanks,

Lauren Rangel
Fish and Wildlife Biologist
New Mexico Ecological Services Field Office
U.S. Fish and Wildlife Service
[redacted]

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS, 55TH WING (ACC)
OFFUTT AIR FORCE BASE NEBRASKA

1 July 2021

Mr. Gary Chesley, P.E.
55 CES/CL
106 Peacekeeper Dr. Suite 2N3
Offutt AFB NE 68113-4019

U.S. Fish and Wildlife Service
Based on the information provided, you may consider this project to be in compliance with the Endangered Species Act of 1973, as ammended, 16 U.S.C. 1531 *et. seq*. The project should be reanalyzed by our office if any new information indicates there may be effects to protected species or their habitats.

Mark Porath
Digitally signed by Mark Porath
Date: 2021.07.21 15:12:38 -05'00'

Project Leader, Nebraska Field Office Supervisor

Ms. Eliza Hines
US Fish and Wildlife Service
9325 South Alda Road
Wood River NE 68883

USFWS TAILS# 06E22000-2021-I-0529

Dear Ms. Hines

The United States (US) Air Force proposes to construct and operate a permanent headquarters (HQ) facility for the US Space Command (USSPACECOM) (Proposed Action). The Air Force is evaluating six alternative sites in the US, one of which is located at Offutt Air Force Base (AFB), Nebraska. In accordance with Section 7 of the Endangered Species Act of 1973, this correspondence is intended to initiate informal consultation regarding the Proposed Action. The Air Force previously contacted you on 2 June 2021 requesting relevant information for consideration in its Environmental Assessment.

As noted in our previous correspondence, the US Department of Defense (DoD) established USSPACECOM in 2019 as the eleventh unified combatant command. The purpose of this Proposed Action, accordingly, is to establish a permanent operational USSPACECOM HQ to facilitate a functional combatant command. The Proposed Action is needed due to the current lack of suitable permanent facilities in which USSPACECOM can fulfill its required functions and achieve full operational capability.

The proposed site for the HQ facility at Offutt AFB (see attachment 1) is approximately 10.9 acres and consists of a former tarmac now used for parking, four baseball diamonds (i.e., active recreational space), and manicured landscaping. Landscaping consists of turf grass mix (Kentucky bluegrass [*Poa pratensis*] and tall fescue [*Schedonorus arundinaceus*]) and scattered deciduous and evergreen trees. Most existing trees are healthy saplings or immature with trunk diameter at breast height of 7 inches or less, with no standing deadwood or peeling bark.

The proposed HQ facility would consist of a multistory office/administrative building with approximately 460,000 square feet (SF) of functional interior space and approximately 310,000 SF of parking space. An access road, utilities, and appropriate security measures would also be constructed on-site. The Air Force assumes the entire 10.9-acre site would be disturbed during

construction. Following construction, the site would be landscaped with native species. In total, construction is expected to take two years. Once operational, the HQ facility would accommodate approximately 1,816 personnel.

The Air Force queried the United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) database to identify federally listed species with the potential to occur in the Proposed Action area (Consultation Code 06E22000-2021-SLI-0447). Four federally listed species have the potential to occur in the Proposed Action area (see Attachment 2 for the official species list):

Northern Long-Eared Bat (*Myotis septentrionalis*) – Federally Threatened

The northern long-eared bat (NLEB) hibernates in caves and mines (i.e., hibernacula) during the winter. During the summer, it either roosts in hibernacula, or underneath bark or in cavities or crevices of trees and snags. It may also roost in man-made structures, such as barns or sheds, on occasion. The NLEB forages in the understory of forests (USFWS, 2020). This species was detected on Offutt AFB in 2016. However, there are no known hibernacula or maternity roost trees on the installation (U.S. Air Force, 2020). Using the NLEB key within the IPaC system, the Air Force concluded, and USFWS verified, that the Proposed Action is consistent with activities analyze in the USFWS's January 5, 2016 Programmatic Biological Opinion for this species. The Proposed Action ***may affect*** the NLEB; however, any take that may occur as a result of the Proposed Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 Code of Federal Regulations 17.40(o). A copy of the USFWS Verification Letter for this determination is included in Attachment 3.

Piping Plover (*Charadrius melodus*) – Federally Threatened

Piping plover generally inhabit wide, flat, open, sandy beaches with very little grass or other vegetation. Nesting territories often include creeks or wetlands (USFWS, 2019). The Air Force has surveyed Offutt AFB for suitable piping plover habitat. To date, none has been identified on the installation (U.S. Air Force, 2020). The Air Force conducted a site visit to the proposed HQ site at Offutt AFB on 18 May 2021 and confirmed that no wetlands or other suitable habitat for piping plovers exist on-site. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Pallid Sturgeon (Scaphirhynchus albus) – Federally Endangered

Pallid sturgeon inhabit large, silty rivers with a natural hydrograph. Their preferred habitat has a diversity of depths and velocities formed by braided channels, sand bars, sand flats and gravel bars (USFWS, 2019). Offutt AFB does not contain suitable habitat for this species (U.S. Air Force, 2020). The Air Force conducted a site visit to the proposed HQ site at Offutt AFB on 18 May 2021 and confirmed that no waterways, and thus no suitable habitat for pallid sturgeon, exist on-site. The Missouri River, which does provide suitable habitat for this species, is at least 1.6 mile away from the site. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Western Prairie Fringed Orchid (*Platanthera praeclara*) – Federally Threatened

The western prairie fringed orchid occurs in moist tallgrass prairies and sedge meadows (USFWS, 2021). Offutt AFB does not contain suitable habitat for this species, and no individuals have been observed to date (U.S. Air Force, 2020). The Air Force conducted a site visit to the proposed HQ site at Offutt AFB on 18 May 2021 and confirmed that no suitable habitat for western prairie fringed orchid exists on-site. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

In conclusion, the Air Force requests your review and concurrence with our findings and determinations that implementation of the Proposed Action would have **no effect** on the piping plover, pallid sturgeon, and western prairie fringed orchid. As noted in the USFWS's prior verification letter (see Attachment 3), the Proposed Action **may affect** the NLEB; however, the Proposed Action would be covered under the Programmatic Biological Opinion for this species and any take that may occur would not be prohibited.

The Air Force has contracted AECOM Technical Services, Inc. (AECOM) to facilitate the National Environmental Policy Act process, including this informal consultation, for the Proposed Action. If you have any questions or information relevant to this Proposed Action or our effect determinations, please contact Jennifer Warf by email to: Jennifer.Warf@aecom.com; or by mail to: AECOM, ATTN: Jennifer Warf, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Sincerely

CHESLEY.GARY.D.1140580828 Digitally signed by CHESLEY.GARY.D.1140580828 Date: 2021.07.01 15:40:08 -05'00'

GARY D. CHESLEY, P.E.
Director, 55th Civil Engineer Squadron

4 Attachments:
1. Proposed Action Area at Offutt AFB
2. Official Species List via IPaC
3. Verification letter for the 'Establishment of Permanent Headquarters for United States Space Command (Offutt AFB)' project under the 5 January 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions
4. References

Proposed Permanent Site Boundary (10.9 Acres)

Offutt Air Force Base

USSPACECOM

Offutt Air Force Base
Offutt AFB, NE

0 150 300 600 Feet

N

Source: ESRI 2019

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Nebraska Ecological Services Field Office
9325 B South Alda Rd., Ste B
Wood River, NE 68883-9565
Phone: (308) 382-6468 Fax: (308) 384-8835
http://www.fws.gov//nebraskaes

In Reply Refer To: June 04, 2021
Consultation Code: 06E22000-2021-SLI-0447
Event Code: 06E22000-2021-E-00781
Project Name: Establishment of Permanent Headquarters for United States Space Command (Offutt AFB)

Subject: Updated list of threatened and endangered species that may occur in your proposed project location 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
- 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:

Nebraska Ecological Services Field Office
9325 B South Alda Rd., Ste B
Wood River, NE 68883-9565
(308) 382-6468

Project Summary

Consultation Code: 06E22000-2021-SLI-0447
Event Code: 06E22000-2021-E-00781
Project Name: Establishment of Permanent Headquarters for United States Space Command (Offutt AFB)
Project Type: DEVELOPMENT
Project Description: The United States Department of Air Force (DAF) is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the United States (Proposed Action). U.S. Army Garrison Redstone Arsenal, Alabama is the DAF's Preferred Alternative. Other alternative locations being analyzed include Peterson Air Force Base (AFB), Colorado; Offutt AFB, Nebraska; Kirtland AFB, New Mexico; Cape Canaveral Spaceport, Florida; and Port San Antonio, Texas. The Proposed Action includes construction and operation of a multi-story HQ facility that would be specifically designed to accommodate the functional requirements of USSPACECOM. It would accommodate approximately 1,816 personnel in a typical HQ setting, providing approximately 460,000 square feet of office, administrative, and functional interior space and 310,000 square feet of vehicle parking.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.129685699999996,-95.91038812376432,14z

Counties: Sarpy County, Nebraska

Endangered Species Act Species

There is a total of 4 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.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened

Fishes

NAME	STATUS
Pallid Sturgeon *Scaphirhynchus albus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7162	Endangered

Flowering Plants

NAME	STATUS
Western Prairie Fringed Orchid *Platanthera praeclara*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/1669

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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
American Golden-plover *Pluvialis dominica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
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 Oct 15 to Aug 31

NAME	BREEDING SEASON
Buff-breasted Sandpiper *Calidris subruficollis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9488	Breeds elsewhere
Golden Eagle *Aquila chrysaetos* 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/1680	Breeds elsewhere
Hudsonian Godwit *Limosa haemastica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Least Bittern *Ixobrychus exilis* 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/6175	Breeds Aug 16 to Oct 31
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
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Rusty Blackbird *Euphagus carolinus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Semipalmated Sandpiper *Calidris pusilla* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 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.

▪ probability of presence ▪ breeding season | survey effort – no data

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

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 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.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
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http://www.fws.gov//nebraskaes

In Reply Refer To: June 21, 2021
Consultation code: 06E22000-2021-TA-0447
Event Code: 06E22000-2021-E-00872
Project Name: Establishment of Permanent Headquarters for United States Space Command (Offutt AFB)

Subject: Verification letter for the 'Establishment of Permanent Headquarters for United States Space Command (Offutt AFB)' project under the January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions.

Dear Michael Busam:

The U.S. Fish and Wildlife Service (Service) received on June 21, 2021 your effects determination for the 'Establishment of Permanent Headquarters for United States Space Command (Offutt AFB)' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. This IPaC key assists users in determining whether a Federal action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from "take"[1] prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, the Action is consistent with activities analyzed in the PBO. The Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the PBO satisfies and concludes your responsibilities for this Action under ESA Section 7(a)(2) with respect to the northern long-eared bat.

Please report to our office any changes to the information about the Action that you submitted in IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation. If the Action is not completed within one year of the date of this letter, you must update and resubmit the information required in the IPaC key.

This IPaC-assisted determination allows you to rely on the PBO for compliance with ESA Section 7(a)(2) only for the northern long-eared bat. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- Pallid Sturgeon *Scaphirhynchus albus* Endangered
- Piping Plover *Charadrius melodus* Threatened
- Western Prairie Fringed Orchid *Platanthera praeclara* Threatened

If the Action may affect other federally listed species besides the northern long-eared bat, a proposed species, and/or designated critical habitat, additional consultation between you and this Service office is required. If the Action may disturb bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act is recommended.

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[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Establishment of Permanent Headquarters for United States Space Command (Offutt AFB)

2. Description

The following description was provided for the project 'Establishment of Permanent Headquarters for United States Space Command (Offutt AFB)':

> The United States Department of Air Force (DAF) is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the United States (Proposed Action). U.S. Army Garrison Redstone Arsenal, Alabama is the DAF's Preferred Alternative. Other alternative locations being analyzed include Peterson Air Force Base (AFB), Colorado; Offutt AFB, Nebraska; Kirtland AFB, New Mexico; Cape Canaveral Spaceport, Florida; and Port San Antonio, Texas. The Proposed Action includes construction and operation of a multi-story HQ facility that would be specifically designed to accommodate the functional requirements of USSPACECOM. It would accommodate approximately 1,816 personnel in a typical HQ setting, providing approximately 460,000 square feet of office, administrative, and functional interior space and 310,000 square feet of vehicle parking.

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.129685699999996,-95.91038812376432,14z

Determination Key Result

This Federal Action may affect the northern long-eared bat in a manner consistent with the description of activities addressed by the Service's PBO dated January 5, 2016. Any taking that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR

§17.40(o). Therefore, the PBO satisfies your responsibilities for this Action under ESA Section 7(a)(2) relative to the northern long-eared bat.

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on May 15, 2017. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for Federal actions is to assist determinations as to whether proposed actions are consistent with those analyzed in the Service's PBO dated January 5, 2016.

Federal actions that may cause prohibited take of northern long-eared bats, affect ESA-listed species other than the northern long-eared bat, or affect any designated critical habitat, require ESA Section 7(a)(2) consultation in addition to the use of this key. Federal actions that may affect species proposed for listing or critical habitat proposed for designation may require a conference under ESA Section 7(a)(4).

Determination Key Result

This project may affect the threatened Northern long-eared bat; therefore, consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) is required. However, based on the information you provided, this project may rely on the Service's January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions* to fulfill its Section 7(a)(2) consultation obligation.

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

   Yes

2. Have you determined that the proposed action will have "no effect" on the northern long-eared bat? (If you are unsure select "No")

   No

3. Will your activity purposefully **Take** northern long-eared bats?

   No

4. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

   Automatically answered

   No

5. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

   Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html.

   Yes

6. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

   No

7. Will the action involve Tree Removal?

   Yes

8. Will the action only remove hazardous trees for the protection of human life or property?

   No

9. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

   No

10. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

    No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

References

MDA. (2018a). *Robinson Maneauver Training Center Integrated Natural Resources Management Plan.* Military Department of Arkansas.

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USFWS. (2019, May 29). *Piping Plover Fact Sheet*. Retrieved June 4, 2021, from U.S. Fish and Wildlife Service Midwest Region Endangered Species: https://www.fws.gov/midwest/endangered/pipingplover/pipingpl.html#:~:text=Habitat%20%2D%20Piping%20plovers%20use%20wide,with%20pebbles%20or%20broken%20shells.

USFWS. (2020, January 22). *Northern Long-Eared Bat Myotis septentrionalis*. Retrieved June 4, 2021, from U.S. Fish and Wildlife Service Midwest Region Endangered Species: https://www.fws.gov/midwest/endangered/mammals/nleb/nlebfactsheet.html#:~:text=Summer%20Habitat%3A%20During%20the%20summer,places%2C%20like%20caves%20and%20mines.

USFWS. (2021, January 6). *Western Prairie Fringed Orchid*. Retrieved June 4, 2021, from U.S. Fish and Wildlife Service Endangered Species | Plants - Mountain-Prairie Region: https://www.fws.gov/mountain-prairie/es/westernPrairieFringedOrchid.php#:~:text=Habitat%3A%20The%20western%20prairie%20fringed,%2C%20little%20bluestem%2C%20and%20switchgrass.

DEPARTMENT OF THE AIR FORCE
UNITED STATES SPACE FORCE
PETERSON-SCHRIEVER GARRISON

30 June 2021

Lt Col Timothy J. Fryar
Commander, 21st Civil Engineer Squadron
580 Goodfellow Street
Peterson AFB, CO 80914

Ms. Nicole Alt
U.S. Fish and Wildlife Service
Colorado Ecological Services Field Office
134 Union Boulevard, Suite 650
Lakewood, CO 80228

Dear Ms. Alt,

The United States (US) Air Force proposes to construct and operate a permanent headquarters (HQ) facility for the US Space Command (USSPACECOM) (Proposed Action). The Air Force is evaluating six alternative sites in the US, one of which is located at Peterson Air Force Base (AFB), Colorado. In accordance with Section 7 of the Endangered Species Act of 1973, this correspondence is intended to initiate informal consultation regarding the Proposed Action. The Air Force previously contacted your office, via email to MountainPrairie@fws.gov, on June 16, 2021 requesting relevant information for consideration in its Environmental Assessment.

As noted in our previous correspondence, the US Department of Defense (DoD) established USSPACECOM in 2019 as the eleventh unified combatant command. The purpose of this Proposed Action, accordingly, is to establish a permanent operational USSPACECOM HQ to facilitate a functional combatant command. The Proposed Action is needed due to the current lack of suitable permanent facilities in which USSPACECOM can fulfill its required functions and achieve full operational capability.

The proposed site for the HQ facility at Peterson AFB (see Enclosure 1) is approximately 13.7 acres and immediately east of existing military operations centers and associated parking lots. The site consists of vacant, disturbed, planted grassland subject to grazing. The grasses are generally short and xeric. No wet areas occur on-site.

The proposed HQ facility would consist of a multistory office/administrative building with approximately 460,000 square feet (SF) of functional interior space and approximately 310,000 SF of parking space. An access road, utilities, and appropriate security measures would also be constructed on-site. The Air Force assumes the entire 13.7-acre site would be disturbed during construction. Following construction, the site would be landscaped with native species. In total,

construction is expected to take two years. Once operational, the HQ facility would accommodate approximately 1,816 personnel.

The Air Force queried the United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) database to identify federally listed species with the potential to occur in the Proposed Action area (Consultation Code 06E24000-2021-SLI-0981). Seven federally listed species have the potential to occur in the Proposed Action area (see Enclosure 2 for the official species list):

Eastern Black Rail (*Laterallus jamaicensis ssp. jamaicensis*) – Federally Threatened

The eastern black rail, in the interior United States, generally inhabits wet meadows and shallow wetlands with dense emergent vegetation; in Colorado, specifically, cattail marshes with standing water are often used (USFWS, 2019). This habitat does not occur within or near the Proposed Action area. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Piping Plover (*Charadrius melodus*) – Federally Threatened

Piping plover generally inhabit wide, flat, open, sandy beaches with very little grass or other vegetation. Nesting territories often include creeks or wetlands (USFWS, 2019). Peterson AFB does not contain suitable habitat for this species, and no piping plovers have been documented at the installation during prior surveys (USAF, 2020). Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Whooping Crane (*Grus americana*) – Federally Endangered

Whooping cranes inhabit areas with pothole wetlands, salt marshes, ponds, or shallow lakes interspersed among grasslands, prairies, or flatwoods (USFWS, 2019). Currently, there are four known wild populations of this species: non-migratory populations in Louisiana and Florida, a Wisconsin/Florida migratory population, and a Wood-Buffalo (Alberta)/Aransas (Texas) population. Peterson AFB is not near any of these populations. Additionally, it does not contain suitable stop-over habitat for this species, and no individuals have been documented at the installation during prior surveys (USAF, 2020). Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Greenback Cutthroat Trout (*Oncorhynchus clarkii stomias*) – Federally Threatened

Greenback cutthroat trout inhabit cold water streams and cold water lakes with adequate stream spawning habitat present in spring (USFWS, 1998). This species is only known to exist in streams isolated from other fish where, with the exception of Bear Creek, it has been reintroduced (Fendt, 2019). Peterson AFB does not contain suitable habitat for this species, and there are no streams on or proximal to the Proposed Action area (USAF, 2020). Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Pallid Sturgeon (*Scaphirhynchus albus*) – Federally Endangered

Pallid sturgeon inhabit large, silty rivers with a natural hydrograph. Their preferred habitat has a diversity of depths and velocities formed by braided channels, sand bars, sand flats, and gravel bars (USFWS, 2019). Peterson AFB does not contain suitable habitat for this species, and there are no rivers on or proximal to the Proposed Action area (USAF, 2020). Therefore, this species has no potential to occur at or near the site, and the Proposed Action would have ***no effect*** on this species.

Ute Ladies'-tresses (*Spiranthes diluvialis*) – Federally Threatened

The Ute ladies'-tresses occurs along riparian edges, gravel bars, old oxbows, high flow channels, and moist to wet meadows along perennial streams. It typically occurs in stable wetland and seepy areas associated with old landscape features within historical floodplains of major rivers. It also is found in wetland and seepy areas near freshwater lakes or springs (USFWS, 2021). Peterson AFB does not contain suitable habitat for this species, and no individuals have been documented at the installation during prior surveys (USAF, 2020). Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Western Prairie Fringed Orchid (*Platanthera praeclara*) – Federally Threatened

The western prairie fringed orchid occurs in moist tallgrass prairies and sedge meadows (USFWS, 2021). Peterson AFB, including the Proposed Action area, does not contain suitable habitat for this species, and no individuals have been documented at the installation during prior surveys (USAF, 2020). Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

In conclusion, the Air Force requests your review and concurrence with our findings and determinations that implementation of the Proposed Action would have **no effect** on the eastern black rail, piping plover, whooping crane, greenback cutthroat trout, pallid sturgeon, Ute ladies'-tresses, and western prairie fringed orchid.

If you have any questions or information relevant to this Proposed Action or our effect determinations, please contact Mr. Robert Tomlinson, Chief, Environmental Quality, by email to: robert.tomlinson@spaceforce.mil; or by mail to: Robert Tomlinson, 21 CES/CEI, 580 Goodfellow Street, Suite 2370, Peterson AFB, CO 80914-2370.

Sincerely,

Timothy J. Fryar, Lt Col, USAF

Enclosures:
1. Proposed Action Area at Peterson AFB

2. Official Species List via IPaC

References

Fendt, L. (2019, February 15). *The greenback cutthroat trout needs saving, again.* Retrieved from High Country News: https://www.hcn.org/articles/fish-the-greenback-cutthroat-trout-needs-saving-again

USAF. (2020). *U.S. Air Force Integrated Natural Resources Management Plan: Peterson Air Force Base.*

USFWS. (1998, March). *Greenback Cutthroat Trout Recovery Plan.* Retrieved from https://cpw.state.co.us/Documents/Research/Aquatic/CutthroatTrout/GBNRecoveryPlan.pdf

USFWS. (2019, May 29). *Fact Sheet: Pallid Sturgeon (Scaphirhynchus albus).* Retrieved June 4, 2021, from U.S. Fish and Wildlife Service Midwest Region Endangered Species: https://www.fws.gov/midwest/endangered/fishes/pallidsturgeon/palld_fc.html

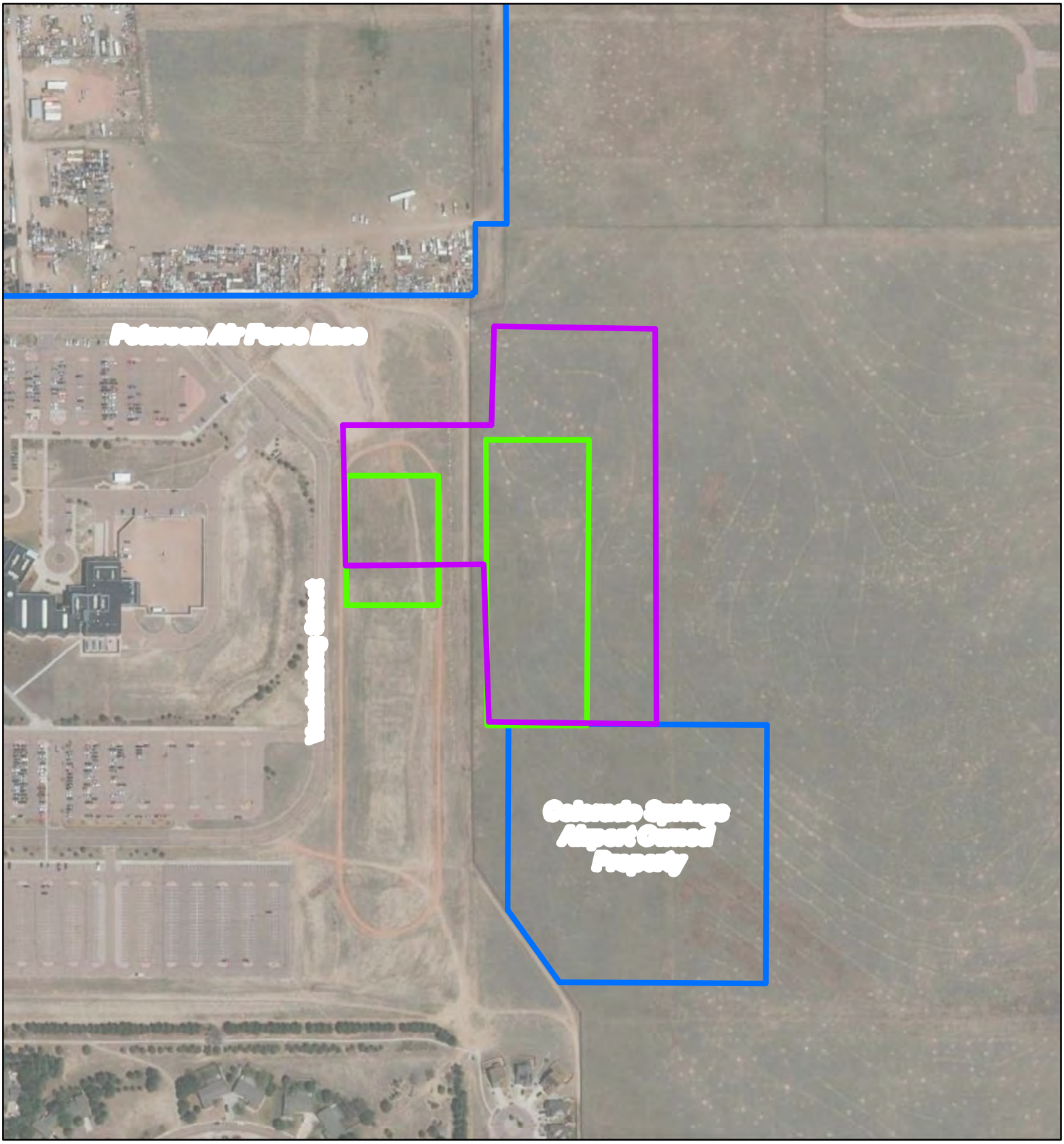
USFWS. (2019, May 29). *Piping Plover Fact Sheet.* Retrieved June 4, 2021, from U.S. Fish and Wildlife Service Midwest Region Endangered Species: https://www.fws.gov/midwest/endangered/pipingplover/pipingpl.html#:~:text=Habitat%20%2D%20Piping%20plovers%20use%20wide,with%20pebbles%20or%20broken%20shells.

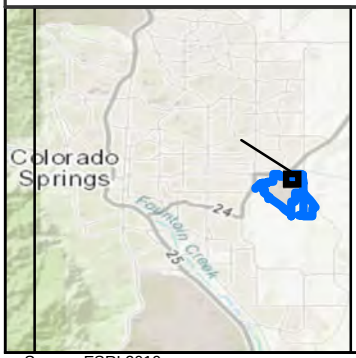
USFWS. (2019, November 20). *Species Status and Fact Sheet: Whooping Crane.* Retrieved from U.S. Fish and Wildlife Service North Florida Ecological Services Office: https://www.fws.gov/northflorida/WhoopingCrane/whoopingcrane-fact-2001.htm#:~:text=DESCRIPTION%3A%20The%20whooping%20crane%20is,bare%20red%20face%20and%20crown.

USFWS. (2019, August). *Species Status Assessment Report for the Eastern Black Rail (Laterallus jamaicensis jamaicensis), Version 1.3.* Retrieved from https://ecos.fws.gov/ServCat/DownloadFile/186791

USFWS. (2021, January 6). *Ute-Ladies'-Tresses Orchid.* Retrieved from U.S. Fish and Wildlife Service Endangered Species | Plants: Mountain-Prairie Region: https://www.fws.gov/mountain-prairie/es/uteLadiestress.php

USFWS. (2021, January 6). *Western Prairie Fringed Orchid.* Retrieved June 4, 2021, from U.S. Fish and Wildlife Service Endangered Species | Plants - Mountain-Prairie Region: https://www.fws.gov/mountain-prairie/es/westernPrairieFringedOrchid.php#:~:text=Habitat%3A%20The%20western%20prairie%20fringed,%2C%20little%20bluestem%2C%20and%20switchgrass.





Proposed Permanent Site Boundary (2021) (13.7 Acres)

Previously Studied Site Boundary (2019)

Peterson Air Force Base

USSPACECOM

Peterson Air Force Base
Colorado Springs, CO

0 125 250 500

Feet

N

Source: ESRI 2019

United States Department of the Interior

FISH AND WILDLIFE SERVICE
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Denver, CO 80225-0486
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http://www.fws.gov/platteriver

In Reply Refer To: June 17, 2021
Consultation Code: 06E24000-2021-SLI-0981
Event Code: 06E24000-2021-E-02543
Project Name: Establishment of Permanent Headquarters for US Space Command

Subject: List of threatened and endangered species that may occur in your proposed project location 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
- 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:

Colorado Ecological Services Field Office
Denver Federal Center
P.O. Box 25486
Denver, CO 80225-0486
(303) 236-4773

Project Summary

Consultation Code: 06E24000-2021-SLI-0981
Event Code: 06E24000-2021-E-02543
Project Name: Establishment of Permanent Headquarters for US Space Command
Project Type: DEVELOPMENT
Project Description: The United States Department of Air Force (DAF) is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the United States (Proposed Action). U.S. Army Garrison Redstone Arsenal, Alabama is the DAF's Preferred Alternative. Other alternative locations being analyzed include Peterson Air Force Base (AFB), Colorado; Offutt AFB, Nebraska; Kirtland AFB, New Mexico; Cape Canaveral Spaceport, Florida; and Port San Antonio, Texas. The Proposed Action includes construction and operation of a multi-story HQ facility that would be specifically designed to accommodate the functional requirements of USSPACECOM. It would accommodate approximately 1,816 personnel in a typical HQ setting, providing approximately 460,000 square feet of office, administrative, and functional interior space and 310,000 square feet of vehicle parking.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.83512155,-104.69184523738305,14z

Counties: El Paso County, Colorado

Endangered Species Act Species

There is a total of 7 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. Note that 4 of these species should be considered only under certain conditions.

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
Eastern Black Rail *Laterallus jamaicensis ssp. jamaicensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10477	Threatened
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. The location of the critical habitat is not available. This species only needs to be considered under the following conditions: ▪ Project includes water-related activities and/or use in the N. Platte, S. Platte, and Laramie River Basins which may affect listed species in Nebraska. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Whooping Crane *Grus americana* Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. The location of the critical habitat is not available. This species only needs to be considered under the following conditions: ▪ Project includes water-related activities and/or use in the N. Platte, S. Platte, and Laramie River Basins which may affect listed species in Nebraska. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

Fishes

NAME	STATUS
Greenback Cutthroat Trout *Oncorhynchus clarkii stomias*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/2775

Pallid Sturgeon *Scaphirhynchus albus*	Endangered

No critical habitat has been designated for this species.
This species only needs to be considered under the following conditions:

- Project includes water-related activities and/or use in the N. Platte, S. Platte, and Laramie River Basins which may affect listed species in Nebraska.

Species profile: https://ecos.fws.gov/ecp/species/7162

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

Western Prairie Fringed Orchid *Platanthera praeclara*	Threatened

No critical habitat has been designated for this species.
This species only needs to be considered under the following conditions:

- Project includes water-related activities and/or use in the N. Platte, S. Platte, and Laramie River Basins which may affect listed species in Nebraska.

Species profile: https://ecos.fws.gov/ecp/species/1669

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
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 Oct 15 to Jul 31
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

NAME	BREEDING SEASON
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
Lark Bunting *Calamospiza melanocorys* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 10 to Aug 15
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:

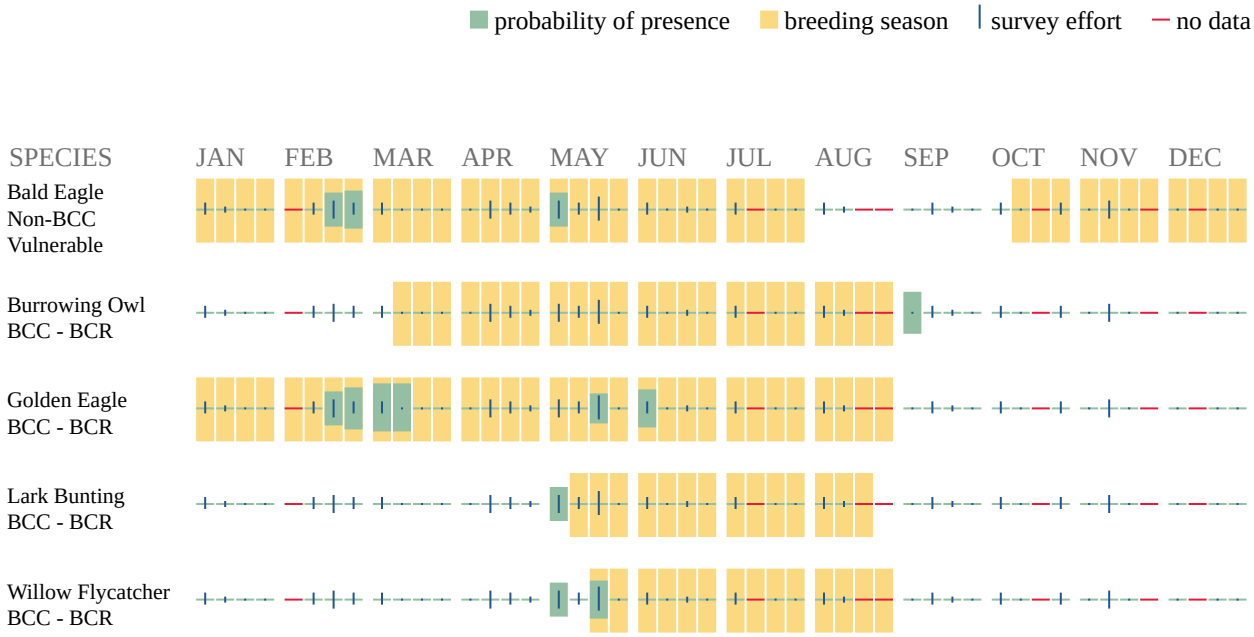
1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability 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 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.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

Obenland, Benjamin

From: Salamack, Kristin A [redacted]
Sent: Friday, July 16, 2021 11:30 AM
To: TOMLINSON, ROBERT R GS-13 USSF SPOC 21 CES/CEIE
Cc: Busam, Michael
Subject: [EXTERNAL] RE: RE: USSPACECOMEA USFWS Section 7 Consultation - Peterson AFB

Hello Robert Tomlinson,

Thank you for the clarifications. The Service agrees with your determinations of "no effect" for the species listed under the Endangered Species Act as candidate, proposed, threatened, or endangered with the potential to occur within the boundaries of the proposed US Air Force Space Command Headquarters if Peterson AFB were to be chosen as the location for these headquarters.

Please let me know if there are any further questions.

Kristin Salamack **(she/her/hers)**
CDOT/USFWS Liaison
Colorado Ecological Services Field Office
134 Union Blvd, Lakewood, CO 80228
Office: [redacted] Mobile: [redacted]

COLORADO
Department of Transportation
Division of Transportation Development

From: TOMLINSON, ROBERT R GS-13 USSF SPOC 21 CES/CEIE [redacted]
Sent: Friday, July 16, 2021 8:37 AM
To: Salamack, Kristin A [redacted]
Cc: [redacted]
Subject: [EXTERNAL] RE: USSPACECOMEA USFWS Section 7 Consultation - Peterson AFB

Ms. Salamack,

1. Redstone Arsenal in Huntsville, Alabama is the preferred alternative, the draft EA is currently being prepared.
2. Additionally, while we realize informal consultation is only necessary if the determination for a species is "may affect, not likely to adversely affect," we prefer to engage the Service with no effect determinations as well for transparency.

If you have any additional questions, please give me a call.

V/r

Robert Tomlinson, GS-13, Chief, Installation Management
21 CES/CEI
580 Goodfellow Street, Suite 2370
Peterson AFB CO 80914-2370

[redacted]

eDASH: https://usaf.dps.mil/teams/eDASH/WPP/HomePage/Home.aspx
Peterson eDASH Home: https://usaf.dps.mil/teams/10624/Peterson/SitePages/Home.aspx

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From: Salamack, Kristin A [redacted]
Sent: Wednesday, July 14, 2021 4:19 PM
To: TOMLINSON, ROBERT R GS-13 USSF SPOC 21 CES/CEIE [redacted]
Cc: [redacted]
Subject: [Non-DoD Source] USSPACECOMEA USFWS Section 7 Consultation - Peterson AFB

Hello Robert Tomlinson,

The U.S. Fish and Wildlife Service (Service) received a request for Section 7 informal consultation for the US Air Force Space Command Headquarters on July 1, 2021. I am the biologist assigned to consultations associated with Peterson AFB and I had a couple of questions.

1. In the letter, it indicates that the Peterson AFB headquarters location is one of six alternative sites identified in the EA. Section 7 consultation is typically not initiated until once the Preferred Alternative has been selected, between the Final EA and FONSI stages of a NEPA document. I was unsure at what stage this EA was in, but based on the language it sounds like it is in the draft stage. Can you clarify whether the Peterson AFB has been selected as the Preferred Alternative?
2. I noticed that the determination for all species is "no effect." Written concurrence from the Service is not required for a no effect determination and informal consultation is only necessary if the determination for a species is "may affect, not likely to adversely affect."

Once I have a clarification on the questions above I can provide the appropriate response. Thanks in advance for your attention.

Kristin Salamack **(she/her/hers)**
CDOT/USFWS Liaison
Colorado Ecological Services Field Office
134 Union Blvd, Lakewood, CO 80228
Office: [redacted] Mobile: [redacted]

COLORADO
Department of Transportation
Division of Transportation Development

DEPARTMENT OF DEFENSE
UNITED STATES SPACE COMMAND

July 7, 2021

Steven T. Rose, GS-15, F. SAME
Executive Director
US Space Command Logistics and Engineering
Peterson AFB, CO 80914

Mr. Adam Zerrenner
Field Supervisor
US Fish and Wildlife Service
Austin Ecological Services Field Office
10711 Burnet Road, Suite 200
Austin, TX 78758

Dear Mr. Zerrenner:

The United States (US) Air Force proposes to construct and operate a permanent headquarters (HQ) facility for the US Space Command (USSPACECOM) (Proposed Action). The Air Force is evaluating six alternative sites in the US, one of which is located at Port San Antonio, Texas. In accordance with Section 7 of the Endangered Species Act of 1973, this correspondence is intended to initiate informal consultation regarding the Proposed Action. The Air Force previously contacted you on June 16, 2021 requesting relevant information for consideration in its Environmental Assessment.

As noted in our previous correspondence, the US Department of Defense (DoD) established USSPACECOM in 2019 as the eleventh unified combatant command. The purpose of this Proposed Action, accordingly, is to establish a permanent operational USSPACECOM HQ to facilitate a functional combatant command. The proposed HQ facility would accommodate approximately 1,816 personnel in a multistory office/administrative building with approximately 460,000 square feet (SF) of functional space and approximately 310,000 SF of parking space. The total personnel number accounts for approximately 1,400 USSPACECOM military and civilian employees to be based at the final selected location, as well as a reasonably expected number of National Agency Representatives and contractor personnel supporting USSPACECOM missions who would be co-located with the permanent, HQ and, therefore, are included in the environmental analysis. The Proposed Action is needed due to the current lack of suitable permanent facilities in which USSPACECOM can fulfill its required functions and achieve full operational capability.

The Proposed Action area for the HQ facility at Port San Antonio (see Enclosure 1) is approximately 32.5 acres. A large portion of the project site is currently under construction for a separate, unrelated action. This construction zone includes an office building, parking lot, and associated infrastructure. The remainder of the site consists of level, vacant, and open urban parkland. Vegetation outside the construction zone includes several well-spaced trees and an understory of grasses and forbs. No water features occur on the site.

The proposed HQ facility would consist of a multistory office/administrative building with approximately 460,000 square feet (SF) of functional interior space and approximately 310,000 SF of parking space. An access road, utilities, and appropriate security measures would also be constructed on-site. The Air Force assumes the entire 32.5-acre site would be disturbed during construction. Following construction, the site would be landscaped with native species. In total, construction is expected to take two years. Once operational, the HQ facility would accommodate approximately 1,816 personnel.

The Air Force queried the United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) database to identify federally listed species with the potential to occur in the Proposed Action area (Consultation Code 02ETAU00-2021-SLI-1443). Twenty-one federally listed species were identified by IPaC as having the potential to occur in the Proposed Action area (see Enclosure 2 for the official species list):

Golden-cheeked Warbler (*Dendroica chrysoparia*) – Federally Endangered

Golden-cheeked warblers nest exclusively in oak-juniper woodlands in central Texas. This species requires old growth forests with dense tree canopy where it forages for a variety of insects, including caterpillars (USFWS, 2019). The Proposed Action area consists of a construction zone and an urban park with scattered ornamental trees. Therefore, no suitable habitat for this species exists on the Proposed Action area. Further, the Air Force conducted a site visit to the proposed HQ site at Port San Antonio on May 25, 2021 and confirmed that no oak-juniper woodlands exists on the Proposed Action area. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Piping Plover (*Charadrius melodus*) – Federally Threatened

Piping plovers are a migratory shorebird that breeds along the Atlantic Coast from Canada to North Carolina, and on the shores of the great lakes. Piping plovers winter primarily near Gulf Coast beaches. Wintering piping plovers in Texas prefer habitats with sparse vegetation that are periodically covered in water, such as tidal mudflats, sand flats, or algal flats (Texas Parks and Wildlife Department, 2021a). No suitable habitat for this species was observed in the Proposed Action area during the Air Force's site visit on May 25, 2021. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Red Knot (*Calidris canutus rufa*) – Federally Threatened

Red knots are a migratory bird that nests in high arctic habitats and winters in southern coastal habitats, including coastal Texas (Audubon, 2021). During migration, red knots utilize coastal mudflats and tidal zones, although some sightings have occurred at shorelines of large lakes and freshwater marshes in the interior US (Cornell University, 2019a). No suitable habitat for the red knot, including any water features or wetlands, was observed during the Air Force's site visit on May 25, 2021. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Whooping Crane (*Grus americana*) – Federally Endangered

Whooping cranes are a migratory bird that breeds in the wetlands of Wood Buffalo National Park in northern Canada and winters on the Texas coast at Aransas National Wildlife Refuge. Migrating birds feed in croplands and roost in shallow, freshwater wetlands (Cornell University, 2019b). No suitable habitat for the whooping crane, including any water features or cropland, was observed during the site visit

conducted on May 25, 2021. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

San Marcos Salamander (*Eurycea nana*) – Federally Threatened

San Marcos salamanders live exclusively in San Marcos Springs and nearby surface and subterranean aquatic habitats. This species is strictly aquatic (USFWS, 2021). There is no suitable habitat for this species in the Proposed Action area, as no water features are present. Further, San Marcos Springs is located approximately 50 miles northeast of the Proposed Action area. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Texas Blind Salamander (*Eurycea rathbuni*) – Federally Endangered

Texas blind salamanders live exclusively in water-filled caves of the Edwards Aquifer, located in San Marcos, Texas. This species is strictly aquatic, and is only seen near the surface when pushed upward by springs (NWF, 2021). There is no suitable habitat for this species in the Proposed Action area, as no water features are present. Further, San Marcos is located approximately 50 miles northeast of the Proposed Action area. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Fountain Darter (*Etheostoma fonticola*) – Federally Endangered

The fountain darter is found only in the San Marcos and Comal River headwaters. Suitable habitat for the fountain darter includes clean, spring-fed waters with bottom vegetation (Texas Parks and Wildlife Department, 2021b). There is no suitable habitat on the Proposed Action area, as no water features are present. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Bracted Twistflower (*Streptanthus bracteatus*) – Candidate

Bracted twistflower is typically found in oak-juniper woodlands on rocky hillsides and in canyon bottoms with shallow, well-drained, gravelly clays (NatureServe, 2021). The Proposed Action area is a level, urbanized environment and no suitable habitat for bracted twistflower exists on or near the site. Further, the Air Force conducted a site visit to the proposed HQ site at Port San Antonio on May 25 2021, and confirmed that no oak-juniper woodlands or canyon bottoms exist in the Proposed Action area. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effec***t on this species.

Texas Wild-rice (*Zizania texana*) – Federally Endangered

Texas wild-rice is a clumping perennial grass that roots underwater in riverbeds (Texas Parks and Wildlife Department, 2021c). There is no suitable habitat on the Proposed Action area, as no water features are present. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

The IPaC-generated species list also includes 12 federally listed insects, arachnids, and crustaceans:

- Beetle (*Rhadine exilis*)

- Beetle (*Rhadine infernalis*)
- Comal Springs Dryopid Beetle (*Stygoparnus comalensis*)
- Comal Springs Riffle Beetle (*Heterelmis comalensis*)
- Helotes Mold Beetle (*Batrisodes venyivi*)
- Braken Bat Cave Meshweaver (*Cicurina venii*)
- Cokendolpher Cave Harvestman (*Texella cokendolpheri*)
- Government Canyon Bat Cave Meshweaver (*Cicurina vespera*)
- Government Canyon Bat Cave Spider (*Neoleptoneta microps*)
- Madla Cave Meshweaver (*Cicurina madla*)
- Robber Baron Cave Meshweaver (*Cicurina baronia*)
- Peck's Cave Amphipod (*Stygobromus (=Stygonectes) pecki*)

All 12 of these listed insects, arachnids, and crustaceans are invertebrates that only occur in karst environments. The Proposed Action area is located within a highly urbanized area within Karst Zone 5, where no listed invertebrate karst species occur (USFWS, 2011). Therefore, these 12 species have no potential to occur at the site, and the Proposed Action would have ***no effect*** on these species.

In conclusion, the Air Force requests your review and concurrence with our findings and determinations that implementation of the Proposed Action would have **no effect** on any of the federally listed species identified by IPaC.

The Air Force has contracted AECOM Technical Services, Inc. (AECOM) to facilitate the National Environmental Policy Act process, including this informal consultation, for the Proposed Action. If you have any questions or information relevant to this Proposed Action or our effect determinations, please contact Jennifer Warf by email to: Jennifer.Warf@aecom.com; or by mail to: AECOM, ATTN: Jennifer Warf, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Sincerely,

STEVEN T. ROSE, GS-15, F. SAME
Executive Director
US Space Command Logistics and Engineering

Attachments:
1. Proposed Action Area at Port San Antonio
2. Official Species List via IPaC

cc:
Mr. Richard Trevino

References

Audubon. (2021). *Red Knot*. Retrieved June 21, 2021, from Guide to North American Birds: https://www.audubon.org/field-guide/bird/red-knot

Cornell University. (2019a). *The Cornell Lab*. Retrieved June 21, 2021, from All About Birds: https://www.allaboutbirds.org/guide/Red_Knot/lifehistory

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USFWS. (2019). *Golden-cheeked Warbler*. Retrieved June 21, 2021, from Balcones Canyonlands: https://www.fws.gov/refuge/Balcones_Canyonlands/GCW.html

USFWS. (2021). *San Marcos Salamander*. Retrieved June 21, 2021, from Environmental Conservation Online System: https://ecos.fws.gov/ecp/species/6374#:~:text=The%20San%20Marcos%20salamander%20is,the%20upper%20San%20Marcos%20River.

Proposed Permanent Site Boundary (32.5 Acres)

USSPACECOM

Port San Antonio
San Antonio, TX

0 250 500 1,000 Feet

N

Source: ESRI 2019

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Austin Ecological Services Field Office
10711 Burnet Road, Suite 200
Austin, TX 78758-4460
Phone: (512) 490-0057 Fax: (512) 490-0974
http://www.fws.gov/southwest/es/AustinTexas/
http://www.fws.gov/southwest/es/EndangeredSpecies/lists/

In Reply Refer To: June 01, 2021
Consultation Code: 02ETAU00-2021-SLI-1443
Event Code: 02ETAU00-2021-E-02930
Project Name: Establishment of Permanent Headquarters for United States Space Command (Port San Antonio)

Subject: Updated list of threatened and endangered species that may occur in your proposed project location 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 county 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.).

Please note that new information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. 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. Also 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 federally listed as

threatened or endangered species and to determine whether projects may affect these 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.

While a Federal agency may designate a non-Federal representative to conduct informal consultation or prepare a biological assessment, the Federal Agency must notify the Service in writing of any such designation. The Federal agency shall also independently review and evaluate the scope and content of a biological assessment prepared by their designated non-Federal representative before that document is submitted to the Service.

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 a federally funded, permitted or authorized activity, the agency is required to consult with the Service pursuant to 50 CFR 402. The following definitions are provided to assist you in reaching a determination:

- *No effect* - the proposed action will not affect federally listed species or critical habitat. A "no effect" determination does not require section 7 consultation and no coordination or contact with the Service is necessary. However, if the project changes or additional information on the distribution of listed or proposed species becomes available, the project should be reanalyzed for effects not previously considered.
- *May affect, but is not likely to adversely affect* - the project may affect listed species and/or critical habitat; however, the effects are expected to be discountable, insignificant, or completely beneficial. Certain avoidance and minimization measures may need to be implemented in order to reach this level of effect. The Federal agency or the designated non-Federal representative should consult with the Service to seek written concurrence that adverse effects are not likely. Be sure to include all of the information and documentation used to reach your decision with your request for concurrence. The Service must have this documentation before issuing a concurrence.
- *Is likely to adversely affect* - adverse effects to listed species may occur as a direct or indirect result of the proposed action. For this determination, the effect of the action is neither discountable nor insignificant. If the overall effect of the proposed action is beneficial to the listed species but the action is also likely to cause some adverse effects to individuals of that species, then the proposed action "is likely to adversely affect" the listed species. The analysis should consider all interrelated and interdependent actions. An "is likely to adversely affect" determination requires the Federal action agency to initiate formal section 7 consultation with our office.

Regardless of the determination, the Service recommends that the Federal agency maintain a complete record of the evaluation, including steps leading to the determination of effect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other

related information. 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.

Migratory Birds

For projects that may affect migratory birds, the Migratory Bird Treaty Act (MBTA) implements various treaties and conventions for the protection of these species. Under the MBTA, taking, killing, or possessing migratory birds is unlawful. Migratory birds may nest in trees, brushy areas, or other areas of suitable habitat. The Service recommends activities requiring vegetation removal or disturbance avoid the peak nesting period of March through August to avoid destruction of individuals, nests, or eggs. If project activities must be conducted during this time, we recommend surveying for nests prior to conducting work. If a nest is found, and if possible, the Service recommends a buffer of vegetation remain around the nest until the young have fledged or the nest is abandoned.

For additional information concerning the MBTA and recommendations to reduce impacts to migratory birds please contact the U.S. Fish and Wildlife Service Migratory Birds Office, 500 Gold Ave. SW, Albuquerque, NM 87102. A list of migratory birds may be viewed at https://www.fws.gov/birds/management/managed-species/migratory-bird-treaty-act-protected-species.php. Guidance for minimizing impacts to migratory birds for projects including communications towers can be found at: https://www.fws.gov/birds/management/project-assessment-tools-and-guidance/guidance-documents/communication-towers.php. Additionally, wind energy projects should follow the wind energy guidelines

https://www.fws.gov/birds/management/project-assessment-tools-and-guidance/guidance-documents/wind-energy.php) for minimizing impacts to migratory birds and bats.

Finally, 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 https://www.fws.gov/birds/management/project-assessment-tools-and-guidance/guidance-documents/eagles.php.

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:

Austin Ecological Services Field Office
10711 Burnet Road, Suite 200
Austin, TX 78758-4460
(512) 490-0057

Project Summary

Consultation Code: 02ETAU00-2021-SLI-1443
Event Code: 02ETAU00-2021-E-02930
Project Name: Establishment of Permanent Headquarters for United States Space Command (Port San Antonio)
Project Type: DEVELOPMENT
Project Description: The United States Department of Air Force (DAF) is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the United States (Proposed Action). U.S. Army Garrison Redstone Arsenal, Alabama is the DAF's Preferred Alternative. Other alternative locations being analyzed include Peterson Air Force Base (AFB), Colorado; Offutt AFB, Nebraska; Kirtland AFB, New Mexico; Cape Canaveral Spaceport, Florida; and Port San Antonio, Texas. The Proposed Action includes construction and operation of a multi-story HQ facility that would be specifically designed to accommodate the functional requirements of USSPACECOM. It would accommodate approximately 1,816 personnel in a typical HQ setting, providing approximately 460,000 square feet of office, administrative, and functional interior space and 310,000 square feet of vehicle parking.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@29.38160585,-98.55739680687049,14z

Counties: Bexar County, Texas

Endangered Species Act Species

There is a total of 21 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. Note that 2 of these species should be considered only under certain conditions.

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
Golden-cheeked Warbler (=wood) *Dendroica chrysoparia* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/33	Endangered
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. The location of the critical habitat is not available. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot *Calidris canutus rufa* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane *Grus americana* Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

Amphibians

NAME	STATUS
San Marcos Salamander *Eurycea nana* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6374	Threatened
Texas Blind Salamander *Eurycea [=Typhlomolge] rathbuni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5130	Endangered

Fishes

NAME	STATUS
Fountain Darter *Etheostoma fonticola* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5858	Endangered

Insects

NAME	STATUS
[no Common Name] Beetle *Rhadine exilis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6942	Endangered
[no Common Name] Beetle *Rhadine infernalis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3804	Endangered
Comal Springs Dryopid Beetle *Stygoparnus comalensis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7175	Endangered
Comal Springs Riffle Beetle *Heterelmis comalensis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3403	Endangered
Helotes Mold Beetle *Batrisodes venyivi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1149	Endangered

Arachnids

NAME	STATUS
Braken Bat Cave Meshweaver *Cicurina venii* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7900	Endangered
Cokendolpher Cave Harvestman *Texella cokendolpheri* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/676	Endangered
Government Canyon Bat Cave Meshweaver *Cicurina vespera* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7037	Endangered
Government Canyon Bat Cave Spider *Neoleptoneta microps* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/553	Endangered
Madla Cave Meshweaver *Cicurina madla* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2467	Endangered
Robber Baron Cave Meshweaver *Cicurina baronia* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2361	Endangered

Crustaceans

NAME	STATUS
Peck's Cave Amphipod *Stygobromus (=Stygonectes) pecki* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8575	Endangered

Flowering Plants

NAME	STATUS
Bracted Twistflower *Streptanthus bracteatus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2856	Candidate
Texas Wild-rice *Zizania texana* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/805	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Obenland, Benjamin

From: Robinson, Donelle M [redacted]
Sent: Friday, July 9, 2021 1:16 PM
To: Busam, Michael; Warf, Jennifer
Cc: Williams, Christina
Subject: [EXTERNAL] RE: USSPACECOM EA: Port San Antonio - Section 7 Informal Consultation

Dear Michael Busam and Jennifer Warf,
Thank you for your letter regarding the Port San Antonio Section 7 Informal Consultation. In this case, because no effects are anticipated by the project on federally listed the species, the Endangered Species Act does not require Section 7 consultation (more information is located here https://www.fws.gov/endangered/what-we-do/faq.html#8). The U.S. Fish and Wildlife Service also does not concur with determinations of no effect to listed species. The determination should be documented in the action agency's records as to why no effects are anticipated from the project to listed species and why section 7 consultation was not necessary. There is no need for consultation with U.S. Fish and Wildlife on this project unless it changes such that the project may affect listed species.
Sincerely,
Donelle Robinson

_____

Donelle Robinson, Ph.D.
Fish and Wildlife Biologist
Austin Ecological Services
U.S. Fish and Wildlife Service
10711 Burnet Road, Suite 200
Austin, Texas 78758
[redacted]

From: Busam, Michael [redacted]
Sent: Thursday, July 8, 2021 7:54 AM
To: Sommer, Tanya [redacted]
Cc: Warf, Jennifer [redacted]
Subject: [EXTERNAL] USSPACECOM EA: Port San Antonio - Section 7 Informal Consultation

To Whom it May Concern:

The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). One of the six alternative sites is

located at Port San Antonio in Texas. We recently contacted your office via email on June 16, 2021 with an early notification stakeholder letter.

In accordance with Section 7 of the Endangered Species Act of 1973, this correspondence (see attached letter) is intended to initiate informal consultation regarding the Proposed Action. The Air Force requests your review and concurrence with its findings and determinations that implementation of the Proposed Action would have no effect on federally listed species.

If you have any questions or information relevant to this Proposed Action or our effect determinations, please contact Jennifer Warf by email to: [redacted]; or by mail to: AECOM, ATTN: Jennifer Warf, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Thank you,
Michael Busam

Michael Busam, AWB®
Environmental Planner
Impact Assessment & Permitting (IAP) Department
[redacted]

AECOM
12420 Milestone Center Drive, Suite 150
Germantown, MD 20876
T 301.250.2934
F 301.820.3409
www.aecom.com
Imagine it. Delivered.

DEPARTMENT OF DEFENSE
UNITED STATES SPACE COMMAND

July 7, 2021

Steven T. Rose, GS-15, F. SAME
Executive Director
US Space Command Logistics and Engineering
Peterson AFB, CO 80914

Florida Ecological Services Field Office
FWS Log No 2021-I-0491

The Service concurs with your effect determination(s) for resources protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). This finding fulfills the requirements of the Act.

CECELIA DZIERGOWSKI

Digitally signed by CECELIA DZIERGOWSKI
Date: 2021.09.23 15:37:42 -04'00'

Environmental Review Supervisor Date

Mr. Larry Williams
U.S. Fish and Wildlife Service
North Florida Ecological Services Field Office
7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256

Dear Mr. Williams,

The United States (US) Air Force proposes to construct and operate a permanent headquarters (HQ) facility for the US Space Command (USSPACECOM) (Proposed Action). The Air Force is evaluating six alternative sites in the US, one of which is located at Cape Canaveral Spaceport, Brevard County, Florida. In accordance with Section 7 of the Endangered Species Act of 1973, this correspondence is intended to initiate informal consultation regarding the Proposed Action. The Air Force previously contacted you on June 15, 2021 requesting relevant information for consideration in its Environmental Assessment.

As noted in our previous correspondence, the US Department of Defense (DoD) established USSPACECOM in 2019 as the eleventh unified combatant command. The purpose of this Proposed Action, accordingly, is to establish a permanent operational USSPACECOM HQ to facilitate a functional combatant command. The proposed HQ facility would accommodate approximately 1,816 personnel in a multistory office/administrative building with approximately 460,000 square feet (SF) of functional space and approximately 310,000 SF of parking space. The total personnel number accounts for approximately 1,400 USSPACECOM military and civilian employees to be based at the final selected location, as well as a reasonably expected number of National Agency Representatives and contractor personnel supporting USSPACECOM missions who would be co-located with the permanent, HQ and, therefore, are included in the environmental analysis.

The Proposed Action is needed due to the current lack of suitable permanent facilities in which USSPACECOM can fulfill its required functions and achieve full operational capability.

The proposed site for the HQ facility at Cape Canaveral Spaceport (see Enclosure 1) is approximately 244.3 acres; however, all Proposed Action-related activities would occur within an

approximately 104.7-acre maximum limits of disturbance in the western portion of the overall site. The proposed site is undeveloped and is generally densely vegetated with various species of trees, shrubs, and grasses. Specific vegetative communities include shrub and brushland, pine flatwoods, upland mixed coniferous-hardwood forest, freshwater marsh, wet prairies, slash pine swamp forest, and wetland forested mixed. Within the brushland community, dominant vegetation includes wax myrtle (*Morella cerifera*), saw palmetto (*Serenoa repens*), and scrub oak (*Quercus inopina*). Pine flatwoods habitat predominantly included longleaf pine (*Pinus palustris*), slash pine (*P. elliottii*), saw palmetto, and inkberry (*Ilex glabra*). Dominant species within the mixed coniferous-hardwood forest include myrtle oak (*Q. myrtifolia*), live oak (*Q. virginiana*), sand pine (*P. clausa*), longleaf pine, and gopher apple (*Geobalanus oblongifolius*). Freshwater marshes present within the site contain torpedograss (*Panicum repens*), maidencane (*P. hemitomon*), and Baldwin's spikerush (*Eleocharis baldwinii*). Wet prairie habitat within the site is dominated by broomsedge bluestem (*Andropogon virginicus*), Carolina redroot (*Lachnanthes caroliana*), and yelloweyed grass (*Xyris spp*.). The slash pine swamp forest is dominated by slash pine and pond cypress (*Taxodium ascendens*). The wetland forested mixed habitats within the site are dominated by slash pine, loblolly bay (*Gordonia lasianthus*), dahoon (*I. cassine*), and cabbage palm (*Sabal palmetto*). Previous disturbance within the site consists of dirt roads, trails, and moderate amounts of trash.

The proposed HQ facility would consist of a multistory office/administrative building with approximately 460,000 square feet (SF) of functional interior space and approximately 310,000 SF of parking space. An access road, utilities, and appropriate security measures would also be constructed on-site. The Air Force assumes the entire 104.7-acre parcel would be disturbed during construction. Following construction, the site would be landscaped with native species. In total, construction is expected to take two years. Once operational, the HQ facility would accommodate approximately 1,816 personnel.

The Air Force queried the United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) database to identify federally listed species with the potential to occur in the Proposed Action area (Consultation Code 04EF1000-2021-SLI-1064). Thirteen federally listed species have the potential to occur in the Proposed Action area (see Enclosure 2 for the official species list):

Audubon's Crested Caracara (*Polyborus plancus audubonii*) – Federally Threatened

Audubon's crested caracara generally inhabits dry and wet prairies and pasture lands with cabbage palm, and may be found in wooded areas with cypress (*Taxodium* sp.) and low-growing oaks, such as dwarf live oak (*Q. minima*). This species prefers areas with short, herbaceous vegetation for foraging (USFWS, 2017). The Air Force conducted a site visit to the proposed HQ site at Cape Canaveral Spaceport on May 18-20, 2021 and confirmed that no suitable habitat for Audubon's crested caracara exists on-site. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Carter's Mustard (*Warea carteri*) – Federally Endangered

Carter's mustard occurs in xeric, shrub-dominated habitats, slash pine forests, and sandhills occurring along the Lake Wales Ridge located in Polk and Highlands Counties in central Florida. This species is found in degraded or disturbed areas, and is fire-dependent (USFWS, 1999a). The Air Force conducted a site visit to the proposed HQ site at Cape Canaveral Spaceport on May 18-20, 2021 and did not observe any individuals of this species. This survey also confirmed that no suitable habitat for Carter's mustard exists on-site. Furthermore, the proposed site is not located along the Lake Wales Ridge. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Eastern Black Rail (*Laterallus jamaicensis ssp. jamaicensis*) – Federally Threatened

Eastern black rail habitat along the south Atlantic coast generally includes salt or brackish marshes, as well as upland areas of these marshes, with dense vegetation (USFWS, 2020a). Cape Canaveral Spaceport contains areas of freshwater marsh, which is not common habitat for this species. The Air Force conducted a site visit to the proposed HQ site at Cape Canaveral Spaceport on May 18-20, 2021 and performed a visual survey for this species throughout the freshwater marsh. No individuals were observed, and vegetation was present at low densities throughout the marshes. Due to the absence of marsh with dense vegetation, the Air Force confirmed that no suitable habitat for eastern black rail exists on-site. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Eastern Indigo Snake (*Drymarchon corais couperi*) – Federally Threatened

The eastern indigo snake occurs in various upland and lowland habitats, including pine flatwoods, scrubby flatwoods, sandhills, oak scrub, dry prairie, and freshwater and saltwater marshes. This species moves between habitats seasonally, although it typically exhibits a preference for upland habitat. Additionally, the eastern indigo snake is known to use gopher tortoise (*Gopherus polyphemus*) burrows for overwintering (USFWS, 2018c). The Air Force conducted a site visit to the proposed HQ site at Cape Canaveral Spaceport on May 18-20, 2021 and did not observe this species. However, several gopher tortoise burrows were observed, which could potentially provide habitat for this species. The Air Force would implement the USFWS's *Standard Protection Measures for the Eastern Indigo Snake* in order to minimize potential impacts to this species during construction of the Proposed Action (USFWS, 2013). Due to the presence of potential habitat, and with adherence to established protection measures, the Proposed Action ***may affect, but would not be likely to adversely affect,*** the eastern indigo snake.

Everglade Snail Kite (*Rostrhamus sociabilis plumbeus*) – Federally Endangered

Everglade snail kite habitat consists of freshwater marshes and shallow, vegetated edges of surface water bodies which may contain apple snails (*Pomacea paludosa*). This species has a very specialized diet primarily comprising apple snails, and occupies habitat where this prey can be found (NPS, 2017). The Florida Natural Areas Inventory (FNAI) has not documented any occurrence of this species in Brevard County (FNAI, 2019). The Air Force conducted a site visit to the proposed HQ site at Cape Canaveral Spaceport on May 18-20, 2021 and confirmed that no

evidence of apple snails or other snail species is present. No suitable habitat for Everglade snail kite exists on-site. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Florida Scrub-jay (*Aphelocoma coerulescens*) – Federally Threatened

The Florida scrub-jay is the only bird species endemic to Florida and occupies only scrub and scrubby flatwoods along the coastlines and on the central ridges. Optimal habitat for this species comprises primarily scrub oak with patches of sparse, fire-dominated herbaceous vegetation (USFWS, 2019a). The Air Force conducted a site visit to the proposed HQ site at Cape Canaveral Spaceport on May 18-20, 2021 and did not observe this species. There is limited potential nesting habitat for this species on-site, as vegetation is tall, dense, and composed of mixed hardwood-conifer species such as myrtle oak, longleaf pine, and live oak. However, existing trails provide openings in the vegetation that could be used by this species for foraging. Due to the absence of nesting habitat and the limited presence of potential foraging habitat, this species would be unlikely to frequent the proposed site, and would likely avoid the site during any disturbance activities associated with the Proposed Action. Therefore, the Proposed Action ***may affect, but would not be likely to adversely affect,*** the Florida scrub-jay.

Gopher Tortoise (*Gopherus polyphemus*) – Candidate

Gopher tortoises typically occupy well-drained, sandy soils associated with longleaf pine and dry oak sandhills. The species habitat also includes scrub, dry prairie, and pine flatwoods. Gopher tortoise is listed as federally threatened throughout its range in Louisiana, Mississippi, and Alabama, and is a candidate species throughout the remainder of its range, including in Florida (USFWS, 2019b). The Air Force conducted a site visit to the proposed HQ site at Cape Canaveral Spaceport on May 18-20, 2021 and surveyed upland areas of the proposed site in accordance with methods listed in Appendix 4 of the Florida Fish and Wildlife Conservation Commission's (FWC) *Gopher Tortoise Permitting Guidelines* (FWC, 2020). The Air Force surveyed 16 percent of the suitable habitat present, in which it observed six gopher tortoise burrows. The Air Force would comply with the FWC's *Gopher Tortoise Permitting Guidelines* to relocate gopher tortoises and to avoid or minimize impacts to this species and their burrows during implementation of the Proposed Action (FWC, 2020). With implementation of protection measures and compliance with applicable permit requirements, the Proposed Action ***may affect, but would not be likely to adversely affect,*** the gopher tortoise.

Green Sea Turtle (*Chelonia mydas*) – Federally Threatened

Green sea turtles occupy shallow waters inside reefs, bays, and inlets, and frequent areas with various marine grasses and algae. Nesting habitat for green sea turtles includes open, sloped beaches (USFWS, 2018a). The Air Force conducted a site visit to the proposed HQ site at Cape Canaveral Spaceport on May 18-20, 2021 and confirmed that no suitable habitat for green sea turtles exists on-site. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Hawksbill Sea Turtle (*Eretmochelys imbricata*) – Federally Endangered

Hawksbill sea turtles largely inhabit nearshore waters such as estuaries with coral reefs and mangroves, but juveniles are also found in offshore pelagic habitats. Hawksbill sea turtles nest on small, isolated beaches with little sand and a rocky shoreline (NOAA Fisheries, 2021). The Air Force conducted a site visit to the proposed HQ site at Cape Canaveral Spaceport on May 18-20, 2021 and confirmed that no suitable habitat for hawksbill sea turtles exists on-site. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Leatherback Sea Turtle (*Dermochelys coriacea*) – Federally Endangered

Leatherback sea turtles are typically found in the open oceans, specifically in tropical and temperate waters. Nesting habitat includes vegetated sandy beaches with access to deep water (USFWS, 2018b). The Air Force conducted a site visit to the proposed HQ site at Cape Canaveral Spaceport on May 18-20, 2021 and confirmed that no suitable habitat for leatherback sea turtles exists on-site. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Loggerhead Sea Turtle (*Caretta caretta*) – Federally Threatened

Loggerhead sea turtles occupy an extensive range of habitats, from coastal areas such as bays, salt marshes, and lagoons, to offshore pelagic waters. Nesting habitat typically consists of open beaches (USFWS, 2020b). The Air Force conducted a site visit to the proposed HQ site at Cape Canaveral Spaceport on May 18-20, 2021 and confirmed that no suitable habitat for loggerhead sea turtles exists on-site. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Lewton's Polygala (*Polygala lewtonii*) – Federally Endangered

Lewton's polygala is endemic to ridges within central Florida, and occurs in oak scrub, high pine communities, and in transitional habitats between high pine and turkey oak (*Q. laevis*) barrens. It is often found in disturbed sites and primarily depends on fire to maintain its habitat (USFWS, 1999b). The Air Force conducted a site visit to the proposed HQ site at Cape Canaveral Spaceport on May 18-20, 2021 and did not observe any individuals of this species. The site visit also confirmed that no suitable habitat for Lewton's polygala exists on-site. Furthermore, the proposed site is not located along central Florida's ridges. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Wood Stork (*Mycteria americana*) – Federally Threatened

Wood stork habitat typically consists of freshwater and estuarine wetlands, and they nest in cypress stands or mangroves (USFWS, 2020c). The Air Force conducted a site visit to the proposed HQ site at Cape Canaveral Spaceport on May 18-20, 2021 and confirmed the presence of freshwater wetlands and cypress stands, but did not observe this species. No nesting colonies of

wood stork are located on-site, but the proposed site is located within the core foraging area (i.e., a 15-mile radius) for three wood stork nesting colonies: Orlando Wetlands Park (last active 2018), Brevard County Maintenance Shop (last active 2018), and Highways 524/520 (last active 2019) (USFWS, 2020d).

The Air Force consulted the Determination Key for the Wood Stork in Central and North Peninsular Florida to identify potential impacts to this species from the Proposed Action (USFWS, 2008). In accordance with the Determination Key and to minimize potential impacts to wood stork, the Air Force, if it chooses to implement the Proposed Action at this site, would provide suitable foraging habitat compensation in an approved area and would comply with the USFWS's *Habitat Management Guidelines for the Wood Stork in the Southeast Region* (USFWS, 1990). The details for this compensatory mitigation and incorporation of habitat management guidelines would be determined during the project design phase. Through compliance with these measures, the Proposed Action ***may affect, but would not be likely to adversely affect,*** the wood stork. Requisite compensatory mitigation for unavoidable wetland impacts would offset associated impacts to this species.

In conclusion, the Air Force requests your review and concurrence with our findings and determinations that implementation of the Proposed Action would have **no effect** on Audubon's crested caracara, Carter's mustard, eastern black rail, Everglade snail kite, green sea turtle, hawksbill sea turtle, leatherback sea turtle, Lewton's polygala, and loggerhead sea turtle; and **may affect, but would not be likely to adversely affect,** eastern indigo snake, Florida scrub-jay, gopher tortoise, and wood stork. With implementation of and compliance with applicable management guidelines and permit requirements, potential impacts to species would be minimized to the maximum extent practicable.

The Air Force has contracted AECOM Technical Services, Inc. (AECOM) to facilitate the National Environmental Policy Act process, including this informal consultation, for the Proposed Action. If you have any questions or information relevant to this Proposed Action or our effect determinations, please contact Jennifer Warf by email to: Jennifer.Warf@aecom.com; or by mail to: AECOM, ATTN: Jennifer Warf, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Sincerely,

STEVEN T. Rose, GS-15, F. SAME
Executive Director
US Space Command Logistics and Engineering

Attachments:
1. Proposed Action Area at Cape Canaveral Spaceport

2. Official Species List via IPaC

cc:
Col Edward Marshall

References

FNAI. (2019). *FNAI Tracking List, Brevard County*. Retrieved June 21, 2021, from Florida Natural Areas Inventory: https://www.fnai.org/bioticssearch.cfm

FWC. (2020). *Gopher Tortoise Permitting Guidelines.* Retrieved June 21, 2021, from https://myfwc.com/media/11854/gt-permitting-guidelines.pdf

NOAA Fisheries. (2021). *Hawksbill Turtle*. Retrieved June 17, 2021, from https://www.fisheries.noaa.gov/species/hawksbill-turtle

NPS. (2017). *Snail Kite: Species Profile*. Retrieved June 17, 2021, from Everglads National Park, Florida: https://www.nps.gov/ever/learn/nature/snailkite.htm

USFWS. (1990). *Habitat Management Guidelines for the Wood Stork in the Southeast Region.* Retrieved June 21, 2021, from https://www.saj.usace.army.mil/Portals/44/docs/regulatory/sourcebook/endangered_species/wood_stork/habitatGuidelines.pdf

USFWS. (1999a). *Multi-Species Recovery Plan for South Florida: Carter's Mustard.* Retrieved June 17, 2021, from https://www.fws.gov/verobeach/MSRPPDFs/Carter.PDF

USFWS. (1999b). *Multi-Species Recovery Plan for South Florida: Lewton's Polygala.* Retrieved June 17, 2021, from https://www.fws.gov/verobeach/MSRPPDFs/Lewton.PDF

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Maximum Limits of Disturbance (104.7 Acres)

Permanent Site Boundary (244.3 Acres)

USSPACECOM

Cape Canaveral Spaceport
Cape Canaveral, FL

0 250 500 1,000 Feet

N

Source: ESRI 2019

United States Department of the Interior

FISH AND WILDLIFE SERVICE
North Florida Ecological Services Field Office
7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256-7517
Phone: (904) 731-3336 Fax: (904) 731-3045

In Reply Refer To: June 01, 2021
Consultation Code: 04EF1000-2021-SLI-1064
Event Code: 04EF1000-2021-E-01674
Project Name: Establishment of Permanent Headquarters for United States Space Command (Cape Canaveral Spaceport)

Subject: List of threatened and endangered species that may occur in your proposed project location 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
- 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:

North Florida Ecological Services Field Office
7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256-7517
(904) 731-3336

Project Summary

Consultation Code: 04EF1000-2021-SLI-1064
Event Code: 04EF1000-2021-E-01674
Project Name: Establishment of Permanent Headquarters for United States Space Command (Cape Canaveral Spaceport)
Project Type: DEVELOPMENT
Project Description: The United States Department of Air Force (DAF) is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the United States (Proposed Action). U.S. Army Garrison Redstone Arsenal, Alabama is the DAF's Preferred Alternative. Other alternative locations being analyzed include Peterson Air Force Base (AFB), Colorado; Offutt AFB, Nebraska; Kirtland AFB, New Mexico; Cape Canaveral Spaceport, Florida; and Port San Antonio, Texas. The Proposed Action includes construction and operation of a multi-story HQ facility that would be specifically designed to accommodate the functional requirements of USSPACECOM. It would accommodate approximately 1,816 personnel in a typical HQ setting, providing approximately 460,000 square feet of office, administrative, and functional interior space and 310,000 square feet of vehicle parking.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@28.510770450000003,-80.82896632009077,14z

Counties: Brevard County, Florida

Endangered Species Act Species

There is a total of 13 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
Audubon's Crested Caracara *Polyborus plancus audubonii* Population: FL pop. No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8250	Threatened
Eastern Black Rail *Laterallus jamaicensis ssp. jamaicensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10477	Threatened
Everglade Snail Kite *Rostrhamus sociabilis plumbeus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7713	Endangered
Florida Scrub-jay *Aphelocoma coerulescens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6174	Threatened
Wood Stork *Mycteria americana* Population: AL, FL, GA, MS, NC, SC No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8477	Threatened

Reptiles

NAME	STATUS
Eastern Indigo Snake *Drymarchon corais couperi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/646	Threatened
Gopher Tortoise *Gopherus polyphemus* Population: eastern No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6994	Candidate
Green Sea Turtle *Chelonia mydas* Population: North Atlantic DPS There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened
Hawksbill Sea Turtle *Eretmochelys imbricata* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3656	Endangered
Leatherback Sea Turtle *Dermochelys coriacea* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1493	Endangered
Loggerhead Sea Turtle *Caretta caretta* Population: Northwest Atlantic Ocean DPS There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1110	Threatened

Flowering Plants

NAME	STATUS
Carter's Mustard *Warea carteri* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5583	Endangered
Lewton's Polygala *Polygala lewtonii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6688	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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
American Kestrel *Falco sparverius paulus* 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/9587	Breeds Apr 1 to Aug 31
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 Sep 1 to Jul 31

NAME	BREEDING SEASON
Black Rail *Laterallus jamaicensis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/7717	Breeds Mar 1 to Sep 15
Black Skimmer *Rynchops niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15
Common Ground-dove *Columbina passerina exigua* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Feb 1 to Dec 31
King Rail *Rallus elegans* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8936	Breeds May 1 to Sep 5
Least Tern *Sterna antillarum* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 20 to Sep 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
Limpkin *Aramus guarauna* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 15 to Aug 31
Prairie Warbler *Dendroica discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Reddish Egret *Egretta rufescens* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/7617	Breeds Mar 1 to Sep 15
Ruddy Turnstone *Arenaria interpres morinella* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Short-billed Dowitcher *Limnodromus griseus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere

NAME	BREEDING SEASON
Short-tailed Hawk *Buteo brachyurus* 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/8742	Breeds Mar 1 to Jun 30
Swallow-tailed Kite *Elanoides forficatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30
Yellow Warbler *Dendroica petechia gundlachi* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 20 to Aug 10

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:

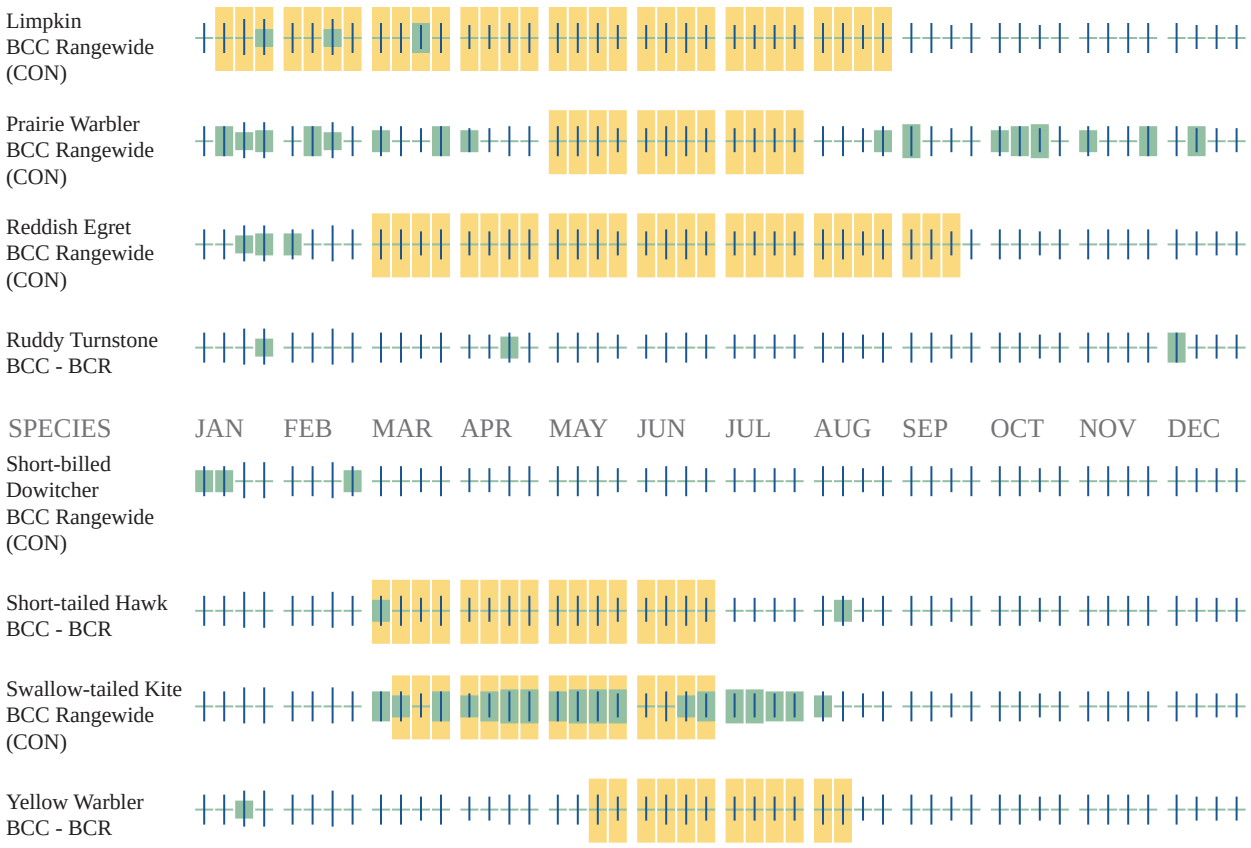
1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability 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 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.

APPENDIX F:

NATIONAL HISTORIC PRESERVATION ACT SECTION 106 CONSULTATION

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DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, REDSTONE
4488 MARTIN ROAD
REDSTONE ARSENAL, ALABAMA 35898-5000

June 23, 2021

Office of the Garrison Commander

Mr. Eric Sipes
Alabama State Historic Preservation Office
468 South Perry Street
Montgomery, AL 3613-3020

Dear Mr. Sipes:

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations, and the United States Air Force (USAF) and Army NEPA regulations, the USAF is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the United States (Proposed Action). Redstone Arsenal, Alabama is the USAF's Preferred Alternative. Other alternative locations being analyzed include Peterson Air Force Base (AFB), Colorado; Offutt AFB, Nebraska; Kirtland AFB, New Mexico; Cape Canaveral Spaceport, Florida; and Port San Antonio, Texas.

The purpose of the Proposed Action (herein "Undertaking" pursuant to the National Historic Preservation Act [NHPA]) is to establish a permanent operational USSPACECOM HQ to facilitate a functional combatant command. The Undertaking is needed due to the current lack of suitable permanent facilities in which USSPACECOM can fulfill its required functions and achieve full operational capability. The proposed HQ facility would accommodate approximately 1,816 personnel in a multistory office/administrative building with approximately 460,000 square feet (SF) of functional space and approximately 310,000 SF of parking space.

Pursuant to Section 106 of the NHPA of 1966 (36 Code of Federal Regulations Part 800), as amended, the USAF would like to initiate consultation concerning the Undertaking to allow you the opportunity to identify any comments, concerns, and suggestions you might have. As we move forward through this process, we welcome your participation and input.

The Preferred Alternative, Redstone Arsenal in the state of Alabama. If this location is ultimately selected, USAF has determined that the Area of Potential Effects (APE) for

archaeological resources would be defined as the 59.89 acres of the proposed site in which the USSPACECOM HQ facility could be constructed. The APE for architectural resources is defined as a 0.25-mile (1,320-foot) radius around the boundary of the proposed site. USSPACECOM is currently conducting research and investigations to identify historic properties within the APE and determine the potential effects, if any, of the proposed Undertaking.

The archaeological APE was subjected to a Phase I archaeological survey in 1998 as detailed in *Final Report: Phase I Archaeological Survey of Ground Disturbance, Areas 4, 5, and 7 on Redstone Arsenal, Madison County, Alabama* by Lawrence S. Alexander, H. Russell Campbell, Daniel J. Minnich, and James M. Moore of Alexander Archaeological Consultants, conducted for the U.S. Army Aviation and Missile Command. This survey documented sites 1MA699 and 1MA700 within the archaeological APE. Site 1MA699 was documented as a prehistoric and historic surface scatter in a heavily eroded setting; the site was recommended Not Eligible for the National Register of Historic Places (NRHP). Site 1MA700 was documented as a single brick and stone chimney base with no associated artifacts in a heavily eroded setting; the site was recommended Not Eligible for the NRHP.

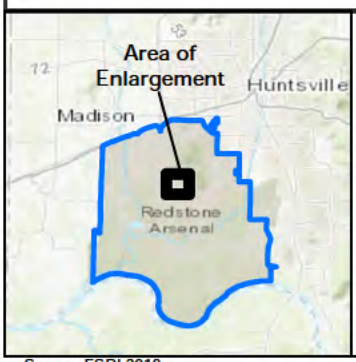
Per the 2012 Integrated Cultural Resources Management Plan for Redstone Arsenal, all pre-World War II, World War II, and Cold War-era properties within the installation have been inventoried. While a portion of Building Area 4400, which contains Cold War-era buildings, is within the architectural APE, Building Area 4400 is screened from the proposed Undertaking by a forested area.

As noted above, the USAF would like to initiate consultation pursuant to Section 106 of the NHPA concerning this Undertaking, and is seeking concurrence on the APE for Redstone Arsenal, as defined. Please send your written responses to Ben Hoksbergen by email to bejamin.j.hoksbergen.civ@mail.mil.

Sincerely,

Glenn O. Mellor
Colonel, US Army
Garrison Commander

Enclosure



Proposed Permanent Site Boundary (2021) (59.9 Acres) (Archaeological APE)

Previously Studied Site Boundary (2019)

Aboveground APE

Redstone Arsenal

USSPACECOM

Redstone Arsenal
Huntsville, AL

0 250 500 1,000 Feet

N

Source: ESRI 2019

ALABAMA HISTORICAL COMMISSION

468 South Perry Street
Montgomery, Alabama 36130-0900

Lisa D. Jones
Executive Director
State Historic Preservation Officer

Tel: 334-242-3184
Fax: 334-242-1083

July 30, 2021

Allison Guilliams
USAG Redstone
4488 Martin Road
Redstone Arsenal, AL 35898

Re: AHC 19-1153
Environmental Assessment for the Establishment of Permanent Headquarters for
United States Space Command
Madison County

Dear Ms. Guilliams:

Thank you for the initial coordination letter. We look forward to receiving the Environmental Assessment for this undertaking when it is complete.

We appreciate your commitment to helping us preserve Alabama's historic archaeological and architectural resources. Should you have any questions, please contact Amanda McBride at 334.230.2692 or Amanda.McBride@ahc.alabama.gov. Have the AHC tracking number referenced above available and include it with any future correspondence.

Sincerely,

Lee Anne Wofford
Deputy State Historic Preservation Officer

LAW/EDS/law

Obenland, Benjamin

From: NARANJO, AUSTIN N CTR USAF AFMC AFCEC/CZN [redacted]
Sent: Thursday, June 16, 2022 10:43 AM
To: [redacted]
Subject: AHC 19-1153 - US Space Command Permanent Headquarters EA
Attachments: November 30, 2001.pdf

Good Morning:

I am the current NEPA Program Manager at the Air Force Civil engineering Center for the referenced Environmental Assessment.

In relation to the document and consultation, we received the attached letter from your office in July of 2021. We understand that your office is waiting to review the EA, but I have provided language directly from the document below related to cultural impacts at Redstone, and we were hoping we may be able to get a concurrence of no effect from your office. Since Redstone is the preferred alternative, we would like to have concurrence of no effect prior to publication of the document. Please see language below:

3.8.1 Affected Environment
3.8.1.1 Alternative 1 – Redstone Arsenal
Archaeological APE: The Alternative 1 site contains two archaeological sites, both of which are ineligible for the NRHP (Air Force, 2019a). One site consists of a prehistoric and historic surface scatter, and one site consists of a single brick and stone chimney base with no associated artifacts.
Architectural APE: The Alternative 1 site contains no built resources. A portion of Building Area 4400, which contains Cold War-era buildings, is within the architectural APE, although it is screened from the Alternative 1 site by a forested area and thus is not within the viewshed.

3.8.2 Environmental Consequences
A cultural resources impact would be significant if it would constitute an unresolved adverse effect as defined in Section 106 of the NHPA (36 CFR 800.5): alteration, directly or indirectly, of any of the characteristics of a historic property that qualify it for inclusion in the NRHP in a manner that would diminish the integrity of its location, design, setting, materials, workmanship, feeling, or association.
As described in the subsections below, the Proposed Action would have no significant impact on cultural resources under any Alternative.

3.8.2.1 Alternative 1 – Redstone Arsenal
The Proposed Action would have no effect on archaeological resources under Alternative 1, as no NRHP-eligible archaeological resources are present in the APE.
The Proposed Action would have no effect on architectural resources under Alternative 1, as the Proposed Action would not be visible from off-site architectural resources.
In a letter dated July 30, 2021, the Alabama SHPO acknowledged the DAF's initial coordination and noted it intends to review the EA (Appendix F).

Please feel free to call me on my cell to discuss if needed, (210)563-0190. We greatly appreciate the continued cooperation from your office. If you are able to expedite a response it would be much appreciated, as we are hoping to have this resolved as soon as possible.

Thanks for your help.

Respectfully,
//SIGNED//
AUSTIN NARANJO, DAF, CSU Cooperative
Air Force NEPA Division (AFCEC/CZN)
JBSA-Lackland
San Antonio, TX 78226
Cell: [redacted]

ALABAMA HISTORICAL COMMISSION

468 South Perry Street
Montgomery, Alabama 36130-0900

Lisa D. Jones
Executive Director
State Historic Preservation Officer

Tel: 334-242-3184
Fax: 334-242-1083

June 24, 2022

Austin Naranjo, DAF, CSU Cooperative
Air Force NEPA Division (AFCEC/CZN)
JBSA-Lackland
San Antonio, TX 78226

Re: AHC 2019-1153
Environmental Assessment for the Establishment of Permanent Headquarters for
United States Space Command
Redstone Arsenal
Madison County

Dear Mr. Naranjo:

Upon review of the materials provided for the above referenced undertaking, we understand that Building Area 4400 will be visually shielded from the proposed development by an existing forested area. With this stipulation in place, we agree with your agency's determination of no effect to historic properties.

We appreciate your commitment to helping us preserve Alabama's historic archaeological and architectural resources. Should you have any questions, please contact Eric Sipes at 334.230.2667 or Eric.Sipes@ahc.alabama.gov. Have the AHC tracking number referenced above available and include it with any future correspondence.

Sincerely,

Lee Anne Wofford
Deputy State Historic Preservation Officer

LAW/EDS/amh

cc: Ben Hoksbergen, Redstone Arsenal

DEPARTMENT OF DEFENSE
UNITED STATES SPACE COMMAND

3 April 2020

Steven T. Rose, GS-15. F. SAME
Executive Director
US Space Command Logistics and Engineering
Peterson AFB, CO 80914

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

Dear Dr. Pappas,

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations, and the United States Air Force (USAF) and Army NEPA regulations, the USAF is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the United States (Proposed Action). U.S. Army Garrison Redstone Arsenal, Alabama is the USAF's Preferred Alternative. Other alternative locations being analyzed include Peterson Air Force Base (AFB), Colorado; Offutt AFB, Nebraska; Kirtland AFB, New Mexico; Cape Canaveral Spaceport, Florida; and Port San Antonio, Texas.

The purpose of the Proposed Action (herein "Undertaking" pursuant to the National Historic Preservation Act [NHPA]) is to establish a permanent operational USSPACECOM HQ to facilitate a functional combatant command. The Undertaking is needed due to the current lack of suitable permanent facilities in which USSPACECOM can fulfill its required functions and achieve full operational capability. The proposed HQ facility would accommodate approximately 1,816 personnel in a multistory office/administrative building with approximately 460,000 square feet (SF) of functional space and approximately 310,000 SF of parking space. The total personnel number accounts for approximately 1,400 USSPACECOM military and civilian employees to be based at the final selected location, as well as a reasonably expected number of National Agency Representatives and contractor personnel supporting USSPACECOM missions who would be co-located with the permanent, HQ and, therefore, are included in the environmental analysis.

Pursuant to Section 106 of the NHPA of 1966 (36 Code of Federal Regulations Part 800), as amended, the USAF would like to initiate consultation concerning the Undertaking to allow you

the opportunity to identify any comments, concerns, and suggestions you might have. As we move forward through this process, we welcome your participation and input.

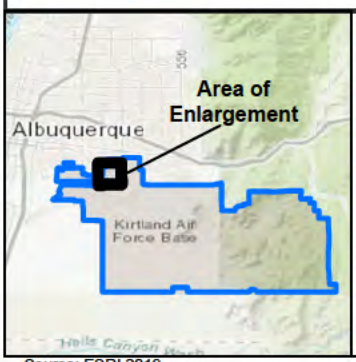
One of the alternatives under consideration is located in the state of New Mexico. If this location is selected over the Preferred Alternative, USAF has determined that the Area of Potential Effects (APE) for direct effects would be defined as the 63.92 acres of the proposed site in which the USSPACECOM HQ facility could be constructed. The APE for indirect effects is defined as a 0.25-mile (1,320-foot) radius around the boundary of the proposed site. USSPACECOM conducted research and investigations to identify historic properties within the APE and determine the potential effects, if any, of the proposed Undertaking. All work conformed to the professional guidelines set forth in the *Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48CFR44716, as amended and annotated). Based on the results of this research and investigation, the USAF has determined that the Undertaking will have No Adverse Effect on historic properties.

As noted above, the USAF would like to initiate consultation pursuant to Section 106 of the NHPA concerning this Undertaking and is seeking concurrence on the APE and the determination of No Adverse Effect on historic properties for Kirtland AFB, as defined. Please send your written responses to Scott Seibel by email to: Scott.Seibel@aecom.com; or by mail to: AECOM, ATTN: Scott Seibel, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876. Please contact David Reynolds, Cultural Resources Program Manager, at david.reynolds.37@us.af.mil if you have any technical questions.

Sincerely

STEVEN T. ROSE, GS-15, F. SAME
Executive Director
US Space Command Logistics and Engineering

Attachment:
Proposed Location of Undertaking at Kirtland Air Force Base
Establishment of U.S. Space Command Permanent Headquarters – Kirtland Air Force Base, New Mexico Alternative Site – Cultural Resources Memorandum



Proposed Permanent Site Boundary (59.1 Acres) (Archaeological APE)

Aboveground APE

Kirtland Air Force Base

USSPACECOM

Kirtland Air Force Base
Albuquerque, NM

0 300 600 1,200 Feet

N

Source: ESRI 2019

Obenland, Benjamin

From: Moffson, Steven, DCA [redacted]
Sent: Thursday, August 5, 2021 5:37 PM
To: Seibel, Scott
Cc: Busam, Michael; Reycraft, Richard, DCA
Subject: [EXTERNAL] USSPACECOM Kirtland AFB

Scott,

The New Mexico SHPO has reviewed the two documents submitted for the USSPACECOM project. We have determined that there are no archeological concerns within the APE. In order for us to complete our review of the built environment, please submit photos of eligible and listed properties within the APE. The photos should be keyed to a map.

We look forward to working with you further on this project.

Best regards,
Steven

Steven Moffson
State and National Register Coordinator
New Mexico Historic Preservation Division
407 Galisteo Street, Suite 236
Santa Fe, New Mexico 87501
[redacted]

From: Seibel, Scott [redacted]
Sent: Wednesday, July 21, 2021 9:16 AM
To: SHPO, NM, DCA [redacted]
Cc: Busam, Michael [redacted]
Subject: Section 106 Initiation Letter: Proposed USSPACECOM Headquarters at Kirtland AFB

Mr. Pappas,

The United States (US) Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the US (Proposed Action). One of the six alternative sites is located at Kirtland Air Force Base in New Mexico.

Please see the attached Section 106 initiation letter for greater detail regarding this Undertaking.

Please send your comments to Scott Seibel within 30 days of receipt of this letter by email to: [redacted] or by mail to: AECOM, ATTN: Scott Seibel, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Thank you,

Scott Seibel, RPA
Associate Vice President
Deputy Department Manager
East Cultural Resources Department
Federal CRM Practice Leader
[redacted]

AECOM
12420 Milestone Center Drive, Suite 150
Germantown, Maryland 20876, USA
Main Line +1-301-250-2934

4 North Park Drive, Suite 300
Hunt Valley, Maryland 21030, USA
Main Line +1-410-785-7220

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STATE OF NEW MEXICO
DEPARTMENT OF CULTURAL AFFAIRS
HISTORIC PRESERVATION DIVISION

Michelle Lujan Grisham
Governor

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

August 26, 2021

Kirsten Johnson
Senior Historian/Architectural Historian
Impact Assessment and Planning
AECOM
7720 N. 16th Street, Suite 100
Phoenix, AZ 85020

Dear Ms. Johnson:

Thank you for your report entitled "Establishment of U.S. Space Command Permanent Headquarters/ Kirtland Air Force Base, New Mexico Alternative Site/Draft Cultural Resources Record Review." I think the disconnect in our recent email correspondence is because we do not typically review desktop analysis reports, like the one submitted for the above mentioned project.

In this case, for our office to complete a Section 106 review, we need current documentation. In many cases, the buildings cited were surveyed as long as twenty years ago. For this reason, we need current photos and documentation because buildings change over time, particularly on military installations.

The report as submitted does not provide the necessary information for us to review and comment. We will be pleased to work with you when you have gathered the data that will allow us to review your findings.

Sincerely,

Steven Moffson
State and National Register Coordinator

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS, 55TH WING (ACC)
OFFUTT AIR FORCE BASE, NEBRASKA

28 May 2021

Mr. Gary Chesley, P.E.
55 CES/CL
106 Peacekeeper Dr. Suite 2N3
Offutt AFB, NE 68113-4019

Ms. Jill Dolberg
Nebraska State Historic Preservation Office
1500 R Street
P.O. Box 82554
Lincoln, NE 68501

Dear Ms. Dolberg,

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations, and the United States Air Force (USAF) and Army NEPA regulations, the USAF is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the United States (Proposed Action). U.S. Army Garrison Redstone Arsenal, Alabama is the USAF's Preferred Alternative. Other alternative locations being analyzed include Peterson Air Force Base (AFB), Colorado; Offutt AFB, Nebraska; Kirtland AFB, New Mexico; Cape Canaveral Spaceport, Florida; and Port San Antonio, Texas.

The purpose of the Proposed Action (herein "Undertaking" pursuant to the National Historic Preservation Act [NHPA]) is to establish a permanent operational USSPACECOM HQ to facilitate a functional combatant command. The Undertaking is needed due to the current lack of suitable permanent facilities in which USSPACECOM can fulfill its required functions and achieve full operational capability. The proposed HQ facility would accommodate approximately 1,816 personnel in a multistory office/administrative building with approximately 460,000 square feet (SF) of functional space and approximately 310,000 SF of parking space.

Pursuant to Section 106 of the NHPA of 1966 (36 Code of Federal Regulations Part 800), as amended, the USAF would like to initiate consultation concerning the Undertaking to allow you the opportunity to identify any comments, concerns, and suggestions you might have. As we move forward through this process, we welcome your participation and input.

One of the alternatives under consideration is located in the state of Nebraska. If this location is selected over the Preferred Alternative, USAF has determined that the Area of Potential Effects (APE) for archaeological resources would be defined as the 10.99 acres of the proposed site in which the USSPACECOM HQ facility could be constructed. The APE for architectural resources is defined as a 0.25-mile (1,320-foot) radius around the boundary of the proposed site.

USSPACECOM is currently conducting research and investigations to identify historic properties within the APE and determine the potential effects, if any, of the proposed Undertaking. All work conforms to the professional guidelines set forth in the *Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48CFR44716, as amended and annotated) and History Nebraska and the Nebraska SHPO standards and guidelines.

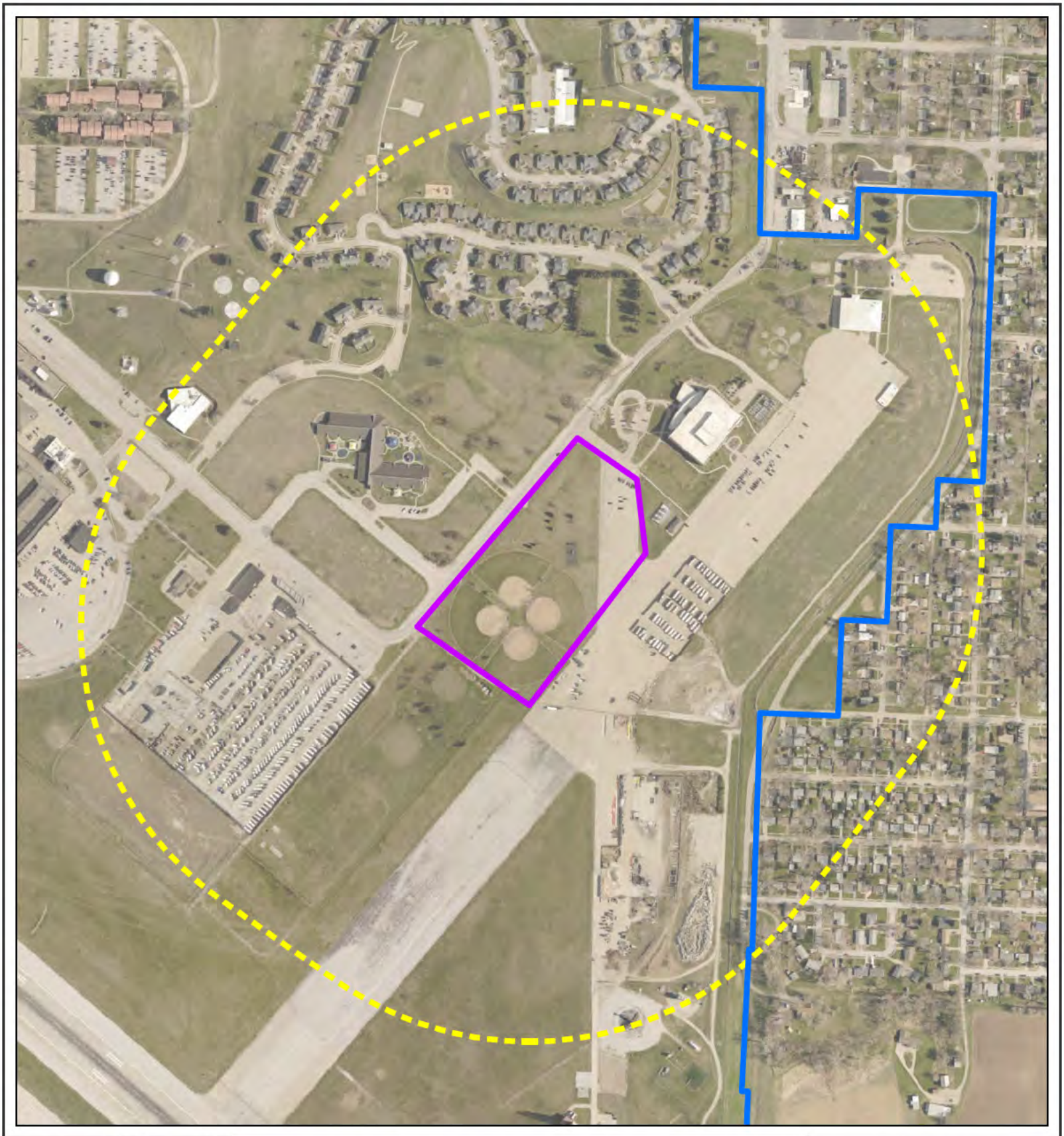
As noted above, the USAF would like to initiate consultation pursuant to Section 106 of the NHPA concerning this Undertaking, and is seeking concurrence on the APE for Offutt AFB, as defined. Please send your written responses to Scott Seibel by email to: Scott.Seibel@aecom.com; or by mail to: AECOM, ATTN: Scott Seibel, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Sincerely

CHESLEY.GARY.D.1140580828 Digitally signed by CHESLEY.GARY.D.1140580828 Date: 2021.05.28 13:27:22 -05'00'

GARY D. CHESLEY, P.E.
Director, 55th Civil Engineer Squadron

Attachment:
Proposed Location of Undertaking at Offutt Air Force Base



Proposed Permanent Site Boundary (10.9 Acres) (Archaeological APE)

Aboveground APE

Offutt Air Force

USSPACECOM

Offutt Air Force Base
Offutt AFB, NE

0 175 350 700 Feet

N

Source: ESRI 2019

History NEBRASKA

Preserving the past. Building the future.

June 4, 2021

Scott Seibel
Associate Vice President
Deputy Department Manager
AECOM
VIA EMAIL

RE: HP# 2106-020-01 United States Space Command Headquarters Facility Alternative, Offutt AFB, Sarpy County; AECOM

Dear Scott Seibel,

Thank you for submitting the project proposal for our review and comment. Our comment on this project and its potential to affect historic properties is required by Section 106 of the National Historic Preservation Act of 1966, as amended, and implementing regulations 36 CFR Part 800.

According to the information you have provided, there will be **no historic properties affected** by this project as planned. Should any changes in this project be made or in the type of funding or assistance provided through federal or state agencies, please notify this office of the changes before further project planning continues.

Please retain this correspondence and your documented finding in order to show compliance with Section 106 of the National Historic Preservation Act, as amended. If you have any questions, please contact me at betty.gillespie@nebraska.gov or 402-805-7392.

Sincerely,

Betty Gillespie
Section 106 Review and Compliance Coordinator

1500 R Street
Lincoln, NE 68508-1651
P: 402.471.3270
history.nebraska.gov

DEPARTMENT OF THE AIR FORCE
UNITED STATES SPACE FORCE
PETERSON-SCHRIEVER GARRISON

June 11, 2021

Lt Col Timothy J. Fryar
Commander, 21st Civil Engineer Squadron
580 Goodfellow Street
Peterson AFB, CO 80914

Steve Turner
State Historic Preservation Officer
History Colorado, the Colorado Historical Society
1200 Broadway
Denver, CO 80203

Dear Mr. Turner,

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations, and the Department of Air Force (DAF) and Army NEPA regulations, the DAF is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the United States (Proposed Action). U.S. Army Garrison Redstone Arsenal, Alabama is the DAF's Preferred Alternative. Other alternative locations being analyzed include Peterson Air Force Base (AFB), Colorado; Offutt AFB, Nebraska; Kirtland AFB, New Mexico; Cape Canaveral Spaceport, Florida; and Port San Antonio, Texas.

The purpose of the Proposed Action (herein "Undertaking" pursuant to the National Historic Preservation Act [NHPA]) is to establish a permanent operational USSPACECOM HQ to facilitate a functional combatant command. The Undertaking is needed due to the current lack of suitable permanent facilities in which USSPACECOM can fulfill its required functions and achieve full operational capability. The proposed HQ facility would accommodate approximately 1,816 personnel in a multistory office/administrative building with approximately 460,000 square feet (SF) of functional space and approximately 310,000 SF of parking space.

Pursuant to Section 106 of the NHPA of 1966 (36 Code of Federal Regulations Part 800), as amended, the USAF would like to initiate consultation concerning the Undertaking to allow you the opportunity to identify any comments, concerns, and suggestions you might have. As we move forward through this process, we welcome your participation and input.

One of the alternatives under consideration is located in the state of Colorado. If this location is selected over the Preferred Alternative, USAF has determined that the Area of Potential Effects (APE) for archaeological resources would be defined as the 13.7 acres of the proposed site in which the USSPACECOM HQ facility could be constructed. The APE for architectural resources is defined as a 0.25-mile (1,320-foot) radius around the boundary of the proposed site.

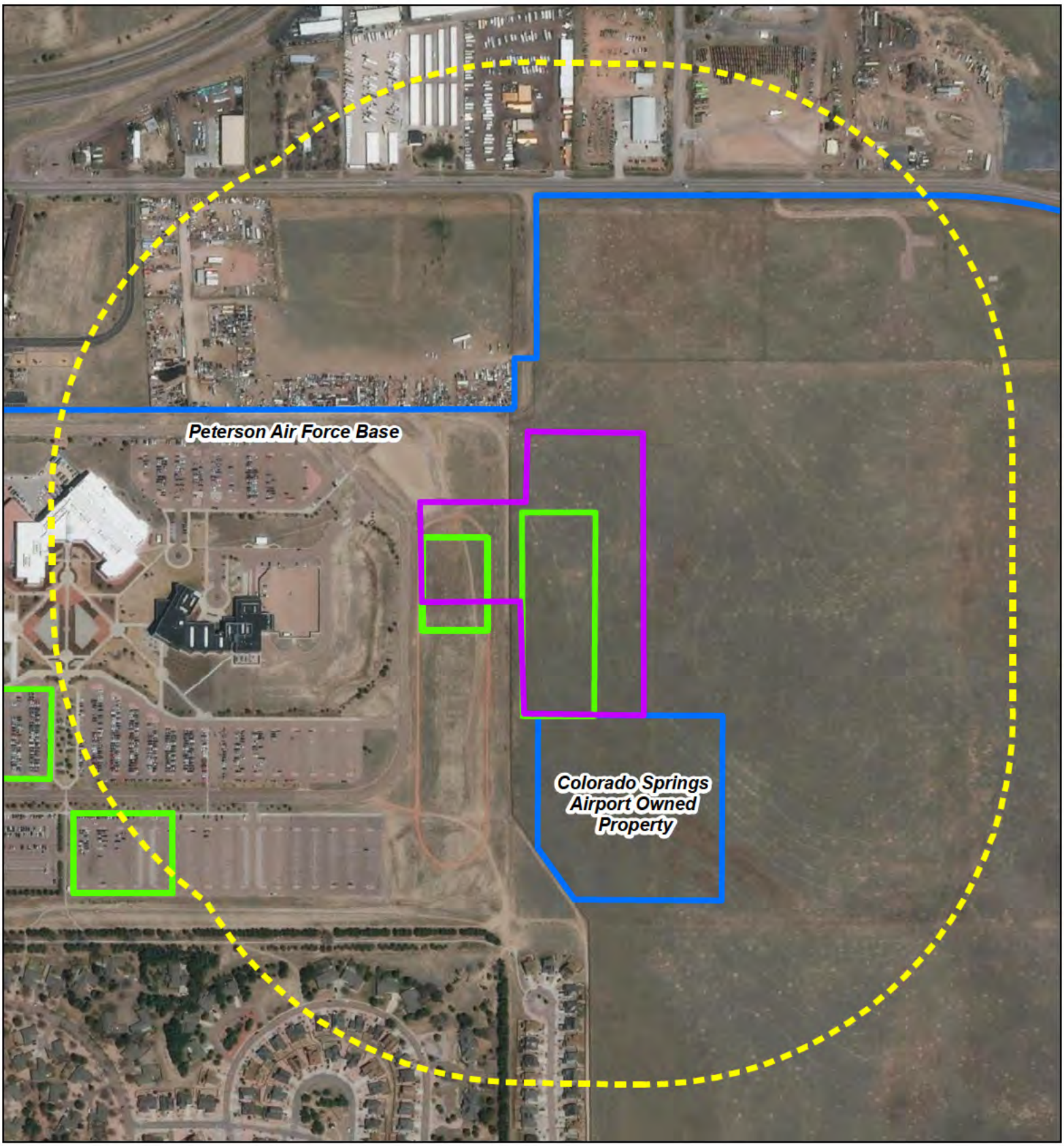
The USAF initially consulted with your office concerning this project site in a letter dated 6 June 2019 (HC #76095) regarding proposed alternative sites at Peterson Air Force Base as well as Schriever Air Force Base and Buckley Air Force Base. Your office noted in a letter dated 28 June 2019 that development of a Programmatic Agreement (PA) for the proposed undertaking was appropriate, given the lack of specificity in the proposed location. An executed project-specific PA was executed and filed with the Advisory Council on Historic Preservation on 3 September 2019. If the Peterson Air Force Base is selected as the Preferred Alternative, the USAF will follow the Stipulations of the PA.

As noted above, the USAF would like to initiate consultation pursuant to Section 106 of the NHPA concerning this Undertaking, and is seeking concurrence on the APE for Peterson AFB, as defined. Please send your written responses to the Cultural Resources Program Manager, Mr. Antwan Jackson, 580 Goodfellow Street, Peterson AFB, CO 80914, or via email to Antwan.Jackson.1@spaceforce.mil.

Sincerely

Timothy J. Fryar, Lt Col, USAF

Attachment:
Proposed Location of Undertaking at Peterson Air Force Base



Proposed Permanent Site Boundary (2021) (13.7 Acres) (Archaeological APE)

Aboveground APE

Previously Studied Site Boundary (2019)

Peterson Air Force Base

USSPACECOM

Peterson Air Force Base
Colorado Springs, CO

0 125 250 500 Feet

N

Source: ESRI 2019

HISTORY Colorado

22 June 2021 HC #76095

Lt Col Timothy J. Fryar
Commander, 21st Civil Engineer Squadron
580 Goodfellow St.
Peterson AFB, CO 80914

RE: Possible Headquarters for the United States Space Command, Peterson Air Force Base, El Paso County

Dear Lt Col Fryar:

Thank you for your recent correspondence received 15 June 2021, concerning the possible construction of a headquarters facility for the U.S. Space Command at Peterson Air Force Base. Our office has reviewed the submitted materials. The final location of the headquarters has not been determined at this time; as you note, it may be located elsewhere in the state or country.

Your letter seeks comment on a possible Area of Potential Effect (APE) for effects at the project site, should Peterson be selected as the location. We agree that the APE is sufficient to establish potential effects caused by the construction of the facility. We also recommend establishing an APE for access routes (both for construction and for daily access by Space Command personnel), as these routes may also affect archaeological resources.

In addition, it is possible that changes to the draft Area of Potential Effect may occur based on additional input from Tribal Historic Preservation Offices (we assume that the Air Force has already established a government-to-government discussion with the relevant THPOs). The APE may need to be expanded to accommodate concerns about visual effects.

We look forward to continuing work with your office as this undertaking moves forward.

If you have any questions, please contact Joseph Saldibar, Architectural Services Manager, at (303) 866-3741 or (303) 842-5619.

Sincerely,

Dr. Holly Kathryn Norton

Digitally signed by Dr. Holly Kathryn Norton
Date: 2021.06.23 10:31:57 -06'00'

Steve Turner, AIA
State Historic Preservation Officer

DEPARTMENT OF THE AIR FORCE
UNITED STATES SPACE FORCE
PETERSON-SCHRIEVER GARRISON

17 September 2021

Lt Col Erica E Tortella
Commander, 21st Civil Engineer Squadron
580 Goodfellow Street
Peterson SFB, CO 80914

Steve Turner
State Historic Preservation Officer
History Colorado, the Colorado Historical Society
1200 Broadway
Denver, CO 80203

Dear Mr. Turner,

The Department of the Air Force (DAF) is in receipt of the Colorado State Historic Preservation Office (SHPO; History Colorado) response dated 22 June 2021 regarding the proposed USSPACECOM HQ (Proposed Action), for which one of the alternative sites is a location at Peterson Space Force Base (SFB), Colorado.

Pursuant to your letter, the DAF requests concurrence that the project-specific Programmatic Agreement (PA) executed and filed with the Advisory Council on Historic Preservation on 3 September 2019 is sufficient for compliance with the National Environmental Policy Act (NEPA) of 1969 (i.e., obtaining a Finding of No Significant Impact) with the stipulation that if the Peterson SFB location is selected as the Preferred Alternative, the DAF will follow the Stipulations of the PA.

Also pursuant to your letter, the DAF notes that your office concurs that the Area of Potential Effects (APE) as defined in our letter dated 11 June 2021 is sufficient to establish potential effects for the Undertaking, but that the APE may need to be revised for access routes and based on input from federally recognized tribes. To inform your office, the DAF is currently consulting with federally recognized tribes for this Undertaking and will revise the APE as needed based on design considerations and tribal input should the Peterson SFB location be selected as the Preferred Alternative.

Pursuant to Section 106 of the NHPA of 1966 (36 Code of Federal Regulations Part 800), as amended, the DAF appreciates the opportunity to consult with your office concerning the Undertaking. Please send your written responses to the Cultural Resources Program Manager, Mr. Antwan Jackson, 580 Goodfellow Street, Peterson SFB, CO 80914, or via email to Antwan.Jackson@spaceforce.mil.

Sincerely

ERICA E. TORTELLA, Lt Col, USAF

SEMPER SUPRA

HISTORY Colorado

23 September 2021 HC #76095

Erica E. Tortella, Lt Col, USAF
Commander, 21st Civil Engineer Squadron
580 Goodfellow St.
Peterson SFB, CO 80914

RE: Proposed Headquarters Facility for the United States Space Force Command, Peterson Space Force Base, El Paso County

Dear Lt Col Tortella:

Thank you for your recent correspondence received 20 September 2021, concerning the existing Programmatic Agreement (PA) governing a potential establishment of the headquarters facility at Peterson SFB. Because the potential effects, project scope, and final location of the facility are unknown at this time, we entered into a Programmatic Agreement in September 2019 to guide future project actions (if needed).

Programmatic Agreements may be used to complete the NHPA/Section 106 consultation process (as in this case); they may also be used as the final step in developing a Programmatic Environmental Assessment or a Programmatic Environmental Impact Statement under NEPA. Given that this undertaking has the potential to have significant environmental effects, a Finding of No Significant Impact (FONSI) may not be appropriate. We also note that, under NEPA, cultural resources are one of several environmental aspects that are evaluated for 'significant effects'; the issuance of a FONSI or a Record of Decision (ROD) is contingent on the agency assessing and evaluating all effects pursuant to 40.CFR.1500.

If you have any questions, please contact Joseph Saldibar, Architectural Services Manager, at (303) 866-3741 or (303) 842-5619.

Sincerely,

Dr. Holly Kathryn Norton

Digitally signed by Dr. Holly Kathryn Norton
Date: 2021.09.28 16:56:33 -06'00'

Steve Turner, AIA
State Historic Preservation Officer

DEPARTMENT OF DEFENSE
UNITED STATES SPACE COMMAND

June 11, 2021

Steven T. Rose, GS-15
Executive Director
US Space Command Logistics and Engineering
Peterson AFB, CO 80914

Mark S. Wolfe
State Historic Preservation Officer
Texas Historical Commission
P.O. Box 12276
Austin, TX 78711-2276

Dear Mr. Wolfe,

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations, and the United States Department of Air Force (DAF) and Army NEPA regulations, the DAF is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the United States (Proposed Action). U.S. Army Garrison Redstone Arsenal, Alabama is the DAF's Preferred Alternative. Other alternative locations being analyzed include Peterson Air Force Base (AFB), Colorado; Offutt AFB, Nebraska; Kirtland AFB, New Mexico; Cape Canaveral Spaceport, Florida; and Port San Antonio, Texas.

The purpose of the Proposed Action (herein "Undertaking" pursuant to the National Historic Preservation Act [NHPA]) is to establish a permanent operational USSPACECOM HQ to facilitate a functional combatant command. The Undertaking is needed due to the current lack of suitable permanent facilities in which USSPACECOM can fulfill its required functions and achieve full operational capability. The proposed HQ facility would accommodate approximately 1,816 personnel in a multistory office/administrative building with approximately 460,000 square feet (SF) of functional space and approximately 310,000 SF of parking space. The total personnel number accounts for approximately 1,400 USSPACECOM military and civilian employees to be based at the final selected location, as well as a reasonably expected number of National Agency Representatives and contractor personnel supporting USSPACECOM missions who would be co-located with the permanent, HQ and, therefore, are included in the environmental analysis.

Pursuant to Section 106 of the NHPA of 1966 (36 Code of Federal Regulations Part 800), as amended, the DAF would like to initiate consultation concerning the Undertaking to allow you the opportunity to identify any comments, concerns, and suggestions you might have. As we move forward through this process, we welcome your participation and input.

One of the alternatives under consideration is located in the state of Texas. If this location is selected over the Preferred Alternative, DAF has determined that the Area of Potential Effects

(APE) for archaeological resources would be defined as the 32.48 acres of the proposed site in which the USSPACECOM HQ facility could be constructed. The APE for architectural resources is defined as a 0.25-mile (1,320-foot) radius around the boundary of the proposed site. USSPACECOM is currently conducting research and investigations to identify historic properties within the APE and determine the potential effects, if any, of the proposed Undertaking. All work conforms to the professional guidelines set forth in the *Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48CFR44716, as amended and annotated) and is in compliance with the regulations issued by the Advisory Council on Historic Preservation (36 CFR 800) and as defined in 13 Texas Administrative Code (TAC) 26.3 and by the Council of Texas Archeologists (CTA) and the Texas Historical Commission (THC).

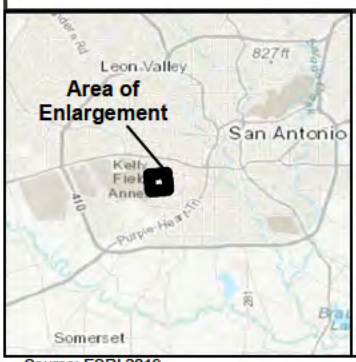
As noted above, the DAF would like to initiate consultation pursuant to Section 106 of the NHPA concerning this Undertaking, and is seeking concurrence on the APE for Port San Antonio, as defined. Please send your written responses to Scott Seibel by email to: Scott.Seibel@aecom.com; or by mail to: AECOM, ATTN: Scott Seibel, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Sincerely,

STEVEN T. ROSE, GS-15
Executive Director
US Space Command Logistics and Engineering

Attachment:
Proposed Location of Undertaking at Port San Antonio

cc:
Mr. Richard Trevino



Source: ESRI 2019

Proposed Permanent Site Boundary (32.5 Acres)
(Archaeological APE)

Aboveground APE

USSPACECOM

Port San Antonio
San Antonio, TX

0 250 500 1,000 Feet

N

Obenland, Benjamin

From: [redacted]
Sent: Friday, July 2, 2021 9:05 AM
To: Seibel, Scott; [redacted]
Subject: [EXTERNAL] Section 106 Submission

Re: Project Review under Section 106 of the National Historic Preservation Act
THC Tracking #202111648
Date: 07/02/2021
United States Space Command Headquarters

,TX

Description: Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command

Dear Client:
Thank you for your submittal regarding the above-referenced project. This response represents the comments of the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC), pursuant to review under Section 106 of the National Historic Preservation Act.

The review staff, led by Caitlin Brashear, Emily Dylla, has completed its review and has made the following determinations based on the information submitted for review:

Above-Ground Resources

- No historic properties are present or affected by the project as proposed. However, if historic properties are discovered or unanticipated effects on historic properties are found, work should cease in the immediate area; work can continue where no historic properties are present. Please contact the THC's History Programs Division at 512-463-5853 to consult on further actions that may be necessary to protect historic properties.

Archeology Comments

- THC/SHPO concurs with information provided.

We have the following comments: Regarding above-ground resources, we concur with the proposed Area of Potential Effect (APE). Please note that there are known historic resources within the above-ground APE including: the Bungalow Colony Historic District, which is designated as a local historic district and was listed in the National Register of Historic Places in 2003, and the Billy Mitchell Village, which was previously determined eligible for National Register-listing as part of a Tax Credit project in 2020.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If the project changes, or if new historic properties are found, please contact the review staff. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: [redacted]

This response has been sent through the electronic THC review and compliance system (eTRAC). Submitting your project via eTRAC eliminates mailing delays and allows you to check the status of the review, receive an electronic response, and generate reports on your submissions. For more information, visit http://thc.texas.gov/etrac-system.

Sincerely,

for Mark Wolfe, State Historic Preservation Officer
Executive Director, Texas Historical Commission

Please do not respond to this email.

Obenland, Benjamin

To: Hartsfield, Shelley
Subject: RE: [EXTERNAL] Section 106 Submission

From: [redacted]
Sent: Friday, August 20, 2021 9:09 AM
To: Hartsfield, Shelley [redacted]
Subject: [EXTERNAL] Section 106 Submission

TEXAS HISTORICAL COMMISSION
real places telling real stories

Re: Project Review under Section 106 of the National Historic Preservation Act and/or the Antiquities Code of Texas
THC Tracking #202114387
Date: 08/20/2021
USSPACECOM Port San Antonio Project
Port San Antonio
San Antonio,TX

Description: Cultural Resources survey for the US Air Force at Port San Antonio, Bexar County. The USAF is evaluating the potential impacts from the construction and operation of a permanent headquarters.

Dear Shelley Hartsfield:
Thank you for your submittal regarding the above-referenced project. This response represents the comments of the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC), pursuant to review under Section 106 of the National Historic Preservation Act and the Antiquities Code of Texas.

The review staff, led by Alex Toprac, Caitlin Brashear, Emily Dylla, has completed its review and has made the following determinations based on the information submitted for review:

Above-Ground Resources

- Property/properties are eligible for listing or already listed in the National Register of Historic Places.
- No adverse effects on historic properties.
- THC/SHPO concurs with information provided.

Archeology Comments

- No identified historic properties, archeological sites, or other cultural resources are present or affected. However, if cultural materials are encountered during project activities, work should cease in the immediate area; work can continue where no cultural materials are present. Please contact the THC's Archeology Division at 512-463-6096 to consult on further actions that may be necessary to protect the cultural remains.
- THC/SHPO concurs with information provided.
- THC/SHPO has comments on the draft report submitted to this office for review.

- This draft report is acceptable. Please submit a final report: one restricted version with any site location information (if applicable), and one public version with all site location information redacted. To facilitate review and make project information and final reports available through the Texas Archeological Sites Atlas, we appreciate submitting abstracts online at http://xapps.thc.state.tx.us/Abstract and e-mailing survey area shapefiles to archeological_projects@thc.texas.gov if this has not already occurred. Please note that these steps are required for projects conducted under a Texas Antiquities Permit.

We have the following comments: Prior to submitting the final report, please make the following corrections: 1) add APE DE acreage to abstract; 2) add the fifth criteria for SAL designation on page 30, per TAC 26.20 (there is a high likelihood that vandalism and relic collecting has occurred or could occur, and official landmark designation is needed to ensure maximum legal protection, or alternatively, further investigations are needed to mitigate the effects of vandalism and relic collecting when the site cannot be protected.) Regarding above-ground resources, we concur there are known historic resources located in the Visual Area of Potential Effect for the proposed project including: the Bungalow Colony Historic District, which was listed in the National Register of Historic Places (NRHP) in 2003, and a portion of Billy Mitchell Village, which was determined eligible for NRHP listing in 2020 as part of a Tax Credit project. Further, we concur that the newly identified resources (Resource# 001, 002, and 003) are Not Eligible for NRHP-listing due to a lack of historic significance.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If the project changes, or if new historic properties are found, please contact the review staff. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: [redacted]

This response has been sent through the electronic THC review and compliance system (eTRAC). Submitting your project via eTRAC eliminates mailing delays and allows you to check the status of the review, receive an electronic response, and generate reports on your submissions. For more information, visit http://thc.texas.gov/etrac-system.

Sincerely,

Alex Loprac

for Mark Wolfe, State Historic Preservation Officer
Executive Director, Texas Historical Commission

Please do not respond to this email.

DEPARTMENT OF DEFENSE
UNITED STATES SPACE COMMAND

June 11, 2021

Steven T. Rose, GS-15
Executive Director
US Space Command Logistics and Engineering
Colorado Springs, CO 80914

Timothy Parsons, PhD
State Historic Preservation Officer
Division of Historical Resources
500 South Bronough Street
R.A. Gray Building, Room 305
Tallahassee, FL 32399-0250

Dear Dr. Parsons,

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations, and the United States Department of Air Force (DAF) and Army NEPA regulations, the DAF is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of a permanent United States Space Command (USSPACECOM) Headquarters (HQ) facility at one of six alternative sites in the United States (Proposed Action). U.S. Army Garrison Redstone Arsenal, Alabama is the DAF's Preferred Alternative. Other alternative locations being analyzed include Peterson Air Force Base (AFB), Colorado; Offutt AFB, Nebraska; Kirtland AFB, New Mexico; Cape Canaveral Spaceport, Florida; and Port San Antonio, Texas.

The purpose of this Proposed Action (herein "Undertaking" pursuant to the National Historic Preservation Act [NHPA]) is to establish a permanent operational USSPACECOM HQ to facilitate a functional combatant command. The Undertaking is needed due to the current lack of suitable permanent facilities in which USSPACECOM can fulfill its required functions and achieve full operational capability. The proposed HQ facility would accommodate approximately 1,816 personnel in a multistory office/administrative building with approximately 460,000 square feet (SF) of functional space and approximately 310,000 SF of parking space. The total personnel number accounts for approximately 1,400 USSPACECOM military and civilian employees to be based at the final selected location, as well as a reasonably expected number of National Agency Representatives and contractor personnel supporting USSPACECOM missions who would be co-located with the permanent, HQ and, therefore, are included in the environmental analysis.

Pursuant to Section 106 of the NHPA of 1966 (36 Code of Federal Regulations Part 800), as amended, the DAF would like to initiate consultation concerning the Undertaking to allow you the opportunity to identify any comments, concerns, and suggestions you might have. As we move forward through this process, we welcome your participation and input.

One of the alternatives under consideration is located in the state of Florida. Overall, this site is 244.3 acres; however, the DAF has identified a 104.7-acre portion of the site that would comprise the maximum limits of disturbance (LOD). If this location is selected over the Preferred Alternative, DAF has determined that the Area of Potential Effects (APE) for archaeological resources would be defined as the 104.7 acres of the proposed site that comprise the maximum LOD in which the USSPACECOM HQ facility could be constructed. The APE for architectural resources is defined as a 0.25-mile (1,320-foot) radius around the boundary of the maximum LOD. USSPACECOM is currently conducting research and field investigations, as necessary, to identify historic properties within the APE and determine the potential effects, if any, of the proposed Undertaking. All work conforms to the professional guidelines set forth in the *Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48CFR44716, as amended and annotated) and the *Florida Cultural Resource Management Standards and Operational Manual* of the Florida Division of Historical Resources (FDHR 2002).

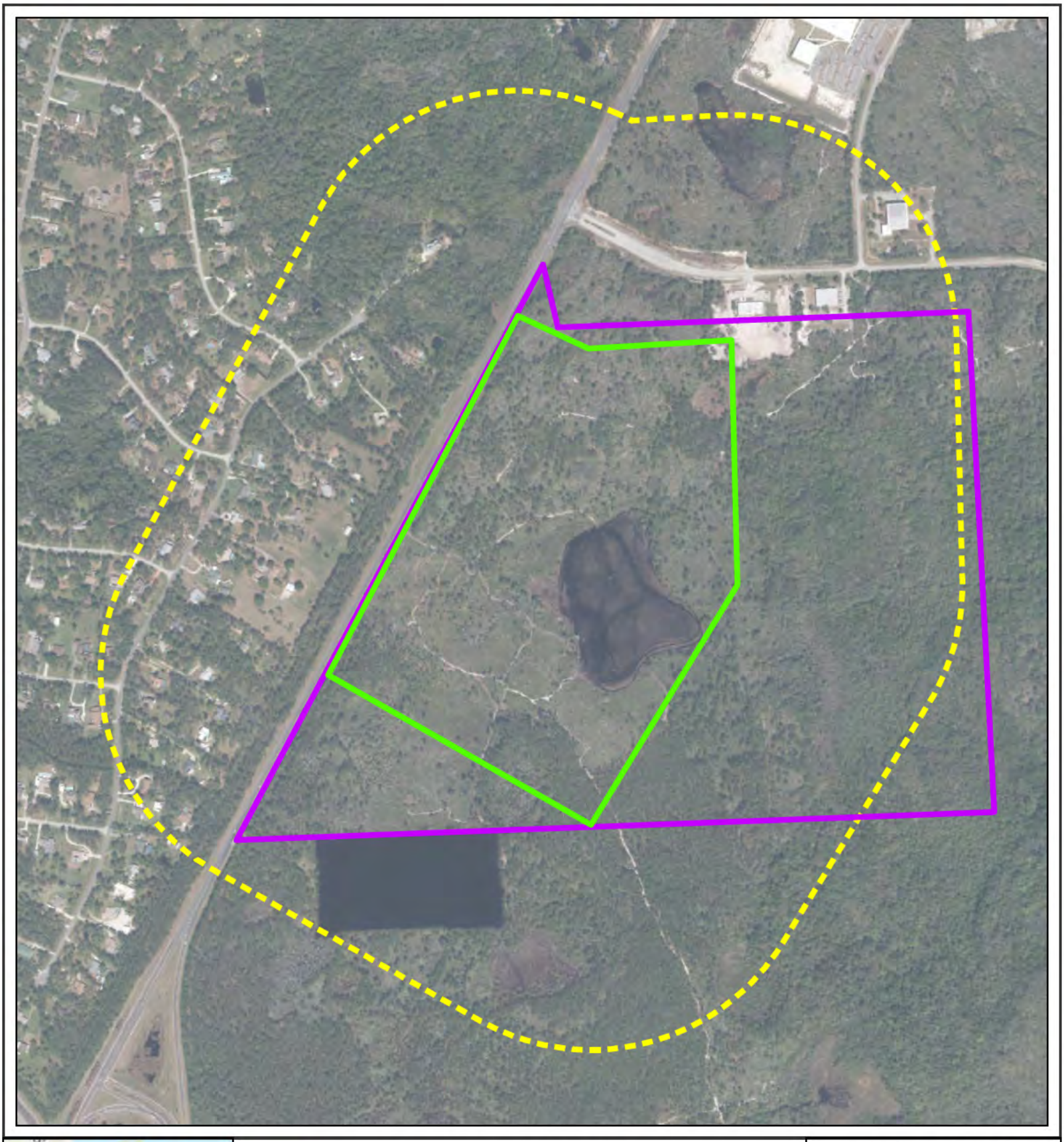
As noted above, the DAF would like to initiate consultation pursuant to Section 106 of the NHPA concerning this Undertaking, and is seeking concurrence on the APE for Cape Canaveral Spaceport, as defined. Please send your written responses to Scott Seibel by email to: Scott.Seibel@aecom.com; or by mail to: AECOM, ATTN: Scott Seibel, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876.

Sincerely

STEVEN T. ROSE, GS-15
Executive Director
US Space Command Logistics and Engineering

Attachment:
Proposed Location of Undertaking at Cape Canaveral Spaceport

cc: Col Edward Marshall



Source: ESRI 2019

FLORIDA DEPARTMENT of STATE

RON DESANTIS
Governor

LAUREL M. LEE
Secretary of State

Mr. Steven T. Rose
Executive Director
US Space Command Logistics and Engineering
Colorado Springs, Colorado 80914

June 21, 2021

Re: DHR Project No.: 2021-3541
Proposed United Space Command Headquarters – Cape Canaveral Spaceport
Brevard County

Dear Mr. Rose:

This office reviewed the referenced project for possible impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places.* The review was conducted in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended, *36 CFR Part 800: Protection of Historic Properties* and the *National Environmental Policy Act of 1969,* as amended.

We note that the proposed project area has previously been surveyed (An Intensive Cultural Resource Assessment Survey of the Willow Creek Residential Tract – DHR No.:2003-5579) in 2003. No cultural resources were identified within the project area during the investigation and this office concurred with the determination. Therefore, it is the opinion of our office that the proposed undertaking will have no effect on cultural resources.

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservationist, by electronic mail *scott.edwards@dos.myflorida.com*, or at 850.245.6333 or 800.847.7278.

Sincerely,

Jason Aldridge
For

Timothy A. Parsons, Ph.D.
Director, Division of Historical Resources
and State Historic Preservation Officer