DRAFT FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR STARCOM DELTAS 10, 11, AND 12 BEDDOWN

Pursuant to provisions of the National Environmental Policy Act (NEPA), 42 United States Code 4321 to 4370h; Council on Environmental Quality (CEQ) Regulations, 40 Code of Federal Regulations (CFR) 1500-1508 (2022); and the U.S. Department of the Air Force (DAF) Environmental Impact Analysis Processes (32 C.F.R. Part 989), the DAF prepared the attached Environmental Assessment (EA) incorporated by reference to assess the potential environmental consequences associated with the Proposed Action to locate sub elements (Squadrons) of three Space Delta units (Delta 10, Delta 11, and Delta 12) of the Strategic Training and Readiness Command (STARCOM) at DAF installations in the U.S. The United States Space Force (USSF) is the lead agency in this NEPA process.

Purpose and Need

The Purpose of the Proposed Actions is to support Delta 10, 11 and 12 missions to develop operational tactical level doctrine, lead wargaming execution (Delta 10); operate the National Space Test and Training Complex, provide adversary training support (Delta 11); and plan and conduct space systems testing and evaluation to deliver war-winning combat enabling capability (Delta 12).

The Need for these Proposed Actions is that these Deltas currently lack for sufficient authorized facility and parking space to meet training, testing, and wargaming requirements as well as the ability to accommodate sensitive and classified data.

Description of Proposed Action

The Proposed Action includes construction and operation of permanent facilities for Delta 10 at Patrick Space Force Base (PaSFB) in Florida, and for selected Squadrons of Deltas 11 and 12 at Kirtland Air Force Base (KAFB) in New Mexico and Schriever SFB (SSFB) in Colorado.

Alternatives

The DAF initially considered multiple alternative sites for implementation of the Proposed Action; however, it was determined that PaSFB best met the mission requirements for Delta 10 and KAFB and SSFB best met the mission requirements for Deltas 11 and 12 (see Sections 2.2 and 2.3 of the EA for additional details regarding selection standards and alternatives eliminated from analysis). In total, the EA considered the following five alternatives for implementation of the Proposed Action and the No Action Alternative:

- **Delta 10 Beddown Alternative 1 – PaSFB.** The Delta 10 Beddown Alternative 1 site at PaSFB covers approximately 13.7 acres, 5.7 of which are currently developed. Existing utility infrastructure would be accessed with minimal additional site disturbance and no major rerouting of utilities. Renovations to Building 991 would also be required.
- **Delta 11 Beddown Alternative 1a – KAFB.** The Delta 11 Beddown Alternative 1a site at KAFB includes existing buildings 20362, 20363, and 20364, which would be renovated and reused. No construction would be required under this alternative.
- **Delta 11 Beddown Alternative 1b – SSFB.** The Delta 11 Beddown Alternative 1b site at SSFB covers approximately six acres of vacant land. Connector roads and new utility connections within the 6-acre footprint would also be required.
- **Delta 12 Beddown Alternative 2a – SSFB.** The Delta 12 Beddown Alternative 2a site at SSFB is the same location proposed for Delta 11 Beddown, if Alternative 1b is not selected.

- **Delta 12 Beddown Alternative 2b – KAFB.** The Delta 12 Beddown Alternative 2b site at KAFB is the same location proposed for Delta 11 Beddown, if Alternative 1a is not selected. No construction would be required under this alternative.

Deltas 10, 11, and 12 Beddown No Action Alternative. Under the No Action Alternative, the proposed Delta 10 beddown at PaSFB and the proposed Deltas 11 and 12 beddown at KAFB or SSFB would not occur. Beddown of Deltas 11 and 12 would require DAF Strategic Basing reconsideration and potential further NEPA analysis.

Summary of Environmental Impacts

The EA evaluates the existing environmental conditions and potential environmental consequences of implementing the Proposed Action with regard to air quality and greenhouse gas/climate change, water resources, cultural resources, biological resources, noise, transportation, hazardous materials and waste, socioeconomics, and environmental justice. The DAF has concluded that the Proposed Action would not meaningfully or measurably affect land use and aesthetics, soil and geological resources, utilities and infrastructure, or public health and safety; thus, these resources were eliminated from detailed analysis in the EA. As shown in Table 1, implementation of the Proposed Action is not anticipated to result in significant adverse environmental impacts under any alternative. Under the No Action Alternative, no changes to baseline conditions would occur.

Table 1. Summary of Potential Environmental Effects from Baseline Conditions

Resource Area	Level of Impact (All Alternatives)	Cumulative Impact
Air Quality and Greenhouse Gas/Climate Change	Adverse construction impacts to local air quality and greenhouse gas emissions impacts to the climate would be short-term and less than significant. Operations impacts would be less than significant.	Less than significant
Water Resources	Adverse construction impacts would be short-term and less than significant. Operations impacts would be less than significant.	Less than significant
Cultural Resources	Adverse construction impacts would be less than significant (no adverse effect). Operations would have no adverse effect to cultural resources.	Less than significant
Biological Resources	Adverse construction and operational impacts would be less than significant (no adverse effect).	Less than significant
Noise	Adverse construction impacts would be short-term and less than significant. Operations impacts would be less than significant.	Less than significant
Transportation	Adverse construction and operational impacts would be less than significant.	Less than significant
Hazardous Materials and Waste	Adverse construction and operational impacts would be less than significant.	Less than significant
Socioeconomics	Adverse construction and operational impacts would be less than significant. Communities adjacent to alternative sites may benefit economically from the Proposed Action, as the increases in population resulting from the relocation of Delta personnel and their dependents would increase spending and tax revenues.	Less than significant
Environmental Justice	Adverse effects would be short-term and less than significant. Environmental justice communities in the vicinity of the installations may benefit from certain long-term effects of the Proposed Action, such as increased regional spending and increased job opportunities.	Less than significant

Regulatory Compliance Measures, Design Commitments, and Minimization Measures

Construction and operation of Delta 10 facilities at PaSFB, per protected species effect minimization measures, would incorporate required lighting management for listed sea turtles per U.S. Fish and Wildlife Service Biological Opinion 41910-2009-F-0087 and Space Launch Delta 45 Instruction 32-7001, Exterior Lighting Management. Section 3.4.2 of the EA presents specific measures that can be taken that will minimize impacts to wildlife. With implementation of these measures, the Proposed Action would have no significant adverse impacts.

Public Review

The DAF sent early notification letters to federal, state and local governments and federally recognized tribes that are historically affiliated with the geographic region of each AFB on June 2, 2023. DAF received comments from the following stakeholders: Brevard County Natural Resources Management Department, Flandreau Santee Sioux Tribe, Florida Department of Transportation, Florida State Clearinghouse, National Nuclear Security Administration, Natural Resources Conservation Service, New Mexico Environment Department, New Mexico State Land Office, Pueblo of Zia, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, and the White Mountain Apache Tribe (see Appendix A for comments).

The DAF published a Notice of Availability of the Draft EA and Draft FONSI in local newspapers at each alternative site. These documents were available for a 30-day public review and comment period. During the Draft EA public review period, a total of X public comments, from X distinct commenters, were received by the DAF. Copies of all comments received as well as the DAF's response to each comment are provided in Appendix A of the Final EA.

Finding of No Significant Effect

After review of the Final EA prepared in accordance with the requirements of NEPA, CEQ regulations, 32 C.F.R. Part 989, and 32 C.F.R. Part 651, and which is attached, I have determined that the proposed establishment of permanent beddown facilities for Deltas 10, 11, and 12 under any analyzed alternative will not have a significant impact on the quality of the natural, cultural or human environment. Accordingly, an Environmental Impact Statement is not required. This decision has been made after taking into account all submitted information, and considering a full range of reasonable alternatives that meet the purpose and need. The signing of this FONSI completes the environmental impact analysis process.

The final basing decision will be documented in a subsequent basing decision memorandum.

PAUL G. FILCEK, Col, USAF
Chief, Space Force Mission Sustainment
(Engineering, Logistics, & Force Protection)

Attachment:

Environmental Assessment for STARCOM Deltas 10, 11, and 12 Beddown

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DRAFT
ENVIRONMENTAL ASSESSMENT

For STARCOM Deltas 10, 11, and 12
Beddown

Patrick Space Force Base, Florida;
Kirtland Air Force Base, New Mexico; and
Schriever Space Force Base, Colorado

November 2023

Privacy Advisory

Letters or other written comments provided may be published in the Final Environmental Assessment (EA). Substantive comments will be addressed in the Final EA and made available to the public. 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.

508 Compliance

The electronic version of this document has been formatted to meet Section 508 of the Rehabilitation Act requirements for accessibility to people with disabilities.

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APPENDICES

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Chapter 1 Purpose and Need for the Proposed Action

1.1 Introduction and Location

This Environmental Assessment (EA) evaluates the potential environmental impacts associated with the United States Space Force (USSF) decision to locate sub elements (Squadrons) of three Space Delta units (Delta 10, Delta 11, and Delta 12) of the Strategic Training and Readiness Command (STARCOM) at U.S. Department of Air Force (DAF) installations in the U.S. The Delta 10 beddown is proposed for Patrick Space Force Base (PaSFB) in Florida (see Figure 1-1). The Delta 11 and Delta 12 beddowns are proposed for Kirtland Air Force Base (KAFB) in New Mexico and Schriever Space Force Base (SSFB) in Colorado (see Figure 1-1). The DAF Strategic Basing Process established criteria for preferred locations based on the needs of the particular units.

The National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code [U.S.C.] § 4321, et seq.); Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508); and the DAF's NEPA regulations (32 CFR Part 989) require lead agencies to evaluate the potential impacts of federal actions on the surrounding environment.

1.2 Purpose and Need for the Proposed Action

In July 2020, the USSF began executing an organizational construct with three echelons of command: Field Command (Space Operations Command, Space Systems Command, and STARCOM); Deltas (focused on particular mission sets) or Garrisons (now called Space Base Deltas [installation support]); and Squadrons. The USSF currently has Delta 10 temporarily activated at the U.S. Air Force Academy, Colorado, and Deltas 11 and 12 temporarily activated at SSFB, Colorado until completion of the DAF's Strategic Basing Process.

The Purpose of the Proposed Actions is to support Delta 10, 11 and 12 missions to develop operational tactical level doctrine, lead wargaming execution (Delta 10); operate the National Space Test and Training Complex, provide adversary training support (Delta 11); and plan and conduct space systems testing and evaluation to deliver war-winning combat enabling capability (Delta 12).

The Need for these Proposed Actions is that these Deltas currently lack for sufficient authorized facility and parking space to meet training, testing, and wargaming requirements as well as the ability to accommodate sensitive and classified data.

1.3 Scope of Environmental Analysis

Consistent with 32 CFR Part 989 and CEQ regulations (40 CFR Parts 1500-1508) revised May 20, 2022, the scope of analysis presented in this EA is defined by the potential range of environmental impacts resulting from implementing the Proposed Action and Alternatives, including the No Action Alternative.

This EA identifies, describes, and evaluates the affected environment and environmental consequences of the Proposed Action and identifies measures to prevent or minimize environmental impacts. Table 1-1 provides information regarding resources eliminated from detailed analysis due to lack of the resource or lack of adverse impacts.

Figure 1-1. Deltas 10, 11, and 12 Beddown Locations Under Consideration

Table 1-1. Resources Eliminated from Detailed Analysis

Resource	Level of Analysis and Justification
Soil and Geological Resources	Eliminated from detailed analysis. Locations chosen for Delta beddown facilities are not seismically active and construction of required facilities would not have adverse effects on the underlying geology. Construction of required facilities would cause direct impacts to soils, however, these activities would not occur in locations containing specially-classified soils (e.g., prime farmland, hydric or other specially-designated soils). Industry standard best management practices would minimize impacts to soils (e.g., silt fencing, detention basins, etc.). Section 3.2 discusses stormwater management and sedimentation.
Land Use and Aesthetics	Eliminated from detailed analysis. Locations chosen for Delta beddown facilities would not require a change in land use and would be compatible with adjacent land uses and installation master planning. Architectural design and layout would conform within standards at the chosen beddown location to minimize visual impacts from the new facilities.
Utilities and Infrastructure	Eliminated from detailed analysis. As part of the Strategic Basing Process, the DAF determined existing electrical, communications, water, sewer, and stormwater management utilities and infrastructure at / or surrounding the potential sites have sufficient capacity to accommodate the Proposed Action. Any utility and infrastructure improvements or upgrades would consist of minor trenching, directional boring, or similar activities to install service connections between the new facilities 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.
Public Health and Safety	Eliminated from detailed analysis. 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.

DAF = U.S. Department of Air Force

1.4 Intergovernmental Coordination, Public and Agency Participation

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. The Draft EA meets the requirements for Section 106 consultation to be done concurrently in accordance with 36 CFR 800.8 and Section 7 consultation to be done concurrently in accordance with 50 CFR 402.06 (see Section 3.3 for further information on cultural resources and Section 3.4 for further information on protected species).

Consistent with the NHPA of 1966 implementing regulations (36 CFR Part 800), DoD Instruction 4710.02, Interactions with Federally Recognized Tribes, AFI 90-2002, Air Force Interaction with Federally Recognized Tribes, and 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. The DAF initiated consultation with federally recognized tribes that are historically affiliated with the geographic region of each alternative site being considered for the Proposed Action (see Appendix A).

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Chapter 2 Proposed Action and Alternatives

2.1 Proposed Action

2.1.1 Delta 10 Beddown

Space Delta 10 (Delta 10) is the Space Doctrine, Tactics, Lessons Learned, and Wargaming unit of STARCOM. This Space Delta is divided into five subunits: Delta 10 Headquarters (Delta 10 HQ), 10th Delta Operations Squadron (10 DOS), Delta 10 Operating Location A, Doctrine and Tactics (Delta 10/OL-A), Delta 10 Operating Location B, Wargaming (Delta 10/OL-B), and Delta 10 Operating Location C, Lessons Learned (Delta 10/OL-C). Table 2-1 specifies facility requirements for Delta 10 proposed for beddown at PaSFB.

Table 2-1. Delta 10 Personnel Authorizations and Facility Requirements

Unit/Abbreviation	Authorizations[1]	Personnel Area (square feet)	Parking Area (square feet)
Headquarters/Delta 10 HQ	6	2,412	1,800
Operations/10 DOS	31	5,750	8,550
Doctrine and Tactics/ Delta 10/OL-A	28	8,407	7,650
Wargaming/ Delta 10/OL-B	30	5,462	8,100
Lessons Learned/ Delta 10/OL-C	13	2,400	3,600
Total	**108**	**24,431**	**29,700**

[1]Authorizations refer to the number of people assigned to each unit.
10 DOS = Delta 10 Operations Squadron; Delta 10 HQ = Delta 10 Headquarters; Delta 10/OL-A = Delta 10 Operating Location A, Doctrine and Tactics; Delta 10/OL-B = Delta 10 Operating Location B, Wargaming; Delta 10/OL-C = Delta 10 Operating Location C, Lessons Learned

In addition to the daily requirement for 5,462 square feet of personnel area and 8,100 square feet of parking for the Wargaming/ Delta 10/OL-B, 62,450 square feet is required for a wargaming facility space for up to 600 participants. This would support the quarterly 10-day influx of 200 to 600 personnel for wargaming with an additional requirement of 67,500 square feet for parking. The wargaming facility and Special Access Program Facilities (SAPF) require backup power (e.g., diesel generator) of 2,000 kilowatts.

2.1.2 Delta 11 Beddown

Space Delta 11 (Delta 11) is the Space Range and Aggressors unit of STARCOM. This Space Delta is divided into six subunits: Delta 11 Headquarters (Delta 11 HQ), 11th Delta Operations Squadron (11 DOS), 57th Space Aggressor Squadron (57 SAS), the 98th Space Range Squadron (98 SRS), and the 527 SAS and 25 SRS, both of which will remain at SSFB and are not discussed in this EA. Table 2-2 specifies facility requirements for Delta 11 squadrons proposed for beddown at either KAFB or SSFB.

Table 2-2. Selected Delta 11 Squadron Personnel Authorizations and Facility Requirements

Unit/Abbreviation	Authorizations[1]	Personnel Area (square feet)	Parking Area (square feet)
Headquarters/Delta 11 HQ	5	2,711	1,350
Operations/11 DOS	114	27,533	30,600
57th Space Aggressor Squadron (57 SAS)	62	10,041	16,650
98th Space Range Squadron (98 SRS)	44	11,383	11,700
Total	**225**	**51,668**	**60,300**

1. Authorizations refer to the number of people assigned to each unit.
11 DOS = Delta 11 Operations Squadron; 57 SAS = 57th Space Aggressor Squadron; 98 SRS = 98th Space Range Squadron; Delta 11 HQ = Delta 11 Headquarters

Delta 11 operates the National Space Test and Training Complex and provides adversary training support through Space Aggressor Squadrons. Delta 11 supports USAF and USSF units in Test and Evaluation, Training, and Exercises.

2.1.3 Delta 12 Beddown

Space Delta 12 (Delta 12) is the Test and Evaluation unit of STARCOM. This Space Delta is divided into six subunits: Delta 12 Headquarters (Delta 12 HQ), 12th Delta Operations Squadron (12 DOS), 1st Test and Evaluation Squadron (1 TES), 3rd Test and Evaluation Squadron (3 TES), 4th Test and Evaluation Squadron (4 TES), and 17th Test and Evaluation Squadron (17 TES). The following three units are already in place at their respective installation and are not discussed in this EA: 4 TES will remain at Peterson SFB, and 3 TES and 17 TES will remain at SSFB. Table 2-3 specifies facility requirements for Delta 12 squadrons proposed for beddown at either KAFB or SSFB.

Table 2-3. Selected Delta 12 Squadron Personnel Authorizations and Facility Requirements

Unit/Abbreviation	Authorizations[1]	Personnel Area (square feet)	Parking Area (square feet)
Headquarters/Delta 12 HQ	10	4,048	2,700
Operations/12 DOS	51	7,775	13,950
1st Test and Evaluation Squadron (1 TES)	64	12,410	17,100
Total	**125**	**24,233**	**33,750**

1. Authorizations refer to the number of people assigned to each unit.
1 TES = 1st Test and Evaluation Squadron; 12 DOS = Delta 12 Operations Squadron; Delta 12 HQ = Delta 12 Headquarters

2.1.4 Facility Design

The Proposed Action includes construction and operation of facilities to support the requirements of each Delta as specified in Tables 2-1 through 2-3. The proposed facility design to meet square footage requirements would vary by alternative site location (e.g., building height, number of buildings, construction of new buildings and/or renovation and reuse of existing buildings, etc.). Functions and components of the proposed facilities would include the following:

- Operations center(s);
- Associated offices, conference rooms, and administrative areas;
- Training and exercise space;
- Secure space, suitable for the handling of sensitive and classified data; and ensuring compliance with requirements for handling classified data;
- Communications and infrastructure equipment;
- Kitchen and dining area;
- Loading dock and shipping/receiving areas; and
- Energy management potentially including electric vehicle charging stations.

Proposed facilities 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. Although the current site layout and design of the facilities are not known, the aesthetic design of the facilities would display a dignified architectural character without excessive ornamentation and convey the importance of the respective Delta mission, while maintaining compatibility with installation design criteria or other design guidelines applicable to the selected site. Landscaping would be compatible with the respective environment at the selected location (e.g., xeric landscaping for KAFB located in a desert environment).

The Proposed Action 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.

2.1.5 Construction

Construction of the proposed facilities 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 facilities. The amount of land disturbance and excavation and the amount of demolition or renovation would depend on the site selected for implementation. Construction impacts (e.g., staging areas, utilities and communications equipment, facility footprints) would be limited to the locations shown in Figures 2-1 through 2-3 (see Section 2.4 for additional information). Construction of new facilities would take 12 to 18 months to complete. Renovation of existing facilities would take 6 to 12 months. Construction would begin in FY 2025 and take approximately 2 years to complete.

Temporary laydown areas and storage areas would be established prior to construction and renovation. It is assumed these areas would be located within the overall site footprint or in adjacent parking or designated laydown areas not requiring additional disturbance. 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. Any asbestos-containing material, if present, would be removed prior to demolition or renovation activities and disposed of at a proper facility. Materials such as concrete, steel, and asphalt from any demolition or renovation activities would be recycled or otherwise diverted from landfills. Machinery such as mobile cranes, loaders, tractors, forklifts, air compressors, and welding equipment may be used during this phase. Following construction, areas temporarily disturbed would be re-seeded with approved seed mixtures. Finally, final grading and landscaping would occur.

2.2 Selection Standards for Alternatives

2.2.1 Strategic Basing Criteria

AFI 10-503, *Strategic Basing,* applies to all DAF entities regardless of basing location and all non-Air Force entities requesting a basing action on DAF real property. The process ensures all strategic basing actions involving DAF units and associated missions follow environmental guidance, consider the overall fiscal ramifications of the proposed action, and optimize use of DAF land, facilities, infrastructure, and airspace.

DAF determined PaSFB best met the mission requirements for Delta 10 and KAFB and SSFB best met the mission requirements for Deltas 11 and 12. PaSFB is the only location that enables Delta 10 to reside on a USSF installation and support their modeling and simulation requirement due to its proximity to a DoD-managed modeling and simulation facility with residential Space expertise (Orlando, Florida). Deltas 11 and 12 must be located on DAF installations with USSF operational and acquisition stakeholders and where existing DAF test, training, and range infrastructure can best be leveraged to support test, training, and exercise activities. Delta 12 works closely with the Air Force Operational Test and Evaluation Center at KAFB to deliver their Test and Evaluation mission. SSFB is home of the DoD's only Space Test and Training Range

and the Delta 11's 527 SAS and 25 SRS already permanently stationed at SSFB. KAFB and SSFB are the only DAF installations that meet these requirements and do not currently contain a Delta HQ; as such, they are the only installations that are considered for the Delta 11 and Delta 12 beddowns in this EA.

2.2.1.1 Locations Dismissed from the Strategic Basing Process

Los Angeles AFB and Vandenberg SFB were not considered for basing as these locations do not meet the specific Deltas 10, 11, and 12 site condition mission requirements. For Delta 10, similar to KAFB and SSFB, these locations are not located in proximity to a DoD-managed modeling and simulation facility with residential Space expertise. For Deltas 11 and 12, these locations also have limited space available and capacity to absorb the combined 350 personnel authorizations and 169,951 combined square feet required for beddown activities. Both of these locations have different user requirements: Los Angeles AFB's mission is to support Space Base Delta 3 and Field Command, Space Systems Command, and Vandenberg SFB's mission is to support Space Launch Delta 30.

Peterson SFB and Buckley SFB were not considered for basing as it would not meet the logistical general Delta criteria. This includes the requirement to disperse STARCOM Delta HQs, distribute STARCOM Deltas to areas that will improve their mission capabilities and establish centers of excellence, and the leveraging existing DAF installations and USSF infrastructure and resources to minimize service costs.

2.2.2 Environmental Impact Analysis Process (EIAP) Siting Criteria

While the criteria employed during Strategic Basing Process play a role in the Air Force siting decision-making process, a separate set of EIAP siting criteria is assessed within this EA, in accordance with NEPA. Table 2-4 outlines specific screening criteria related to alternatives considered during the EIAP.

Table 2-4. NEPA Screening Criteria

1: Reduce Level of Disturbance by Maximizing Existing Regional Infrastructure
• Leverage existing DAF installations and USSF infrastructure and resources to minimize requirements for additional facilities and related environmental impacts from construction and operations. • Proximity to commercial large hub airport to reduce transportation, noise, and air quality impacts from operations.
2: Minimize Environmental and Socioeconomic Impacts
• Avoid or reduce adverse impacts to air quality, noise, cultural resources, wetlands, surface waters and floodplains, and protected species. • Avoid contaminated sites where remediation is not feasible. • Avoid sites that are located in runway or launch evacuation/clear zones or other potential hazards (e.g. explosive transport routes). • Utilize previously disturbed sites to avoid impacts to undisturbed lands or open space. • Compatible with installation area development plans. • Ability to support authorized personnel and their families including housing availability, medical services, chaplain, childcare, and fitness center.

DAF = U.S. Department of Air Force; USSF = United States Space Force

2.3 Alternatives Eliminated from Detailed Analysis

Table 2-5 provides an overview of potential alternative sites DAF considered within the locations selected through the Strategic Basing process.

Beddown Unit	Alternative	Justification for Elimination
Delta 10	Cape Canaveral Space Force Station (CCSFS)	Locations identified within CCSFS are greenfield sites that would require funding to bring in utilities and communication links as the first potential user of this land. Currently available land areas could also fall within the evacuation zone as new launch missions come on board at CCSFS. Residing in the evacuation zone would cause impacts and interruptions to the Delta 10 mission. Delta 10 is not a launch-mission organization, therefore would not meet the requirements to be sited at CCSFS.
	Malabar Transmitter Annex	Malabar Transmitter Annex is located approximately 25 miles south of PaSFB and is an unmanned site with no base security or support functions, both of which Delta 10 requires. In addition, this location requires additional funding to upgrade the communications and utilities in the area.
	PaSFB South Housing	This land is conveyed for privatized housing, which could cause implications with lease and sub-lease agreements and DoD authorities. In addition, this option is outside of the PaSFB secure perimeter and has no perimeter fencing or security access control measures. Also, the area comes with additional costs since it requires leasing a communications circuit and the utilities require upgrading.
	PaSFB Buildings 989/984	This location would require additional funding to either renovate the existing facilities to meet Delta 10 requirements or to demolish NRHP-eligible historic properties so the area can be used for a MILCON. Selection of this alternative would create an adverse to NRHP-eligible historic properties.
Delta 11 and 12	KAFB Building 20361	This location was not selected due to cost and renovations required for the facility. This facility, constructed in 1948, requires extensive renovations in comparison to the Deltas 11 and 12 beddown Alternative 1a site selected for consideration at KAFB. In addition, the building requires mold mitigation, has potential settling issues, and is outside of security fencing.
	KAFB Vacant Land at Griffin Avenue and Pennsylvania Street	This location was eliminated since renovations of existing buildings (Alternative 1a discussed below) would be more cost effective than new construction and would not require impact to undeveloped land. In addition, there were concerns regarding placing a HQ Delta in this area since it is near the main explosive transport route on the installation.
	KAFB Vacant Land near Building 20361	This location was eliminated since renovations of existing buildings would be more cost effective than new construction and would not require impact to undeveloped land.
	KAFB Zia Park Vacant Land	This location was eliminated since renovations of existing buildings would be more cost effective than new construction and would not require impact to undeveloped land.
	KAFB Vacant Land near Griffin Avenue and 3rd Street	This location was eliminated since renovations of existing buildings would be more cost effective than new construction and would not require impact to undeveloped land. In addition, the location is near a ready service explosive storage area and the explosive clearance arc.
	SSFB West side entrance of the restricted area (by the overflow parking lot)	This location was not selected since placing units here permanently would go against the Installation Development Plan, which has this area slated for industrial functions.

PaSFB = Patrick Space Force Base; SSFB = Shriever Space Force Base; KAFB = Kirtland Air Force Base

DAF also considered keeping the Delta units at their current temporary locations while construction occurs on new facilities at the selected permanent locations instead of providing temporary facilities at the selected permanent locations. DAF, however, did not find this optimal

as the Proposed Action alternatives allow sufficient time for personnel and their families to adjust to their new permanent locations.

2.4 Alternatives Carried Forward for Analysis

Based on the selected subunits described in Sections 2.1.1, 2.1.2, and 2.1.3, alternatives carried forward for analysis in this EA include:

- Delta 10 Beddown Alternative 1 – Beddown of all selected subunits of Delta 10 at PaSFB.
- Delta 11 Beddown Alternative 1a – Beddown of all selected subunits of Delta 11 (plus 1 TES of Delta 12) at KAFB.
- Delta 11 Beddown Alternative 1b – Beddown of all selected subunits of Delta 11 (plus 1 TES of Delta 12) at SSFB.
- Delta 12 Beddown Alternative 2a – Beddown of Delta 12 HQ and 12 DOS at SSFB.
- Delta 12 Beddown Alternative 2b – Beddown of Delta 12 HQ and 12 DOS at KAFB.
- No Action Alternative.

To varying degrees, sites at respective bases have been disturbed by previous activities but are currently vacant and available to support beddown activities. The No Action Alternative is also analyzed in this EA to describe the anticipated future condition if the Proposed Action is not implemented and in accordance with 32 CFR Part 989.8(d).

2.4.1 Delta 10 Beddown

2.4.1.1 Delta 10 Beddown Alternative 1: PaSFB

Permanent siting for the Delta 10 beddown considers a 13.7-acre area between South Tech Road and State Road A1A, and north of South Tech Road, as well as renovation and reuse of Building 991 located to the south of the 13.7-acre site along State Road A1A (see Figure 2-1).

All areas in PaSFB are within the 500-year floodplain (see Section 3.2.1.1 for additional information regarding floodplain regulations and impacts). Table 2-6 provides information on the proposed final beddown locations on PaSFB for Delta 10.

Table 2-6. Delta 10 Permanent Beddown Siting at PaSFB

Unit/Abbreviation	Authorizations	Personnel Area (square feet)	Parking Area (square feet)
New MILCON Facility on 13.7-acre Site			
Headquarters/Delta 10 HQ	6	2,412	1,800
Operations/10 DOS	31	5,750	8,550
Wargaming/Delta 10/OL-B	30	5,462	8,100
Total	**67**	**13,624**	**18,450**
Renovated Building 991			
Doctrine and Tactics/Delta 10/OL-A	28	8,407	7,650
Lessons Learned/Delta 10/OL-C	13	2,400	3,600
Total	**41**	**10,807**	**11,250**

10 DOS = Delta 10 Operations Squadron; Delta 10 HQ = Delta 10 Headquarters; Delta 10/OL-A = Delta 10 Operating Location A, Doctrine and Tactics; Delta 10/OL-B = Delta 10 Operating Location B, Wargaming; Delta 10/OL-C = Delta 10 Operating Location C, Lessons Learned; MILCON – military construction

Figure 2-1. Proposed Delta Beddown 10 Permanent Siting Locations at PaSFB

Approximately 5.7 acres of the 13.7-acre site are currently developed, containing Buildings 989 and 984. Building 984 was constructed in 1960 and has not been evaluated for NRHP eligibility with Florida Division of Historic Resources State Historic Preservation Office (SHPO). Building 989 was constructed in 1957 and has been determined eligible for the NRHP. As stated in Section 2.3, DAF dismissed this area for MILCON consideration; however, this area could support parking requirements with use of existing lots located directly to the west and to the east of Building 989.

The remaining 8 acres contain open space that was previously developed, once housing a paint booth, a one-ton crane, transformer storage area, a heavy electrical equipment repair shop, a machine shop, a circuit board lab, a geophysical data terminal, a motion picture lab, and a photographic lab. Past site investigations of the site have identified contamination in both soil (pesticides and polycyclic aromatic hydrocarbons [PAHs]) and groundwater (PAHs, pesticides, metals, and semi-volatile organic compounds [SVOCs]) in excess of screening criteria. Additional investigations of groundwater and soils is planned as a part of a future remedial investigation (RI) to identify appropriate remedies and address contamination allowing the site to be developed for unrestricted reuse. Results of the RI would be included within the requirements of the MILCON action.

Renovations would also be required to Building 991 (constructed in 1958) to accommodate the required 10,807 square feet of personnel space and 11,250 square feet for parking. Building 991 is located within the Tracking Facility Historic District. Typical renovations include new plumbing, water hookups, new air handler with cooling coils and duct work, communications infrastructure, and remediation of asbestos and lead-based paint. Renovations of Building 991 would follow the Secretary of the Interior's Standards for the Treatment of Historic Properties and would be consistent with treatments specified for the Tracking Facility Historic District.

While construction and renovations are occurring, Delta 10 personnel would use Building 562 (14,000 square feet) as immediate office space (no renovations required) as they await completion of Building 991 renovations and relocatable facilities (RLFs) in the open area near the Defense Equal Opportunity Management Institute. Once renovations and MILCON are complete, Delta 10/OL-A and OL-C would permanently reside in Building 991 and Delta 10 HQ / 10 DOS and OL-B would permanently reside in new facilities located within the 8-acre site. No interim wargaming facility is required, and Delta 10 OL-B would continue working agreements with other locations until the wargaming facility MILCON on PaSFB is complete. The temporary facilities have existing parking to meet the Delta 10 requirements.

2.4.1.2 Delta 10 Beddown No Action Alternative

Under the No Action Alternative, beddown of Delta 10 would not occur, and no related facilities would be built or renovated at PaSFB. Beddown of Delta 10 would require DAF Strategic Basing reconsideration and potential further NEPA analysis.

2.4.2 Deltas 11 and 12 Beddown

2.4.2.1 Delta 11 Beddown Alternative 1a: KAFB

Delta 11 Beddown Alternative 1a includes renovation and reuse of Buildings 20362 (28,500 square feet, constructed in 1951), 20363 (29,300 square feet, constructed in 1951), and 20364 (29,500 square feet, constructed in 1951) (see Figure 2-2). Under this alternative, select organizations of Delta 11 (plus 1 TES of Delta 12) would beddown at KAFB (see Table 2-7). By locating additional 1 TES personnel authorizations of the Delta 12 at KAFB under Delta 11 Beddown Alternative 1a, screening criteria indicating high risk for SSFB (where Deltas 11 and 12 are currently activated) regarding support of families and timing would be reduced.

Table 2-7. Selected Deltas 11 and 12 Squadron Permanent Beddown at KAFB

Unit/Abbreviation	Authorizations	Personnel Area (square feet)	Parking Area (square feet)
Delta 11 Squadrons			
Headquarters/Delta 11 HQ	5	2,711	1,350
Operations/11 DOS	114	27,533	30,600
57 SAS	62	10,041	16,650
98 SRS	44	11,383	11,700
Select Delta 12 Squadron			
1 TES	64	12,410	17,100
Total	**289**	**64,078**	**77,400**

1 TES = 1st Test and Evaluation Squadron; 11 DOS = Delta 11 Operations Squadron; 57 SAS = 57th Space Aggressor Squadron; 98 SRS = 98th Space Range Squadron; Delta 11 HQ = Delta 11 Headquarters

This alternative would require minimal renovations/modernizations to the existing facilities. No new MILCON is required. Renovations would include replacing the HVAC systems, new heating system piping, upgrading communications connectivity and infrastructure (including the potential for installment of antennas), ensuring compliance with secure space (suitable for the handling of sensitive and classified data; and ensuring compliance with requirements for handling classified data), potential installation of elevators, and some asbestos abatement. Building 20362 would also require a new generator, upgrades to energy efficient lighting, and replacement of the steam plant which feeds all three buildings under consideration. As stated in Section 2.1.5, the current designs of the facilities are not known; however, construction activities would occur within the location shown on Figure 2-2. The USSF would work with CE Environmental to ensure that all local, state, and federal regulations are followed and permits and approvals are obtained during the design process. Existing facility space will be available starting the 2nd quarter of FY 2024 once the Defense Threat Reduction Agency relocates to their new MILCON facility.

Building 20364 would be available for immediate use, requiring no immediate renovations, and includes an accredited secure space. Once the renovations of Buildings 20362 and 20363 are complete, Delta personnel would be relocated into these facilities from Building 20364 for renovations of that building. Adequate parking exists directly adjacent to these buildings for authorized personnel of the selected Delta 11 subunits and the 1 TES of Delta 12 (see Figure 2-2).

The parking area, approximately 180,000 square feet, could also accommodate solar panels as a source of power for the renovated facilities.

2.4.2.2 Delta 11 Beddown Alternative 1b: SSFB

This alternative would result in the beddown of Delta 11 HQ, 11 DOS, 98 SRS, 57 SAS, and the 1 TES of Delta 12 at SSFB instead of DAF's preferred location at KAFB (described in Section 2.4.2.1). Construction of required facilities for the beddown would use the same 6-acre vacant parcel at SSFB described in Section 2.4.2.3. If DAF selects this alternative, Delta 12 Beddown Alternative 2a (Section 2.4.2.3 below) would not be selected.

2.4.2.3 Delta 12 Beddown Alternative 2a: SSFB

Delta 12 Beddown Alternative 2a includes development of new facilities and associated parking within a 6-acre vacant parcel of land located in the northwest portion of SSFB, north of Blue Road, south of a notional extension of Falcon Parkway, and west of Enoch Road/Talon Way (see Figure 2-3). at SSFB. Under this alternative select subunits of Delta 12 would beddown at SSFB (see Table 2-8).

Figure 2-2. Proposed Delta 11 Beddown Permanent Siting Locations at KAFB

Table 2-8. Selected Delta 12 Squadron Permanent Beddown at SSFB

Unit/Abbreviation	Authorizations	Personnel Area (square feet)	Parking Area (square feet)
Headquarters/Delta 12 HQ	10	4,048	2,700
Operations/12 DOS	51	7,775	13,950
Total	**61**	**11,823**	**16,650**

12 DOS = Delta 12 Operations Squadron; Delta 12 HQ = Delta 12 Headquarters

Minimal site preparation would be needed; however, development at this site would require new utility connections to the existing utility corridors paralleling the roads (at a distance of approximately 1,500 feet). Connector roads within the 6-acre footprint would also be required.

Temporary facilities (modulars) would be built near the west side entrance of the restricted area (by the overflow parking lot) (see Figure 2-3). Existing parking in the restricted area west gate and overflow parking lot would support the maximum amount of personnel until construction of the permanent facilities is complete.

2.4.2.4 Delta 12 Beddown Alternative 2b: KAFB

This alternative would result in the beddown of 12 HQ and 12 DOS at KAFB instead of the preferred location at SSFB (described in Section 2.4.2.3). Delta 12 beddown at KAFB would require renovation of the same buildings at KAFB described in Section 2.4.2.1. The same site proposed under Section 2.4.2.1 would be used for construction of required facilities. If DAF selects this alternative, Delta 11 Beddown Alternative 1a (Section 2.4.2.1) would not be selected.

2.4.2.5 Deltas 11 and 12 Beddown No Action Alternative

Under the No Action Alternative, beddown of Deltas 11 and 12 would not occur at KAFB or SSFB, and no related facilities would be built or renovated at the respective installations. Beddown of Deltas 11 and 12 would require DAF Strategic Basing reconsideration and potential further NEPA analysis.

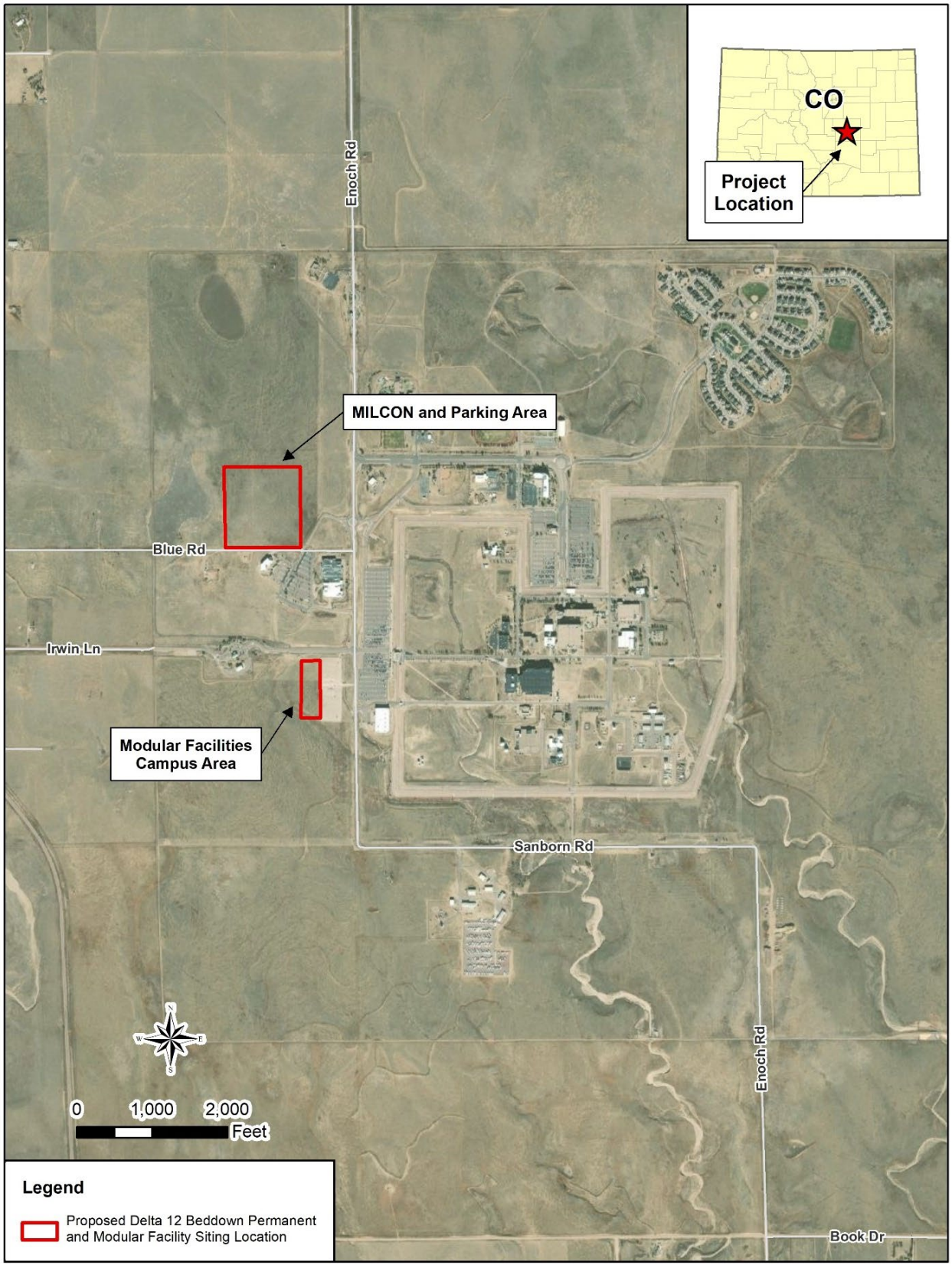

Figure 2-3 Proposed Delta 12 Beddown Permanent and Modular Facility Siting Locations

Chapter 3 Affected Environment and Environmental Consequences

The Region of Influence (ROI) for this EA generally includes the footprints of the site alternatives as described in Section 2.4.1. This includes one site at PaSFB for consideration of Delta 10 beddown and two sites for consideration of beddown for selected Squadrons within Deltas 11 and 12, one site at KAFB and one site at SSFB (see Sections 2.4.1 and 2.4.2 for additional details). For some resource areas, the ROI is expanded to account for impacts of the Proposed Action that would carry outside the limits of the site alternatives. See Appendix B for definitions of each resource carried forward for detailed analysis including resource-specific ROIs and regulatory settings.

The methodology used to identify the existing conditions and to evaluate potential impacts on resources involved the following: review of documentation and project information provided by DAF, searches of various environmental and federal and state agency databases, and public scoping. All references are cited, where appropriate, throughout this EA.

The degree of effects in this EA considers the following duration, type, quality, and intensity of the impact (summarized below) and whether effects would violate federal, state, tribal, or local laws protecting the environment (as described for each resource area):

- Duration (short- or long-term) – In general, short-term effects are those that would occur only with respect to an activity, for a finite period. Long-term effects are those that are more likely to be persistent and may be permanent.
- Type (direct or indirect) – A direct effect is caused by an action and occurs around the same time and place. An indirect effect is caused by an action and might occur later in time or be farther removed in distance but still be a reasonably foreseeable outcome of the action.
- Quality (adverse or beneficial) – An adverse impact is one having unfavorable or undesirable outcomes. Beneficial impacts provide desirable situations or outcomes.

Appendix C contains a list of projects DAF identified for the cumulative impacts analysis for each resource area.

3.1 Air Quality and Greenhouse Gas/Climate Change

3.1.1 Affected Environment

3.1.1.1 Criteria Pollutants

The ambient air quality in an area is classified by whether it complies with the National Ambient Air Quality Standards (NAAQS). Areas where monitored outdoor air concentrations are within an applicable NAAQS are considered in attainment of that NAAQS. Table 3.1-1 describes the air quality attainment status at each of the three proposed sites.

Table 3.1-1. Air Quality Conditions at the Proposed Sites

Site	Regulatory Authority	Air Quality ROI	NAAQS Attainment Status
KAFB-Albuquerque	Region 6; City of Albuquerque Environmental Health Department	Albuquerque-Mid Rio Grande Intrastate AQCR	Attainment/Unclassifiable
SSFB- Colorado Springs	Region 8; Colorado Department of Public Health and Environment (CDPHE)	San Isabel Intrastate AQCR	Attainment/Unclassifiable

Site	Regulatory Authority	Air Quality ROI	NAAQS Attainment Status
PaSFB- Satellite Beach	Region 4; Florida Department of Environmental Protection (FDEP)	Central Florida Intrastate AQCR	Attainment/Unclassifiable

AQCR = Air Quality Control Region; CDPHE = Colorado Department of Public Health and Environment; FDEP = Florida Department of Environmental Protection; KAFB = Kirtland Air Force Base; NAAQS = National Ambient Air Quality Standard; PaSFB = Patrick Space Force Base; SSFB = Schriever SFB; ROI = Region of Influence

According to the EPA AirData Air Quality Monitoring Map (USEPA 2022), all sites are considered in attainment/unclassifiable. Therefore, the General Conformity Rule does not apply (see Appendix B for additional information on the General Conformity Rule).

3.1.1.2 Greenhouse Gas Emissions

Table 3.1-2 summarizes baseline general climate conditions and county greenhouse gas (GHG) emissions (as carbon dioxide [CO_2] equivalent, or CO_2e) for each of the proposed sites (see Appendix B for additional information on the relevance of CO_2e).

Table 3.1-2. Climate Conditions at Proposed Sites

Climate Feature	KAFB	SSFB	PaSFB
General Climate Description	Dry Arid	Humid continental	Humid Subtropical
Average Annual Precipitation (inches)	8.3	20.9	36.7
Wettest Month/Average Monthly Precipitation (inches)	July 1.0	July 3.1	September 5.8
Driest Month/ Average Monthly Precipitation (inches)	June 0.3	December 0.6	April 1.9
Annual Mean Temp (°F)	52.3	46.5	73.3
Warmest Month (°F)	July 79.7	July 70.6	August 81.1
Coolest Month (°F)	January 35.5	December 24.7	January 62.9
County Baseline GHG Emissions (tons CO_2e)	4,737,376.5	3,166,517.6	4,382,313.7

Source: Climate Data 2023

GHG emissions data from 2020 EPA County-level greenhouse gas emissions (USEPA, 2020). Counties are Bernalillo County New Mexico, El Paso County Colorado, and Brevard County Florida.

CO_2e = carbon dioxide equivalent; F = Fahrenheit; GHG = greenhouse gas; KAFB = Kirtland Air Force Base; PaSFB = Patrick Space Force Base; SSFB = Schriever Space Force Base

3.1.1.3 Climate Change Hazards

The Fourth National Climate Assessment details the historical effects and projected impact of climate change within the United States, by geographic region (USGCRP 2018). Both KAFB and SSFB fall within the Southwest region and are discussed jointly, with some distinctions. PaSFB is part of the Southeast region and would face climate change impacts similar to the rest of that region, as discussed below.

The Southwest region faces extreme weather events and rising temperatures. Exposure to hotter temperatures and heat waves already leads to heat-associated deaths in Arizona and California. Mortality risk during a heat wave is exacerbated on days with elevated levels of ground-level O_3 or particulate air pollution. In parts of the region, hotter temperatures contribute to reductions of seasonal maximum snowpack and its water content. The increase in heat and reduction of snow under climate change have amplified recent hydrological droughts in the Colorado River Basin and Rio Grande. Snow droughts can arise from a lack of precipitation, temperatures that are too warm for snow, or a combination.

The Southeast region faces extreme weather events and rising temperatures, although temperatures have had a lesser impact than other parts of the US. The extreme weather events expected to have a significant impact are hurricanes, heat waves, and drought. Rising sea levels and potential changes in hurricane intensity are aspects of climate change that are expected to have a tremendous effect on coastal ecosystems in the Southeast. Sea level rise may also damage base infrastructure, as PaSFB is approximately 10 feet above sea level.

3.1.2 Environmental Consequences

The air quality impact analysis follows the EIAP Air Quality Guidelines for criteria pollutants and GHG emissions (Solutio Environmental 2017). The EA used the Air Conformity Applicability Model (ACAM) 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 CFR. 93 Subpart B). The ACAM report for each alternative is available in Appendix D.

Construction and operational ("steady state") emissions resulting from the Proposed Action were calculated using ACAM. These emissions are presented on an annual basis. For purposes of air quality analysis, construction and renovation activities for each alternative are expected to occur in 2025, while steady state, long-term operational emissions are expected to begin in 2026.

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). An air quality impact is considered insignificant if the action does not cause or contribute to exceedance of one or more of the criteria pollutant thresholds. The DAF defines "insignificance indicators" for each criteria pollutant according to current air quality conditions.

For nonattainment or maintenance areas, 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 in attainment (i.e., where all criteria pollutant concentrations are currently less than 95 percent of applicable NAAQS), 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], NOx, and PM10 at KAFB) 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 contribute incrementally to global and regional GHG emissions and global climate change. It is recognized that vulnerable communities may be disproportionally affected by global climate change. For further discussion on impacts of the Proposed Action on vulnerable communities please refer to Section 3.9.2. For comparative purposes, this EA analyzes the potential GHG emissions for each alternative, as calculated by the ACAM. DAF has adopted the PSD threshold for GHG of 68,039 metric tons per year (mton/yr) as a threshold of insignificance (Solutio Environmental Inc. 2023). This indicator does not define a significant impact; however, it provides a threshold to identify actions that are *de minimis*.

The CEQ's interim guidance on NEPA and climate change also directs agencies to provide estimates of the social cost of greenhouse gases (SC-GHG) associated with agency actions. Estimates of SC-GHG provide an aggregated monetary measure (in U.S. dollars) of the net harm to society associated with an incremental metric ton of emissions in a given year. These estimates include, but are not limited to, climate change impacts associated with net agricultural productivity,

human health effects, property damage from increased risk of natural disasters, disruption of energy systems, risk of conflict, environmental migration, and the value of ecosystem services. In this way, SC-GHG estimates can help the public and federal agencies understand or contextualize the potential impacts of GHG emissions and, along with information on other potential environmental impacts, can inform the comparison of alternatives. SC-GHG is presented by Alternative below.

3.1.2.1 Delta 10 Beddown Alternative 1 – PaSFB

Criteria Pollutants

Construction of Delta 10 Beddown Alternative 1 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 from the use of diesel- and gasoline-powered equipment (see Table 3.1-4). Construction workforce commuting would also contribute to a short-term increase in emissions. Criteria pollutant emissions from construction activities would be temporary in nature (limited to the duration of construction activities), and the resulting impacts to air quality would be short-term.

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,
- Reducing fugitive dust emissions by using appropriate dust suppression methods (e.g., application of water) and
- Reducing fugitive dust emissions by promptly removing spilled or tracked dirt.

During operation of the proposed facility, “steady state” emissions would result from employee commutes, facility space HVAC use, and emergency generator operation (see Table 3.1-3). 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., emergency generators) would be permitted, and either existing air emissions permits would be updated accordingly, or the DAF would obtain a new permit.

Table 3.1-3. Air Pollutant Emissions from the Delta 10 Beddown Alternative 1 at PaSFB

Pollutant	Construction Emissions (ton/yr)	Operations Emissions (ton/yr)	SIGNIFICANCE INDICATOR	
			Indicator (ton/yr)	Exceedance
VOC	0.281	0.201	250	No
NO_x	0.805	1.398	250	No
CO	1.033	2.958	250	No
SO_x	0.002	0.004	250	No
PM_{10}	0.650	0.056	250	No
$PM_{2.5}$	0.028	0.056	250	No
Pb	0.000	0.000	25	No
NH_3	0.001	0.015	250	No

CO = carbon monoxide; NH_3 = ammonia; NO_x = nitrogen oxides; O_3 = ozone; Pb = lead; $PM_{2.5}$ = particulate matter of diameter 2.5 microns or less; PM_{10} = particulate matter of diameter 10 microns or less; SO_x = sulfur oxides; ton/yr = tons per year; VOC = volatile organic compound; yr = year

Greenhouse Gases (GHGs)

Construction activities under Delta 10 Beddown Alternative 1 would result in short-term, GHG emissions from the use of diesel- and gasoline-powered equipment (see Table 3.1-4). Construction workforce commuting would also contribute to a short-term increase in GHG emissions. GHG emissions associated with construction would be temporary; however, the

resulting impacts would be medium to long-term, as most GHGs have atmospheric residence times ranging from decades to centuries.

During operations, "steady state" GHG emissions would result from employee commutes, facility space HVAC use, and emergency generator operation. GHG emissions from construction and operation are significantly smaller than existing baseline county-level emissions (see Table 3.1-2), and CO_2e is within the DAF threshold of insignificance (see Table 3.1-4). Yearly CO2e emissions are equivalent to 122 gasoline-powered passenger vehicles driven for one year (USEPA 2023a).

Table 3.1-4. Annual GHG Emissions from the Delta 10 Beddown Alternative 1 at PaSFB

Year	CO_2	CH_4	N_2O	CO_2e	Indicator Exceedance[1] (yes/no)	SC-GHG ($K/yr [In 2020 $])[2]
	(mton/yr)					
2025	170	0.00630802	0.00134818	170	No	$14.16
2026	542	0.0151604	0.00913514	550	No	$45.85
2027	542	0.0151604	0.00913514	550	No	$46.94
2028	542	0.0151604	0.00913514	550	No	$47.49
2029	542	0.0151604	0.00913514	550	No	$48.04
2030	542	0.0151604	0.00913514	550	No	$48.59
2031	542	0.0151604	0.00913514	550	No	$49.67
2032	542	0.0151604	0.00913514	550	No	$50.23
2033	542	0.0151604	0.00913514	550	No	$51.32
2034	542	0.0151604	0.00913514	550	No	$51.86
2035	542	0.0151604	0.00913514	550	No	$52.42
2036	542	0.0151604	0.00913514	550	No	$53.50
2037	542	0.0151604	0.00913514	550	No	$54.05

[1]PSD threshold for GHG emissions is 68,039 metric tons of CO_2e per year.
[2]IWG SC-GHG Discount Factor used is 2.5%. Annual estimates were found by multiplying the annual emission for a given year by the corresponding IWG Annual SC GHG Emission value.
CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; SC-GHG = social cost of greenhouse gas emissions; k = thousand; yr = year

Cumulative Impacts

As discussed above, Delta 10 beddown at PaSFB would result in less than significant impacts to air quality. The projects listed in Appendix C include a range of past, present, and future actions. The staggered timelines of these projects would limit emissions from simultaneous construction projects. Overall, cumulative effects would be less than significant with the use of BMPs (similar to those discussed in this EA), adherence to applicable permits and regulations, and considering PaSFB's location in an area that is designated as being in attainment for all criteria air pollutants. For reference, the EA for Installation Development at PaSFB (PaSFB 2023) found that the implementation of multiple infrastructure improvement projects, including several of those included in Appendix C, would result in minor adverse impacts on air quality. As such, no

significant cumulative air quality impacts would occur from the proposed Delta 10 beddown at PaSFB. New facilities would adhere to applicable DoD UFC standards and demolition of obsolete facilities would remove less energy efficient buildings, further reducing the potential cumulative air quality impacts. Other DAF goals such as conversion of government-owned vehicle fleets to electric vehicles would help offset increases in vehicle emissions from the additional personnel, along with renewable energy projects.

3.1.2.2 Delta 11 Beddown Alternative 1a – KAFB

Criteria Pollutants

During operation of the proposed facility, “steady state” emissions would result from employee commutes, facility space HVAC use, and emergency generator operation (see Table 3.1-5). Emissions from these activities would not represent a significant increase from the current conditions. In the long-term, only less than significant adverse impacts on air emissions would occur. The USSF would work with KAFB CE Environmental to ensure that appropriate permits are in place. New stationary sources (e.g., emergency generators) would be permitted, and either existing air emissions permits would be updated accordingly, or the DAF would obtain a new permit. KAFB would comply with the City of Albuquerque's Fugitive Dust Program, which requires a fugitive dust permit for any real estate ¾ of an acre or more.

Pending the decision by Albuquerque-Bernalillo County Air Quality Control Board on a petition to amend Title 20, Chapter 11 of the New Mexico Administrative Code to require review and consideration of health, environment and equity impacts in air quality permitting decisions, KAFB’s permitting process may be affected. The amendment is applicable to any permits proposed in a census tract or with continuous census tracts where the combined permitted emissions from all sources are 10 tons per year of hazardous air pollutants (HAPs) or 25 tons per year of combined criteria pollutants and HAPs. It is not currently known if any renovation activities would be applicable under the amendment as the ruling is not final, but if they are KAFB would comply with required mitigation measures.

Table 3.1-5. Air Pollutant Emissions from the Delta 11 Beddown Alternative 1a at KAFB

Pollutant	Operations Emissions (ton/yr)	SIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance
VOC	0.457	250	No
NO_x	0.566	250	No
CO	6.187	100	No
SO_x	0.019	250	No
PM_{10}	0.040	250	No
$PM_{2.5}$	0.039	250	No
Pb	0.000	25	No
NH_3	0.042	250	No

CO = carbon monoxide; NH_3 = ammonia; NO_x = nitrogen oxides; O_3 = ozone; Pb = lead; $PM_{2.5}$ = particulate matter of diameter 2.5 microns or less; PM_{10} = particulate matter of diameter 10 microns or less; SO_x = sulfur oxides; ton/yr = tons per year; VOC = volatile organic compound; yr = year

Greenhouse Gases (GHGs)

During operations, “steady state” GHG emissions would result from employee commutes, facility space HVAC use, and emergency generator operation (see Table 3.1-6). GHG emissions from construction and operation are significantly smaller than existing baseline county-level emissions (see Table 3.1-2), and CO_2e is within the DAF threshold of insignificance (see Table 3.1-6). Yearly CO2e emissions are equivalent to 170 gasoline-powered passenger vehicles driven for one year (USEPA 2023a).

Table 3.1-6. Annual GHG Emissions from the Delta 11 Beddown Alternative 1a at KAFB

Year	CO_2	CH_4	N_2O	CO_2e	Indicator Exceedance[1] (yes/no)	SC-GHG ($K/yr [In 2020 $])[2]
	(mton/yr)					
2025	760	0.029996	0.01254362	765	No	$63.55
2026	760	0.029996	0.01254362	765	No	$64.31
2027	760	0.029996	0.01254362	765	No	$65.85
2028	760	0.029996	0.01254362	765	No	$66.62
2029	760	0.029996	0.01254362	765	No	$67.39
2030	760	0.029996	0.01254362	765	No	$68.16
2031	760	0.029996	0.01254362	765	No	$69.68
2032	760	0.029996	0.01254362	765	No	$70.46
2033	760	0.029996	0.01254362	765	No	$71.99
2034	760	0.029996	0.01254362	765	No	$72.75
2035	760	0.029996	0.01254362	765	No	$73.53
2036	760	0.029996	0.01254362	765	No	$75.05

[1]PSD threshold for GHG emissions is 68,039 metric tons of CO_2e per year.
[2]IWG SC-GHG Discount Factor used is 2.5%. Annual estimates were found by multiplying the annual emission for a given year by the corresponding IWG Annual SC GHG Emission value.
CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; SC-GHG = social cost of greenhouse gas emissions; k = thousand; yr = year

Cumulative Impacts

As discussed above, Delta 11 beddown at KAFB would result in less than significant impacts to air quality. The projects listed in Appendix C include a range of past, present, and future actions. The staggered timelines of these projects would limit emissions from simultaneous construction projects. Overall, cumulative effects would be less than significant with the use of BMPs (similar to those discussed in this EA), adherence to applicable permits and regulations, and considering KAFB's location in an area that is designated as being in attainment for all criteria air pollutants. New facilities would adhere to applicable DoD UFC standards and demolition of obsolete facilities would remove less energy efficient buildings, further reducing the potential cumulative air quality impacts. Other DAF goals such as conversion of government-owned vehicle fleets to electric vehicles would help offset increases in vehicle emissions from the additional personnel, along with renewable energy projects.

3.1.2.3 Delta 11 Beddown Alternative 1b – SSFB

Criteria Pollutants

During construction of Alternative 1b, criteria pollutant emissions would occur from the types of sources described in Section 3.1.2.1 (see Table 3.1-7), and DAF would also employ similar BMPs for reducing emissions. This would result in short-term, less than significant adverse impacts on air quality. Criteria pollutant emissions from construction activities would be temporary in nature

(limited to the duration of construction activities). The USSF would work with SSFB to ensure that appropriate permits are in place before any construction activities begin. New stationary sources (e.g., emergency generators) would be permitted, and either existing air emissions permits would be updated accordingly, or the DAF would obtain a new permit.

Table 3.1-7. Air Pollutant Emissions from the Delta 11 Beddown Alternative 1b at SSFB

Pollutant	Construction Emissions (ton/yr)	SIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance
VOC	0.265	250	No
NO_x	0.802	250	No
CO	0.998	100	No
SO_x	0.002	250	No
PM_{10}	0.605	250	No
$PM_{2.5}$	0.028	250	No
Pb	0.000	25	No
NH_3	0.001	250	No

CO = carbon monoxide, NH_3 = ammonia; NO_x = nitrogen oxides; O_3 = ozone; Pb = lead; $PM_{2.5}$ = particulate matter of diameter 2.5 microns or less; PM_{10} = particulate matter of diameter 10 microns or less; SO_x = sulfur oxides; ton/yr = tons per year; VOC = volatile organic compound; yr = year

As Deltas 11 and 12 are currently activated at SSFB, no additional impacts to air quality from operations would occur. Improvements to air quality would be realized as the 61 personnel associated with Delta 12 HQ and 12 DOS would be permanently located to KAFB (as described in Section 3.1.2.5).

Greenhouse Gases (GHGs)

Construction activities under Delta 11 Alternative 1b would result in short-term, GHG emissions from the use of diesel- and gasoline-powered equipment (see Table 3.1-8). Construction workforce commuting would also contribute to a short-term increase in GHG emissions. GHG emissions associated with construction would be temporary; however, the resulting adverse impacts would be long-term, as most GHGs have atmospheric residence times ranging from decades to centuries. CO_2e is within the DAF threshold of insignificance (see Table 3.1-8). Yearly CO2e emissions are equivalent to 168 gasoline-powered passenger vehicles driven for one year (USEPA 2023a).

Table 3.1-8. Annual GHG Emissions from the Delta 11 Beddown Alternative 1b at SSFB

Year	CO_2	CH_4	N_2O	CO_2e	Indicator Exceedance[1] (yes/no)	SC-GHG ($K/yr [In 2020 $])[2]
	(mton/yr)					
2025	166	0.00652349	0.00132718	167	No	$13.86
2026	753	0.02976274	0.01270776	757	No	$63.67
2027	753	0.02976274	0.01270776	757	No	$65.19
2028	753	0.02976274	0.01270776	757	No	$65.95
2029	753	0.02976274	0.01270776	757	No	$66.71
2030	753	0.02976274	0.01270776	757	No	$67.47
2031	753	0.02976274	0.01270776	757	No	$68.98

Year	CO_2	CH_4	N_2O	CO_2e	Indicator Exceedance[1] (yes/no)	SC-GHG ($K/yr [In 2020 $])[2]
	(mton/yr)					
2032	753	0.02976274	0.01270776	757	No	$69.75
2033	753	0.02976274	0.01270776	757	No	$71.27
2034	753	0.02976274	0.01270776	757	No	$72.02
2035	753	0.02976274	0.01270776	757	No	$72.79
2036	753	0.02976274	0.01270776	757	No	$74.30
2037	753	0.02976274	0.01270776	757	No	$75.07

[1]PSD threshold for GHG emissions is 68,039 metric tons of CO_2e per year.
[2]IWG SC-GHG Discount Factor used is 2.5%. Annual estimates were found by multiplying the annual emission for a given year by the corresponding IWG Annual SC GHG Emission value.
CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; SC-GHG = social cost of greenhouse gas emissions; k = thousand; yr = year

Cumulative Impacts

As discussed above, Delta 11 beddown at SSFB would result in less than significant impacts to air quality. The projects listed in Appendix C include a range of past, present, and future actions. The staggered timelines of these projects would limit emissions from simultaneous construction projects. Overall, cumulative effects would be less than significant with the use of BMPs (similar to those discussed in this EA), applicable permits and regulations, and considering SSFB's location in an area that is designated as being in attainment for all criteria air pollutants. New facilities would adhere to applicable DoD UFC standards and demolition of obsolete facilities would remove less energy efficient buildings, further reducing the potential cumulative air quality impacts. Other DAF goals such as conversion of government-owned vehicle fleets to electric vehicles would help further offset emissions.

3.1.2.4 Delta 12 Beddown Alternative 2a – SSFB

Criteria Pollutants

During construction of Alternative 2a, criteria pollutant emissions would occur from the types of sources described in Section 3.1.2.1, and DAF would also employ similar BMPs for reducing emissions. Criteria pollutant emissions from construction activities would be temporary in nature (limited to the duration of construction activities), and the resulting adverse impacts to air quality would be short-term (see Table 3.1-9).

As Deltas 11 and 12 are currently activated at SSFB, no additional impacts to air quality from operations would occur. Improvements to air quality would be realized as the 289 personnel associated with Delta 11 and the 1 TES of Delta 12 would be permanently located to KAFB (as described in Section 3.1.2.2).

Table 3.1-9. Air Pollutant Emissions from Delta 12 Beddown Alternative 2a at SSFB

Pollutant	Construction Emissions (ton/yr)	SIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance
VOC	0.113	250	No
NO_x	0.365	250	No
CO	0.492	100	No
SO_x	0.001	250	No
PM_{10}	0.164	250	No

Pollutant	Construction Emissions (ton/yr)	SIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance
$PM_{2.5}$	0.015	250	No
Pb	0.000	25	No
NH_3	0.001	250	No

CO = carbon monoxide; NH_3 = ammonia; NO_x = nitrogen oxides; O_3 = ozone; Pb = lead; $PM_{2.5}$ = particulate matter of diameter 2.5 microns or less; PM_{10} = particulate matter of diameter 10 microns or less; SO_x = sulfur oxides; ton/yr = tons per year; VOC=volatile organic compound; yr = year

Greenhouse Gases (GHGs)

Construction activities under Delta 12 Beddown Alternative 2a would result in short-term, GHG emissions from the use of diesel- and gasoline-powered equipment (see Table 3.1-10). Construction workforce commuting would also contribute to a short-term increase in GHG emissions. GHG emissions associated with construction would be temporary; however, the resulting adverse impacts would be long-term, as most GHGs have atmospheric residence times ranging from decades to centuries. CO_2e is within the DAF threshold of insignificance (see Table 3.1-10). Yearly CO2e emissions are equivalent to 34.9 gasoline-powered passenger vehicles driven for one year (USEPA 2023a).

Table 3.1-10. Annual GHG Emissions from Delta 12 Beddown Alternative 2a at SSFB

Year	CO_2	CH_4	N_2O	CO_2e	Indicator Exceedance[1] (yes/no)	SC-GHG ($K/yr [In 2020 $])[2]
	(mton/yr)					
2025	84	0.00339607	0.00070929	85	No	$7.02
2026	156	0.00623453	0.00261828	157	No	$13.19
2027	156	0.00623453	0.00261828	157	No	$13.50
2028	156	0.00623453	0.00261828	157	No	$13.66
2029	156	0.00623453	0.00261828	157	No	$13.82
2030	156	0.00623453	0.00261828	157	No	$13.98
2031	156	0.00623453	0.00261828	157	No	$14.29
2032	156	0.00623453	0.00261828	157	No	$14.45
2033	156	0.00623453	0.00261828	157	No	$14.76
2034	156	0.00623453	0.00261828	157	No	$14.92
2035	156	0.00623453	0.00261828	157	No	$15.08
2036	156	0.00623453	0.00261828	157	No	$15.39
2037	156	0.00623453	0.00261828	157	No	$15.55

[1]PSD threshold for GHG emissions is 68,039 metric tons of CO_2e per year.
[2]IWG SC-GHG Discount Factor used is 2.5%. Annual estimates were found by multiplying the annual emission for a given year by the corresponding IWG Annual SC GHG Emission value.
CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; SC-GHG = social cost of greenhouse gas emissions; k = thousand; yr = year

Cumulative Impacts

As discussed above, Delta 12 beddown at SSFB would result in less than significant impacts to air quality. Similar to Alternative 1b, cumulative effects are anticipated to be less than significant due to the staggered timelines of proposed projects, SSFB's location in an area designated as being in attainment for all criteria air pollutants, implementation of BMPs and DAF goals, and adherence to applicable permits, regulations, and DoD UFC standards.

3.1.2.5 Delta 12 Beddown Alternative 2b – KAFB

Criteria Pollutants

Impacts from construction would be similar to those discussed under Section 3.1.2.2 (short-term and less than significant) as this alternative would use the same site at KAFB. Impacts to air quality from operations would also be less than those described in Section 3.1.2.2, which considers 289 personnel versus the 61 personnel associated with Delta 12 HQ and 12 DOS (see Table 3.1-11). Permitting would be the same as discussed under Section 3.1.2.2.

Table 3.1-11. Air Pollutant Emissions from Delta 12 Beddown at KAFB

Pollutant	Operations Emissions (ton/yr)	SIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance
VOC	0.098	250	No
NO_x	0.122	250	No
CO	1.307	100	No
SO_x	0.005	250	No
PM_{10}	0.010	250	No
$PM_{2.5}$	0.009	250	No
Pb	0.000	25	No
NH_3	0.009	250	No

CO = carbon monoxide;, NH_3 = ammonia; NO_x = nitrogen oxides; O_3 = ozone; Pb = lead; $PM_{2.5}$ = particulate matter of diameter 2.5 microns or less; PM_{10} = particulate matter of diameter 10 microns or less; SO_x = sulfur oxides; ton/yr = tons per year; VOC=volatile organic compound; yr = year

Greenhouse Gases (GHGs)

As Delta 12 Beddown Alternative 2b at KAFB would use existing facilities, there would be less than significant short-term GHG emissions from renovation of these facilities.

During operations, "steady state" GHG emissions would result from employee commutes, facility space HVAC use, and emergency generator operation (see Table 3.1-12). GHG emissions from construction and operation are significantly smaller than existing baseline county-level emissions (see Table 3.1-2), and CO_2e is within the DAF threshold of insignificance (see Table 3.1-12). Yearly CO2e emissions are equivalent to 35.4 gasoline-powered passenger vehicles driven for one year (USEPA 2023a).

Table 3.1-12. Annual GHG Emissions from Delta 12 Beddown Alternative 2b at KAFB

Year	CO_2	CH_4	N_2O	CO_2e	Indicator Exceedance[1]	SC-GHG
	(mton/yr)				(yes/no)	($K/yr [In 2020 $])[2]
2025	158	0.00628873	0.00258709	159	No	$13.17
2026	158	0.00628873	0.00258709	159	No	$13.33
2027	158	0.00628873	0.00258709	159	No	$13.65

Year	CO_2	CH_4	N_2O	CO_2e	Indicator Exceedance[1] (yes/no)	SC-GHG ($K/yr [In 2020 $])[2]
	(mton/yr)					
2028	158	0.00628873	0.00258709	159	No	$13.81
2029	158	0.00628873	0.00258709	159	No	$13.97
2030	158	0.00628873	0.00258709	159	No	$14.13
2031	158	0.00628873	0.00258709	159	No	$14.44
2032	158	0.00628873	0.00258709	159	No	$14.60
2033	158	0.00628873	0.00258709	159	No	$14.92
2034	158	0.00628873	0.00258709	159	No	$15.08
2035	158	0.00628873	0.00258709	159	No	$15.24
2036	158	0.00628873	0.00258709	159	No	$15.56

[1]PSD threshold for GHG emissions is 68,039 metric tons of CO_2e per year.
[2]IWG SC-GHG Discount Factor used is 2.5%. Annual estimates were found by multiplying the annual emission for a given year by the corresponding IWG Annual SC GHG Emission value.
CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; SC-GHG = social cost of greenhouse gas emissions; k = thousand, yr = year

Cumulative Impacts

As discussed above, Delta 12 beddown at KAFB would result in less than significant impacts to air quality. Similar to Alternativa 1a, cumulative effects are anticipated to be less than significant due to the staggered timelines of proposed projects, KAFB's location in an area designated as being in attainment for all criteria air pollutants, implementation of BMPs and DAF goals, and adherence to applicable permits, regulations, and DoD UFC standards.

3.1.2.6 No-Action Alternative

Under the No-Action Alternative, none of the proposed construction or renovation activities would occur; therefore, there would be no changes to criteria pollutant or GHG emissions from baseline conditions.

3.1.3 Climate Change Hazard Assessment

The potential future impacts of climate change to proposed facilities are included in site-specific potential impact assessments 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 3.1.1.3. These areas of concern would have little impact on the new facilities and related operations included in each alternative.

The proposed facilities would be designed to have enhanced resiliency to long-term climate impacts. The DAF uses resiliency measures, updated standards, and best practices captured in routine UFC updates, which serve as design/building codes for DoD facilities. Local building codes also inform design/construction standards, as they are more reflective of regional conditions. Lastly, DAF policy can drive higher standards. The DAF would participate in or lead, as appropriate, master planning and project development activities at the selected location to ensure that climate impacts to the facility are minimized and consistent with installation, local, or regional climate plans. 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, storm shelters and appropriate structural construction measures to withstand tornadoes/hurricanes, elevated construction and on-site water management to withstand flooding and sea level rise (including potential increases in the groundwater table), and adequate setbacks from potential fuel sources to mitigate the risk from wildfires.

3.2 Water Resources

3.2.1 Affected Environment

3.2.1.1 PaSFB

Surface Waters

PaSFB is situated within the Northern Indian River Lagoon watershed (specifically in the St. Johns River Water Management District [SJRWMD] Drainage Basin 21) and the South Banana River sub watershed (Hydrologic Unit Code [HUC] 030802020203). The primary surface water bodies that influence PaSFB are the Banana River to the west and the Atlantic Ocean to the east. The Banana River is a component of the larger Indian River Lagoon complex, which was established as an Estuary of National Significance and joined the National Estuary Program in 1990 (DAF 2022a). The proposed Delta 10 beddown site is located approximately 320 feet (0.06 mile) from the nearest beach at the Atlantic Ocean and is on the far side of the installation from the Banana River (approximately 0.8 mile) (see Figure 2-1). No surface waters occur within the boundaries of the Alternative 1 site, and Atlantic Avenue (Highway A1A) separates the site from the Atlantic Ocean.

The FDEP includes the Banana River on their Statewide Comprehensive Study List, which is provided to the USEPA as an update to the state's CWA Section 303(d) list of impaired waterbodies. Most of PaSFB is located within water boundary identification number (WBID) 3057A, which is described as the portion of the Banana River sub-basin that is south of the State Route (SR) 520 Causeway (and extends south to the SR 518 Causeway). This sub-basin is on the Study List due to high pH values that were caused by exceedingly high chlorophyll levels in 2016 from an algal bloom. The algal bloom resulted from high nutrient levels. An increase in nutrient levels can occur due to a variety of reasons, including but not limited to, runoff that contains fertilizers, septic systems that are releasing nutrients adjacent to waterbodies, and wastewater treatment operations that are releasing nutrients. WBID 3057A includes all of PaSFB west of SR A1A. Areas draining directly to the Atlantic Ocean east of SR A1A including WBIDs 8109 and 8110 are not considered impaired (FDEP 2023).

Stormwater runoff at PaSFB is managed through a network of manmade drainage ditches, canals, and retention ponds. PaSFB maintains a NPDES Phase II Municipal Separate Storm Sewer System (MS4) permit, which identifies the base as a point source of urban runoff into the Banana River. Permit conditions require the use of BMPs to reduce the nutrient loads occurring in stormwater discharges. PaSFB also maintains a NPDES Multi-Sector General Permit, which addresses stormwater management and pollution prevention from industrial activities occurring on-base (DAF 2022a).

Wetlands and Floodplains

While much of PaSFB is located within the 100-year floodplain and isolated wetland areas have been previously identified on base, no wetlands or 100-year floodplains are located on or adjacent to the 13.7-acre site proposed for Delta 10 beddown (DAF 2022a). The 13.7-acre site occurs within the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel 12009C0526H (FEMA, 2021). FIRM panel 12009C0528H shows that the easternmost extent of Building 991, located to the south of the 13.7-acre site, is located within the 100-year floodplain (FEMA 2021). Wetlands are dismissed from analysis for this site. Refer to Figure 2-1 for the locations of the proposed Delta 10 beddown.

EO 13690 includes the 500-year floodplain in the Federal Flood Risk Standard. A 500-year flood has a 0.2 percent chance of occurring in a given year. All areas at PaSFB analyzed in this EA are located fully or partially within the 500-year floodplain (FEMA 2021). In the long-term, climate change and sea level rise have the potential to affect flooding patterns in this area. Coastal

flooding projections have been previously modeled using the DoD Regional Sea Level (DRSL) Database. Model outputs for the "medium" sea level rise scenario for the year 2065 and the "low" sea level rise scenario for the year 2100 predict an approximate 2-foot sea level rise on base. In both scenarios, the proposed Delta 10 beddown site remains outside predicted inundation areas (DAF 2022a; DoD 2021).

Figure 3.2-1 displays both the 100-year and 500-year floodplain boundaries at PaSFB.

Groundwater

Two continuous aquifer systems, the surficial aquifer and the Floridan aquifer, are present in Brevard County. The surficial aquifer system is contained in undifferentiated Late Miocene, Pliocene, and Recent Pleistocene deposits. It primarily consists of unconsolidated sediments such as sand, shell fragments, and gravel. The surficial aquifer is geologically isolated from the underlying Floridan aquifer by sediments originating from the Miocene Age known as the Hawthorn Group. These sediments, composed of low permeability clays, silts, and marls, act as an aquitard, restricting the flow of water between the non-artesian surficial aquifer and the artesian Floridan aquifer system. Groundwater deeper than the surficial aquifer is affected more by regional boundaries such as the Atlantic Ocean and the Banana River. Rates of groundwater movement are generally substantially less than one foot per day (DAF 2020a).

The surficial aquifer is typically classified by the FDEP as a Class G-II aquifer (less than 10,000 milligrams per liter [mg/L] total dissolved solids [TDS]). Class G-II is defined as able to supply water treatable for human consumption (DAF 2020a).

As discussed in Section 2.4.1, past site investigations have identified groundwater contamination (PAHs, pesticides, metals, and SVOCs) in excess of screening criteria. Additional groundwater investigations are planned as part of a future RI to identify appropriate remedies and address contamination in this area. Section 3.7 contains additional information related to contamination at the proposed PaSFB site. PaSFB sources water from the City of Cocoa. Additionally, the Base is connected to two City of Melbourne water mains, which serve as a secondary supply in case of emergencies (DAF 2022a).

Coastal Zone Management Act Consistency

The Florida Coastal Management Program (FCMP) was approved by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) in 1981 and is codified as Florida Statutes, Chapter 380, Part II. As stated above, the entirety of PaSFB is designated as a coastal zone and is subject to the FCMP. As part of this Draft EA, the USSF has submitted a Coastal Zone Management Act (CZMA) Federal Consistency Determination for FDEP review and concurrence (see Appendix E). Consistency determination is pending review by the Florida State Clearinghouse.

3.2.1.2 KAFB

Surface Waters

KAFB is located within the Rio Grande-Albuquerque HUC 8-digit watershed (13020203) (USGS 2020a). Surface waters, including runoff, which occur in this area drain to Tijeras Arroyo, which ultimately drains to the Rio Grande. Tijeras Arroyo is an ephemeral channel that is dry most of the year. Portions of Tijeras Arroyo and Arroyo del Coyote flow through KAFB, but no surface water features are located within 0.5 mile of the proposed Deltas 11 and 12 beddown site (USAF 2018a).

Figure 3.2-1. Floodplain Boundaries at PaSFB.

Stormwater runoff that occurs on base is generally conveyed off-site through ephemeral drainage channels, including Tijeras Arroyo. Most of the runoff occurring in these channels evaporates before reaching the Rio Grande, although some runoff contributes to groundwater recharge in the area (USAF 2018a). KAFB maintains an MS4 permit under the federal NPDES program for residential/non-industrial areas of the installation, an active program for construction projects requiring a NPDES General Stormwater Permit for Construction Activities, and a NPDES General Stormwater Permit for ongoing industrial activities (USAF 2018a). KAFB maintains a Storm Water Pollution Prevention Plan (SWPPP) to manage stormwater quality as part of the requirements of the NPDES General Stormwater Permit for industrial activities (KAFB 2021).

Wetlands and Floodplains

While these resources occur elsewhere at KAFB, no wetlands, 100-year floodplains, or 500-year floodplains are located on or adjacent to the proposed beddown site (USAF 2018a; FEMA 2012). The site occurs within FEMA FIRM panel 35001C0366H (FEMA 2012). Wetlands and floodplains are dismissed from analysis for this site.

Groundwater

Groundwater at KAFB is sourced from six different wells that withdraw groundwater from the Albuquerque Basin Regional Aquifer, which occurs within the Santa Fe Formation (KAFB 2021). The average depth to groundwater beneath the installation is between 450 and 500 feet below ground surface. Groundwater is assumed to be primarily recharged east of KAFB in the Manzanita Mountains (USAF 2018a). In this area in 2021, no contaminants were detected in groundwater that exceed state or federal standards (KAFB 2021). In order to prevent pollutant migration into groundwater in the event of an accidental spill or discharge, KAFB implements a Spill Prevention Control and Countermeasure (SPCC) Plan (KAFB 2018).

3.2.1.3 SSFB

Surface Waters

SSFB is located in the Fountain HUC 8-digit watershed (11020003) (USGS 2020b). The only surface water features within the boundaries of SSFB are ephemeral drainages. SSFB's stormwater drainage system consists of a series of natural and man-made swales, ditches, and erosion control structures. Stormwater is not discharged into any receiving intermittent or perennial waterbodies (DAF 2022b). The ROI at SSFB contains three ephemeral drainages, as shown in Figure 3.2-2: one approximately 0.2 mile east of the proposed 6-acre site and the proposed Modular Facilities Campus Area, a second approximately 330 feet east of the proposed Modular Facilities Campus Area, adjacent to an existing parking lot that would separate the drainage from the Modular Facilities Campus Area (not present within Base-provided GIS data, and therefore not shown on Figure 3.2-2, but identified and displayed within the SSFB Integrated Natural Resources Management Plan [INRMP]), and a third that intersects the southwest corner of the proposed Modular Facilities Campus Area. The three ephemeral drainages carry stormwater south, ultimately converging to form one drainage channel (DAF 2019).

Wetlands and Floodplains

No wetlands, or 100-year and 500-year floodplains are located within the boundaries of the proposed beddown site (DAF 2019; FEMA 2018). The site occurs within FEMA FIRM panel 08041C0795G (FEMA 2018). Wetlands and floodplains are dismissed from analysis for this site.

Groundwater

SSFB is located above the southern edge of the Denver Aquifer system, which includes four aquifers: Dawson, Denver, Arapahoe, and Laramie-Fox Hills. Some portion of all but the Dawson Aquifer underlie SSFB. Aquifers below the base are located approximately 125 feet below the ground surface and consist of unconsolidated sediments with good water quality (DAF 2022b).

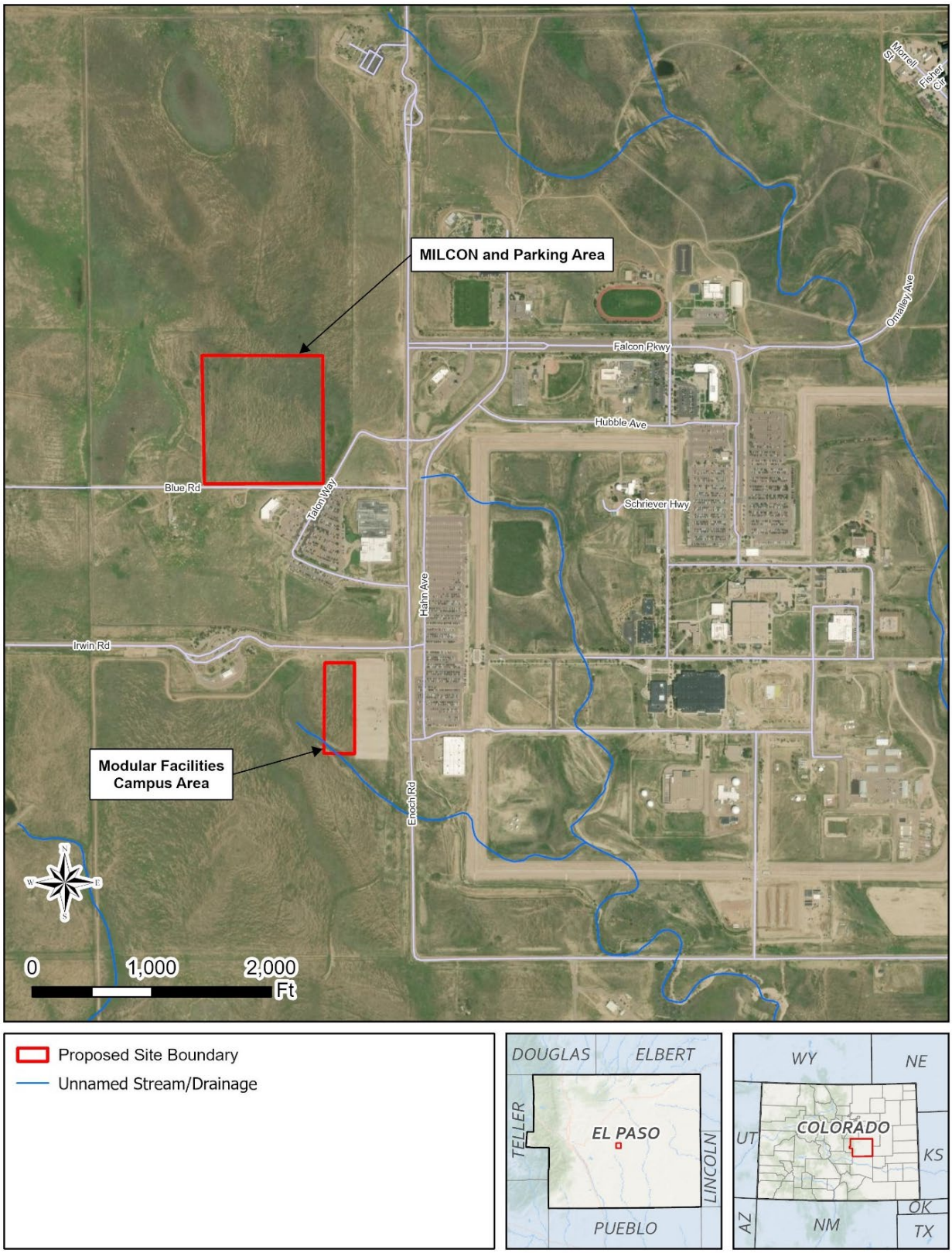

Figure 3.2-2. Surface Waters at SSFB

Groundwater, in general, flows toward the south and east, beyond the base, and discharges into streams, however, groundwater flow in both the Arapahoe Aquifer and the Laramie-Fox Hills Aquifer is toward the north-northeast (DAF 2022b).

Attempts to sample groundwater at the Environmental Restoration Program (ERP) site (the Existing Lagoon) within the restricted area on Base were unsuccessful. Aquifers in this area underlie a dense layer of Arkosic sandstone approximately 100 to 115 feet below ground surface. If present, groundwater is present in extremely low quantities and is not considered to be a current or potential source of water for drinking, agriculture, or grounds maintenance (Lawton 2022). SSFB sources water from wells in the Upper Black Squirrel designated Groundwater Basin, which is located near the community of Ellicott, 6 miles east of the base. The wells are owned and operated by the Cherokee Metropolitan Water District (CMD) (DAF 2022b; Lawton 2022).

The USEPA identified a sole-source aquifer approximately 1-mile west of the proposed Modular Facilities Campus Area (see USEPA letter dated July 14, 2023 in Appendix A). A sole source aquifer is one which supplies at least fifty percent of the drinking water consumed in the area overlying the aquifer with no reasonably available alternative drinking water sources. By this designation, the USEPA has determined that if the sole source drinking water aquifer is contaminated, it would create a significant hazard to public health.

3.2.2 Environmental Consequences

Impacts to water resources would be considered significant in the event that water availability or the existing water supply are substantially reduced, surface water or groundwater quality is substantially affected adversely, or a violation of established water resource laws or regulations occurs.

3.2.2.1 Delta 10 Beddown Alternative 1 – PaSFB

Surface Water

Overall adverse impacts to surface water resources would be less than significant. Although there are no surface water features within the boundaries of the Delta 10 Beddown Alternative 1 site, proposed construction activities would disturb the soil and could result in short-term increases in runoff, consequently increasing pollution, sedimentation, and turbidity in nearby surface waters. Additionally, the permanent increase in impervious surfaces at the site could lead to increased stormwater runoff.

Potential impacts from increases in runoff would be mitigated through the implementation of stormwater controls and BMPs, designed to address increases in stormwater velocities and volumes during construction, as well as resulting from increased impervious surfaces on-site. Examples of potential measures are provided in Section 2.1.4. All necessary permits would be acquired, and adherence to permit conditions would be strictly enforced. Should land disturbance exceed one acre, a NPDES Stormwater Permit for Construction Activities would be required. Coverage under this permit would require the development of a SWPPP, which would identify potential sources of pollutants, describe all pollution prevention activities that would be implemented on-site, and establish erosion and sediment controls to manage stormwater discharges and minimize sedimentation. Should ground disturbance remain under one acre, the project would adhere to the existing PaSFB Stormwater Management Plan (SWMP). Any alteration of a stormwater management system determined to be necessary to accommodate new permanent facilities would require an Environmental Resource Permit from SJRWMD. Access to existing facilities, including stormwater, would be obtained with minimal disturbance.

An increase in activity and presence of construction equipment increases the risk of leaks or spills of oil, lubricants, and other contaminants, which could runoff to nearby surface waters and adversely affect water quality. A comprehensive spill plan and program is maintained by USSF to

address spills on multiple installations, including PaSFB, and minimize the potential impacts that could result from a leak or spill, should one occur (DAF 2020a).

Following construction of the permanent facilities that would be required under this alternative, wastewater discharges may increase as a result of operations in a previously dormant part of the installation. Wastewater generated at PaSFB is treated by the City of Cocoa Beach, through a contract that reserves a treatment capability of 2 million gallons per day for the installation. Average peak wastewater usage at PaSFB is approximately 729,387 gallons per day (DAF 2020a). It is anticipated that the small increase in wastewater generation resulting from new permanent facilities for Delta 10 in this location would be easily accommodated by the existing capacity of the City of Cocoa Beach wastewater facilities, and as a result, increased wastewater generation would have no effect on water resources at this site.

Due to the implementation of BMPs and compliance with all necessary permits as well as the approved spill plan and program discussed above, it is anticipated that the implementation of Delta 10 Beddown Alternative 1 would result in less than significant long-term adverse impacts to surface water resources and stormwater.

Floodplains

Overall impacts to floodplains would be less than significant. Building 991 is located within the 100-year floodplain, however, the Proposed Action utilizes only existing infrastructure in this location and will not increase the ground elevation anywhere within the mapped 100-year floodplain. Therefore, implementation of this alternative would not result in additional flood risk in this area.

As stated in Section 3.2.1.1, all areas at PaSFB analyzed in this EA are located fully or partially within the 500-year floodplain. Although not regulated by FEMA, EO 13690 includes the 500-year floodplain in consideration for the Federal Flood Risk Standard. In the long-term, climate change and sea level rise have the potential to affect flooding patterns in this area. As discussed above, the Delta 10 Beddown Alternative 1 site remains outside predicted inundation areas, assuming a 2-foot sea level rise on base. Section 3.1 further discusses potential effects of climate change in this region.

Groundwater

Overall adverse impacts to groundwater would be less than significant. Due to the shallow water table in this area, it is possible that groundwater would be encountered during construction activities, requiring dewatering protocols to limit adverse impacts to groundwater quality or flow that could result. If dewatering is required, this process would be coordinated with FDEP to ensure current rules and regulations are followed. No dewatering operations at PaSFB are permitted to discharge directly into surface waters (DAF 2020a). Section 3.7 discusses potential groundwater contamination concerns.

Like surface waters, groundwater resources are susceptible to contamination in the event of a leak or spill of construction-related contaminants. As stated above, adherence to the approved spill plan and program will minimize the potential for these impacts.

Following construction of the permanent facilities that would be required under this alternative, an increase in water usage would accommodate an increase in personnel at this location. As water for PaSFB is sourced from the City of Cocoa, there would be no impacts to groundwater within the ROI resulting from increased water usage under this alternative. Average water usage at PaSFB is approximately 816,630 gallons per day, with peak usage measured at approximately 1,292,700 gallons per day in September 2020. Connections to two City of Melbourne water mains would serve as emergency secondary water sources, if needed (DAF 2020a). It is not expected that the increase in personnel associated with Alternative 1 would result in impacts to the general water supply in this region, as the proposed increase of 108 personnel would represent

approximately 0.0003 percent of the existing population in the surrounding area, as it is defined in Section 3.8.

Through compliance with existing PaSFB environmental management plans and all required permit conditions, it is anticipated that the implementation of this alternative would result in less than significant adverse impacts to groundwater.

Coastal Zone Management Act Consistency

USSF submitted an analysis of the CZMA Consistency Determination (Appendix E) and requested concurrence from FDEP's Florida State Clearinghouse as part of the public availability of the Draft EA. Consistency determination is pending review by the Florida State Clearinghouse.

Cumulative Impacts

As discussed above, Delta 10 beddown at PaSFB would result in less than significant impacts to water resources. Projects identified in Appendix C would cause the potential for adverse impacts to water resources from construction due to soil disturbance and potential for erosion and runoff into adjected surface waters, if present, and potential disturbance to the 100-year floodplain and coastal zone. The relocation of the STARCOM HQ to PaSFB would generate similar impacts to the proposed Delta 10 beddown including indirect impacts to water resources from construction and increased water use from operations. Proposed road projects outside of PaSFB would generate similar indirect impacts due to construction, however, these impacts would be temporary and would not likely occur over the same time as construction impacts due to the Delta 10 beddown. Overall, cumulative effects would be less than significant as the project's impacts in combination with the proposed STARCOM HQ would be mitigated through the implementation of stormwater controls and BMPs as described above, designed to address increases in stormwater velocities and volumes during construction, as well as resulting from increased impervious surfaces on-site. Water use from operations of the proposed Delta 10 beddown and STARCOM HQ at PaSFB would not generate significant cumulative impacts as changes to regional population from these activities would be below 0.01 percent. Considerations would also be given to minimize and avoid impacts to floodplains and ensure Federal consistency with the CZMA (Appendix E).

3.2.2.2 Delta 11 Beddown Alternative 1a – KAFB

Surface Water

No impacts to surface waters would occur. As there are no surface water features located within 0.5 mile of the Delta 11 Beddown Alternative 1a site, it is not expected that any surface water impacts would result from the implementation of this alternative. Although no construction would be required, renovation projects which disturb more than 1 acre would require a SWPPP and Notice of Intent under the Construction General Permit. As the proposed project is located within the Albuquerque urbanized area and is under the permit coverage of the Middle Rio Grande Municipal Separate Storm Sewer Systems (MS4) NPDES permit NMR04A000, renovation and operational activities would follow the stormwater management requirements, as applicable, laid out in the permit (see Appendix A, New Mexico Environment Department [NMED] letter dated July 17, 2023). As the process has begun for the change in NPDES Program primacy from the USEPA to NMED, USSF would work with CE Environmental to ensure that all local, state, and federal regulations are followed during any transition period, as applicable.

Groundwater

Overall less than significant adverse impacts to groundwater resources would occur. Operational activities under this alternative would be primarily administrative in nature and would take place within existing facilities requiring minimal renovations. During the renovation period, it is possible that leaks or spills of contaminants could occur that could infiltrate groundwater and cause a

temporary decrease in water quality. Adherence to the KAFB SPCC Plan would decrease the possibility of a leak or spill occurring through spill prevention, spill detection, and quick response times and would mitigate any potential impacts to groundwater resources in the event that a leak or spill does occur.

Under this alternative, there would be an increase in 289 personnel and a corresponding increase in operational activities at KAFB, in a location that is currently dormant. Potable and non-potable water would be required to support the permanent basing of Delta 11 and the 1 TES of Delta 12. It is not expected that adverse impacts to the existing water supply from the Albuquerque Basin Regional Aquifer would occur under this alternative, due to the small increase in personnel and associated water use relative to the overall size of the installation. The addition of 289 personnel would result in a 0.9 percent increase to the overall population at KAFB (33,500 personnel) and a 0.0004 percent increase to the overall population in the surrounding area, as it is defined in Section 3.8.

Cumulative Impacts

As discussed above, Delta 11 beddown at KAFB would result in no impacts to surface waters; therefore, no cumulative impacts are anticipated. Projects identified in Appendix C would contribute to changes to water use, however, as shown in Appendix C, Bernalillo County is currently updating their comprehensive plan which will address topics including sustainable water use which would buffer long-term impact to water resources from population growth through conservation efforts, education and sustainable development (Bernalillo County 2023). Overall, cumulative effects would be less than significant as new facilities would adhere to applicable DoD UFC standards and renovation or demolition of obsolete facilities would remove less water efficient buildings.

3.2.2.3 Delta 11 Beddown Alternative 1b – SSFB

Adverse impacts from construction and operations to water resources and cumulative impacts would be similar to those discussed under Section 3.2.2.4 (less than significant) as this alternative would use the same site at SSFB. As Deltas 11 and 12 are currently activated at SSFB no additional impacts to water resources from operations would occur. A reduction to water use would be realized as the 61 personnel associated with Delta 12 HQ and 12 DOS would be permanently located to KAFB (as described in Section 3.2.2.5).

3.2.2.4 Delta 12 Beddown Alternative 2a – SSFB

Surface Waters

Overall less than significant adverse impacts to surface water resources would occur from beddown of Delta 12 HQ and 12 DOS at SSFB. Under this alternative, short-term, localized adverse effects to surface waters would be possible, resulting from a temporary increase in construction-related runoff. Potential impacts from construction runoff would be mitigated through the implementation of stormwater controls and BMPs, designed to address increases in stormwater velocities and volumes during construction. All necessary construction permits (including a NPDES Stormwater Permit for Construction Activities, if necessary) would be acquired, and adherence to permit conditions would be strictly enforced. Under this alternative, minimal site preparation would be required prior to the construction of permanent facilities, although new utility connections and connector roads would be needed and potential impacts to nearby surface waters resulting from ground disturbing activities would be less than significant.

An increase in activity and presence of construction equipment increases the risk of leaks or spills of oil, lubricants, and other contaminants, which could runoff to nearby surface waters and adversely affect water quality. SSFB maintains an approved Facility Response Plan as required

by the Oil Pollution Act of 1990. Spills or leaks, should they occur, would be contained and cleaned up as soon as possible to minimize potential impacts to nearby surface waters (DAF 2019).

Following construction of the permanent facilities that would be required under this alternative, wastewater discharges may increase as a result of operations in a previously dormant part of the installation. Currently, wastewater from SSFB is discharged to the Cherokee Metropolitan District Publicly Owned Treatment Works under a permit authorization. Based on an assessment of the wastewater system conducted in 2012, it does not appear that a significant volume of stormwater flows through the wastewater system (DAF 2019). It is assumed that the average increase in wastewater and stormwater discharges resulting from Delta 12 operations at the Alternative 2 site would not be sufficient to adversely affect the existing wastewater system. As a result operations-related discharges would be treated appropriately and would not adversely affect surface waters adjacent to the proposed beddown locations under this alternative.

Groundwater

Overall less than significant adverse impacts to groundwater resources would occur. Like surface waters, groundwater resources may be adversely impacted by construction-related runoff, via infiltration from receiving surface waters. Potential impacts from construction-related runoff would be minimized by the methods described above. Groundwater is also susceptible to contamination in the event of a leak or spill of construction-related contaminants. As stated above, adherence to the approved Facility Response Plan and a rapid response in the event of a leak or spill will minimize potential impacts to groundwater resources (Air Force, 2019). Adverse effects to the sole-source aquifer located approximately 1 mile west of the proposed Modular Facilities Campus Area would not occur. This aquifer is further buffered as general groundwater flows at SSFB are to the east, away from this aquifer.

The existing water supply from CMD-operated wells in the Upper Black Squirrel designated Groundwater Basin would not adversely affected by Delta 12 operations under this alternative, as the increase in 61 personnel and associated water use would be small. The addition of 61 personnel would represent a 0.0001 percent increase to the surrounding population, as it is defined in Section 3.8.

Cumulative Impacts

As discussed above, Delta 12 beddown at SSFB would result in less than significant impacts to water resources. Projects identified in Appendix C would cause the potential for adverse impacts to surface waters from construction due to soil disturbance and potential for erosion and runoff into adjected surface waters if present. The relocation of the STARCOM HQ to SSFB would generate similar impacts to the proposed Delta 12 beddown including indirect impacts to water resources from construction and an increase wastewater discharge and groundwater use from operations. SSFB would employ similar measures, as described above, to address construction-related impacts. Water use from operations of the proposed Delta 12 beddown and STARCOM HQ at SSFB would not generate significant cumulative impacts as changes to regional population from these activities would be below 0.01 percent. Overall, cumulative effects would be less than significant as the projects would be required to adhere to NPDES permitting, SWPPPs, and employ BMPs to protect water resources.

3.2.2.5 Delta 12 Beddown Alternative 2b – KAFB

Adverse impacts from renovations to water resources would be similar to those discussed under Section 3.2.2.2 (less than significant) as this alternative would use the same site at KAFB. Impacts to water resources would be less than those described in Section 3.2.2.2 which considers 289 new personnel at KAFB versus the 61 personnel associated with Delta 12 HQ and 12 DOS.

3.2.2.6 No-Action Alternative

Under the No-Action Alternative, none of the proposed construction or renovation activities would occur; therefore, there would be no change to water resource conditions within or adjacent to the site boundaries described above.

3.3 Cultural Resources

3.3.1 Affected Environment

3.3.1.1 PaSFB

Archaeological APE

The following is a summary of the archaeological setting of the PaSFB area and is taken from the 2021 Integrated Cultural Resources Management Plan for Space Launch Delta 45 (SLD 45), which includes a robust prehistoric and historic background that is both relevant and useful for this analysis. Archaeological sites include burials, artifacts, shell middens, cemeteries, rock piles and shelters, chimney falls, brick walls, piers, trash pits and piles, and building remains. The ARPA limits archaeological resources to sites or items that are more than 100 years old while under NHPA and other legislation, sites more than 50 years old, and in rare cases of exceptional significance less than 50 years, may be evaluated for their historical significance.

Prehistoric archaeological sites in the region primarily consist of large shell middens composed of coquina shell with minor species such as clam, oyster, and whelk. The sites along the rivers tend to be large and appear to have been permanent or semi-permanent occupation sites. In addition to the large occupation sites are a series of smaller permanent seasonal camps or middens adjacent to the dune line along the coast. Occupation of Cape Canaveral dates to at least 5,000 BC, though exact dates are hampered by the lack of radiometric data.

There are no known archaeological sites at PaSFB and it is generally thought to have low potential for archaeological sites. During World War II the relic dune and swale system common on the barrier island was completely flattened. Dredged soils from the Banana River were used to expand the western end of the base as well as fill within wetlands and low-lying areas. Any sites that existed prior to 1940 were either destroyed or were so deeply buried the likelihood of finding them is next to impossible. Though a low probability, there is the potential for buried World War II resources in the form of evidence of former facilities, buried cisterns or wells, and landfills.

Architectural APE

The Delta 10 Beddown Alternative 1 considers a 13.7-acre area between South Tech Road and State Road A1A, and north of South Tech Road, as well as renovation and reuse of Building 991 located to the south of the 13.7-acre site along State Road A1A.

The 13.7-acre area is located within the NRHP-eligible Patrick Air Force Base Administrative Historic District (8BR2440). The district consists of nineteen contributing elements: 408 (8BR2044), 410(8BR2453), 423 (8BR2045), 425 (8BR2046), 431 (8BR2047), 439 (8BR2025), 440 (8BR2177), 530(8BR2061), 534 (8BR2048), 535 (8BR2049), 536 (8BR2050), 537 (8BR2056), 545 (8BR2063), 556 (8BR2142), 557 (8BR1837),559 (8BR2064), 560 (8BR2065), 561 (8BR2066), 562 (8BR2067), 926 (8BR2152), 978 (8BR2162), and 989 (8BR2136). The district is associated with both World War II and the Cold War. Buildings within this district were defined by their importance to both historic periods.

Building 991 (8BR2158) is a contributing element of the NRHP-eligible Bomarc-SAGE Tracking Facility Historic District (8BR2181). The district contains two other contributing elements: 990 (8BR2179) and 996 (8BR2159). The Bomarc-SAGE program was an early Cold War defense tracking system developed by the USAF. The warning and tracking system was tested at PAFB and was linked to Bomarc missile testing at Cape Canaveral Space Force Station.

3.3.1.2 KAFB

Archaeological APE

KAFB has significant historic and prehistoric resources from most of the cultural periods recognized in central New Mexico, dating from the Paleoindian through the recent historic periods. Both archaeological sites and historic buildings/structures have been evaluated for eligibility for inclusion in the NRHP. The 2012 Kirtland Air Force Base Integrated Cultural Resources Management Plan lists over 100 prior archaeological studies, 24 historic building/structure surveys, and 15 management plans and other studies that have occurred over several decades at the facility. Military related buildings and structures include 271 eligible for inclusion in the NRHP and 312 not eligible for inclusion in the NRHP.

The Base Civil Engineer (377 MSG/CE) has management responsibility for the following known cultural resources at KAFB: World War II-era buildings and structures; Cold War-era structures and testing facilities; Support facilities and utilities; Historic districts; Plane crashes; and 741 archaeological sites.

Architectural APE

A study area of one quarter mile around the Delta 11 Beddown Alternative 1a project location was selected for the purposes of this study until an architectural APE is established through consultation under Section 106 (see Figure 3.4-1).

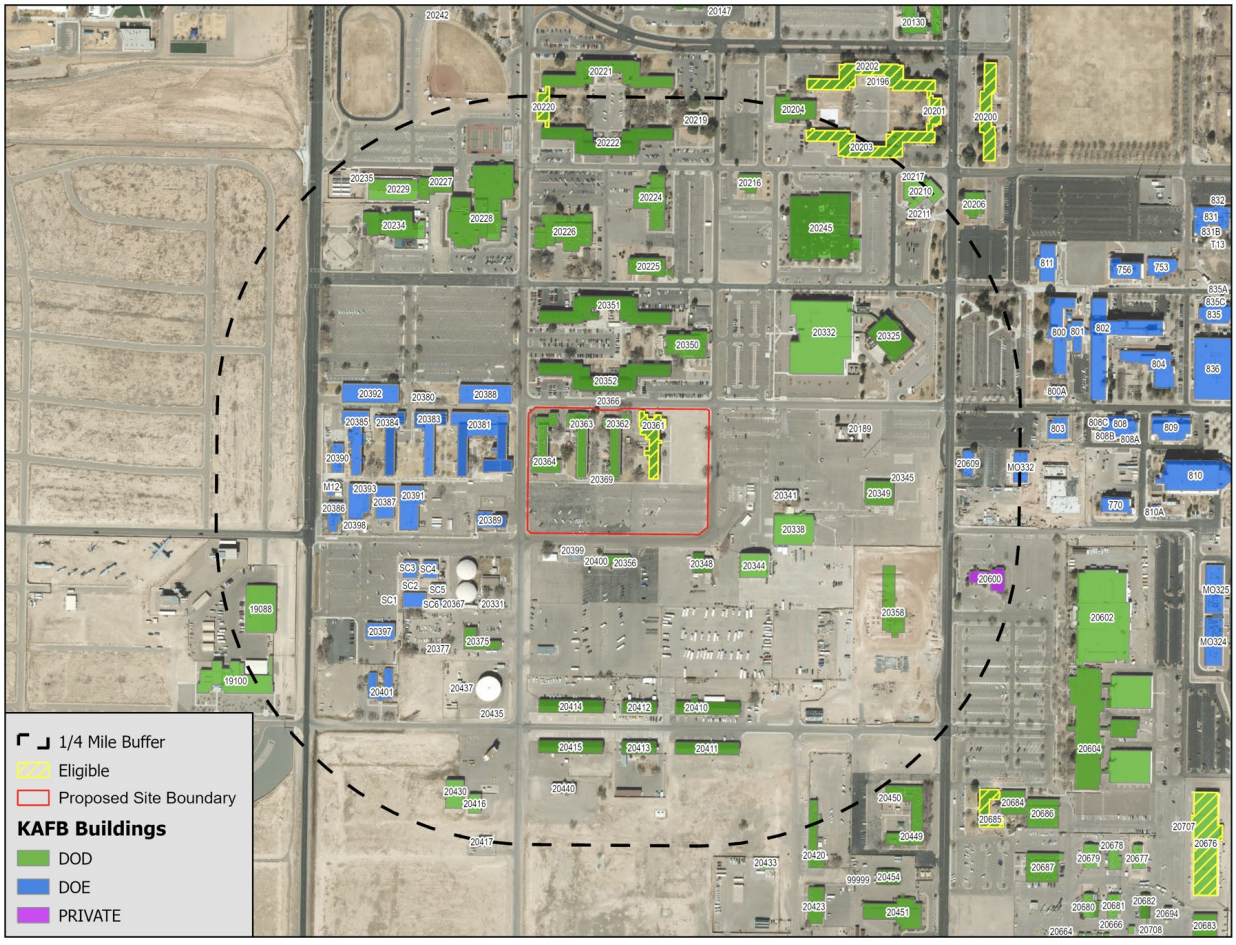

Figure 3.4-1. Quarter-Mile Radius APE for the Delta Beddown at KAFB

Within this area, Buildings 20203, 20220, and 20361 have been determined to be eligible for listing in the NRHP. Additional facilities owned and managed by the U.S. Department of Energy (DOE) are located directly to the west of the proposed site within the quarter-mile APE (see Figure 3.4-1). DOE has not responded to DAF inquiries regarding identification of historic properties for these facilities.

Delta 11 Beddown Alternative 1a includes renovation and reuse of Buildings 20362, 20363, and 20364. Renovations would predominantly be within the interior of the structures; however, some exterior renovations could occur with the replacement of HVAC systems, installment of antennas, and the new generator required for Building 20362. All of the buildings were constructed in 1951. The buildings were evaluated for NRHP eligibility and were determined to be not eligible. The New Mexico Historic Preservation Division concurred with these finding on January 5, 2003. Alternative 1a is not located within or next to any NRHP-eligible/listed historic districts; however, Building 20362 is adjacent to Building 20361, which was determined to be individually eligible for the NRHP and concurred upon by the New Mexico Historic Preservation Division on May 7, 2001.

As stated in Section 2.1.4, the current site layout and design of the facilities are not known; however, all construction impacts (e.g., staging areas, utilities and communications equipment, facility footprints) would be limited to the locations shown in Figure 2-2 for KAFB. Ongoing consultation with the SHPO would be required on exterior renovations of, or within proximity to historic properties. In addition, the USSF would coordinate with KAFB CE Environmental during design reviews to ensure no adverse effects occur to historic properties.

3.3.1.3 SSFB

Archaeological APE

The entire undeveloped area of SSFB, including the APE, is covered by a 2020 Class III pedestrian survey for cultural resources. There are no NRHP-eligible resources and no known archaeological resources, prehistoric or historic, in the APE. Two sites (5EP.1485 [a non-eligible pre-contact-era diffuse lithic scatter] and 5EP.8960.1 [a historic-era ditch and berm associated with dryland ranching operations]) are outside of but in the general vicinity of the APE; both sites were proposed non-eligible and non-contributory and concurrence with this finding was received from the Colorado State Historic Preservation Office on July 23, 2020.

According to SSFB, Tribes claim in the past they have not been afforded the opportunity to provide input on cultural resource surveys which would include the 2020 Class III pedestrian survey. Consultations between SSFB and Tribes have previously identified the need for cultural resources surveys to identify and evaluate Traditional Cultural Properties (TCP) that may exist at SSFB. Tribal representatives have previously expressed concerns that areas on SSFB may contain TCPs that extend beyond the SSFB property boundary and that archaeological sites may exist even in heavily developed or previously disturbed areas.

Architectural APE

Delta 12 Beddown Alternative 2a includes development of new facilities and associated parking within a 6-acre vacant parcel of land located within the northwest portion of SSFB, north of Blue Road, south of a notional extension of Falcon Parkway, and west of Enoch Road/Talon Way.

In 2021, the SSFB Historic District containing 8 contributing and 9 contributing and individually eligible built resources was determined to be NRHP eligible under Criterion A for its association with military history and the installation's role in the Cold War field of rocketry and satellites during the period 1985-1991. The proposed location of Alternative 2a is outside of the NRHP-eligible historic district boundaries.

3.3.2 Environmental Consequences

A cultural resources impact would be significant under NEPA if it would constitute an unresolved adverse effect as defined in Section 106 of the NHPA (36 CFR 800.5). As described in the subsections below, the Proposed Action would have no significant adverse effect on cultural resources under any alternative. This conclusion considers the following measures:

- All alterations to eligible or potentially-eligible structures would follow the Secretary of the Interior's Standards for the Treatment of Historic Properties (SOI Standards) unless or until concurrence is reached for the demolition of the facility. This would include consideration of SOI Standards for renovations of structures adjacent to eligible or potentially-eligible structures.
- Archaeological monitoring or an archaeological survey would be conducted for the new construction of the interim and permanent beddowns, as necessary. If an archaeological survey is conducted, the respective installation would submit a report describing the results of the investigation to the SHPO office for concurrence prior to the commencement of the construction. Otherwise, the respective installation would submit a report describing the results of the archaeological monitoring after the completion of the project.
- All facilities constructed for the temporary beddown activities would be removed after use to avoid permanent visual effects.
- All ground disturbing activities would stop and the installation would contact the SHPO office if archaeological materials or human remains are uncovered during the project.

3.3.2.1 Delta 10 Beddown Alternative 1 – PaSFB

The Delta 10 Beddown Alternative 1 considers a 13.7-acre area between South Tech Road and State Road A1A, and north of South Tech Road, as well as renovation and reuse of Building 991 located to the south of the 13.7-acre site along State Road A1A.

The 13.7-acre area is located within the NRHP-eligible Patrick Air Force Base Administrative Historic District. Approximately 5.7 acres of the 13.7-acre site are currently developed, containing Buildings 989 (contributing to the historic district) and 984 (non-contributing to the historic district). The remaining 8 acres contains open space that would accommodate the required 13,624 square feet of MILCON and 18,450 square feet of parking for Delta 10 HQ, 10 DOS, and 10/OL-B, as well as 62,450 square feet of MILCON for the wargaming facility space and 67,500 square feet for parking during the quarterly exercises. While construction and renovations are occurring to Building 991, Delta 10 personnel would use Building 562 (contributing to the historic district) as immediate office space, with no renovations required. The temporary use of Building 562 requiring no renovations has no potential, direct or indirect, to affect the integrity of the building or the eligibility of the historic district.

As stated in Section 2.1.4, the current site layout and design of the facilities are not known; however, all construction impacts (e.g., staging areas, utilities and communications equipment, facility footprints) would be limited to the locations shown in Figure 2-1 for PaSFB. The new construction within the 8-acre vacant parcel, would occur within the NRHP-eligible Patrick Air Force Base Administrative Historic District. While consultation on specific facility design is premature, DAF expects Florida Division of Historical Resources concurrence with a no adverse effect to historic properties determination because PaSFB will ensure that SOI Standards are considered in the facility design to prevent adverse effects (i.e., no adverse effect under the NHPA). As stated in the regulations (36 CFR Part 68) promulgating the Standards, "*one set of standards …will apply to a property undergoing treatment, depending upon the property's significance, existing physical condition, the extent of documentation available, and interpretive goals, when applicable. The Standards will be applied taking into consideration the economic and*

technical feasibility of each project." PaSFB will ensure that design of facilities will consider appropriate exterior façade (doors, access ladders, windows, etc.) that prevent adverse effects to the NRHP-eligible Patrick Air Force Base Administrative Historic District.

Additionally, Building 991 (8BR2158) is a contributing element of the NRHP-eligible Bomarc-SAGE Tracking Facility Historic District (8BR2181). Typical required renovations would include new plumbing, water hookups, new air handler with cooling coils and duct work, communications infrastructure, and remediation of asbestos and lead-based paint, which would have low potential to affect the building's integrity or NRHP eligibility. Conformance to SOI Standards as described above would preserve any identified character-defining features to ensure that the Proposed Action would have no adverse effects on Building 991 and to the NRHP-eligible Bomarc-SAGE Tracking Facility Historic District (i.e., no adverse effect under the NHPA).

Cumulative Impacts

As discussed above, Delta 10 beddown at PaSFB would result in less than significant impacts to cultural resources (historic structures). The relocation of the STARCOM HQ to PaSFB identified in Appendix C would generate similar impacts to the proposed Delta 10 beddown including construction of new facilities within the NRHP-eligible Patrick Air Force Base Administrative Historic District, however, similar requirements as discussed above would be followed. Other projects identified within Appendix C at PaSFB which are located within a historic district or involve a historic structure would require Section 106 consultation with the Florida Division of Historical Resources to ensure protection or mitigation. State and local road projects would not adversely effect historic districts or structures within PaSFB. Overall, cumulative effects would be less than significant.

3.3.2.2 Delta 11 Beddown Alternative 1a – KAFB

The only NRHP-eligible architectural resource adjacent to the Proposed Action is Building 20361. Any proposed exterior work on Buildings 20362, 20363, and 20364 would require consultation under Section 106 with the New Mexico Historic Preservation Division. Because the west viewshed of Building 20361 is partially obscured by an existing tree line along the east side of Building 20362, the Proposed Action would not result in any direct impacts to Building 20361, substantially alter the current setting of Building 20361, or affect its integrity or NRHP eligibility. KAFB anticipates that the Proposed Action, therefore, would have no adverse effects on Building 20361. Additionally, KAFB anticipates the Proposed Action would have no impact to Buildings 20203 and 20220 located along the northeastern boundary of the ¼-mile APE; the proposed beddown site would not be visible from these two eligible structures as Buildings 20350 and 20245 would obscure the viewshed.

Although the proposed beddown activities at KAFB would involve renovations to existing buildings, the Pueblo of Zia requested during the scoping period that the tribe be notified of any discoveries if additional cultural resources surveys are conducted. They also requested a cultural resources monitor be present during any ground disturbance within the area of development. If any isolated finds are encountered of cultural material, the tribe should be notified, and the finds should be left intact in the ground and not collected.

Cumulative Impacts

The proposed beddown at KAFB would have no effect to known historic properties, therefore, no cumulative effects would occur.

3.3.2.3 Delta 11 Beddown Alternative 1b – SSFB

Impacts from construction and operations and cumulative impacts to cultural resources would be similar to those discussed under Section 3.3.2.4 (no adverse effect) as this alternative would use the same site at SSFB.

3.3.2.4 Delta 12 Beddown Alternative 2a – SSFB

The Proposed Action would have no effect on architectural resources under Alternative 2a, as the Proposed Action would not be visible from the SSFB Historic District. Although the 2020 Phase I pedestrian survey which included coverage of the site for cultural resources did not identify any archaeological resources in the APE, there is always a potential for inadvertent discovery of subsurface cultural materials or sites with any ground-breaking project. Construction activities would follow the SOP of Inadvertent Discovery in the SSFB Integrated Cultural Resources Management Plan in the event of an inadvertent discovery to minimize adverse effects.

During the scoping period, the Flandreau Santee Sioux requested they be contacted immediately if the project inadvertently disturbs any human remains and/or cultural material.

Cumulative Impacts

The proposed beddown at SSFB would have no effect to resources protected under the NHPA, therefore, no cumulative effects would occur.

3.3.2.5 Delta 12 Beddown Alternative 2b – KAFB

Impacts from renovations and operations to cultural resources and cumulative impacts would be similar to those discussed under Section 3.3.2.2 (no adverse effect) as this alternative would use the same site at KAFB.

3.3.2.6 No Action Alternative

Under the No Action Alternative, beddown of Delta 10, 11 and/or 12 would not occur, and no related facilities would be built or renovated at the respective installation. As a result, there would be no impact on cultural resources at PaSFB, KAFB and/or SSFB.

3.4 Biological Resources

3.4.1 Affected Environment

3.4.1.1 PaSFB

Vegetation

PaSFB has been heavily developed, and the majority of vegetation currently present on the installation consists of turf and landscaping. Natural communities remaining within PaSFB include beach dune, estuarine wetlands, and hardwood forested uplands (DAF 2020a). The site proposed for the Delta 10 beddown contains approximately 8 acres of land that is currently vacant but was previously developed. As such, the site supports disturbed ground with minimal vegetation, generally characterized by maintained grasses.

Wildlife

As the majority of PaSFB has been developed, wildlife inhabiting the installation generally are more tolerant of disturbance and the presence of humans and vehicles. Species most likely to be encountered near the proposed Delta 10 beddown site include those highly adaptable species common to disturbed or urban areas, including small mammals, such as squirrels and birds that tolerate human activity. All species documented on the installation are listed in Appendix G of the INRMP) DAF 2020a). Representative species include American alligator (*Alligator mississippiensis*), eastern glass lizard (*Ophisaurus ventralis*), tropical house gecko (*Hemidactylus mabouia*), eastern corn snake (*Pantherophis guttatus*), ribbon snake (*Thamnophis sauritus*), common snapping turtle (*Chelydra serpentina serpentina*), brown pelican (*Pelecanus occidentalis*), northern harrier (*Circus hudsonius*), coyote (*Canis latrans*), racoon (*Procyon lotor*), armadillo (*Dasypus novemcinctus*), opossum (*Didelphis virginiana*), eastern cottontail rabbit (*Sylvilagus floridanus*), and eastern gray squirrel (*Sciurus carolinensis*) (DAF 2020a).

Special-Status Species

The United States Fish and Wildlife Service's (USFWS's) Information for Planning and Consultation (IPaC) system was queried for federally listed, threatened, and endangered species and designated critical habitats potentially occurring within PaSFB. The species list generated by the database search includes a total of 13 species (1 mammal, 4 birds, 6 reptiles, and 2 plants; see Table 3.5-1). Table 3.5-1 includes a brief assessment of the potential impacts to species' associated with the proposed Delta 10 beddown and species' range and habitat requirements.

Table 3.5-1. Federal Special Status Species with Potential to Occur within PaSFB

Species	Federal Status	Habitat	Potential Impacts Due to Delta 10 Beddown Site?
Mammals			
West Indian manatee (*Trichechus manatus*)	Threatened	In Florida, occur in freshwater, brackish, and marine environments, including coastal tidal rivers, mangrove swamps, and salt marshes. Feeding often occurs in shallow grass beds with access to deep channels.	No. This species occupies an aquatic habitat and would not be directly affected by construction or operation of onshore facilities within the proposed Delta 10 beddown site.

Species	Federal Status	Habitat	Potential Impacts Due to Delta 10 Beddown Site?
Birds			
Audubon's crested caracara (*Polyborus plancus audubonii)*	Threatened	Associated with open country, dry prairie with scattered cabbage palm, and wetter prairies. In Florida, often nest in cabbage palms.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Eastern black rail (*Laterallus jamaicensis* ssp. *jamaicensis*)	Threatened	Found among dense vegetation near water. Suitable habitats may be saline, brackish, or freshwater.	No. PaSFB is highly developed, and the project area is located within an area that does not border the shoreline and is designated as serving an institutional land use. No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Piping Plover (*Charadrius melodus*)	Threatened	Usually occur on ocean beaches or on sand or algal flats in protected bays. Winters in the southern U.S. and migrates north to breed.	No. PaSFB is highly developed, and the project area is located within an area that does not border the shoreline and is designated as serving an institutional land use. No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Red knot (*Calidris canutus rufa*)	Threatened	Migratory species that occurs in Florida as a transient. Primary habitats are tidal flats and beaches.	No. PaSFB is highly developed, and the project area is located within an area that does not border the shoreline and is designated as serving an institutional land use. No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Wood Stork (*Mycteria americana*)	Threatened	Wood storks nest in mixed hardwood swamps, sloughs, mangroves, and cypress domes/strands in Florida. They forage in a variety of wetlands including both freshwater and estuarine marshes, although limited to depths less than 10-12 inches.	No. This species has occasionally been observed at PaSFB, however utilizes canals which are not found within or adjacent to the proposed Delta 10 beddown site.
Reptiles			
American crocodile (*Crocodylus acutus*)	Threatened	In Florida, primary habitat is inland mangrove swamps protected from waves. Typically occur in freshwater areas during the nonbreeding season and move to saline waters when breeding.	Possible. PaSFB is highly developed. No surface water occurs within the project site, which is located within an area that is designated as serving an institutional land use. No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site. A crocodile, however, has been confirmed in the local area and could end up on PaSFB.

Species	Federal Status	Habitat	Potential Impacts Due to Delta 10 Beddown Site?
Eastern indigo snake (*Drymarchon couperi)*	Threatened	Suitable habitats include sandhill regions dominated by longleaf pines, turkey oaks, and wiregrass; coastal scrub; dry glades, prairie, brushy riparian corridors, and wet fields.	Possible. PaSFB is highly developed, yet suitable habitat exists for this species. This species hasn't been observed at PaSFB for more than 5 years.
Green sea turtle (*Chelonia mydas*)	Threatened	Feed in shallow, low-energy waters with abundant submerged vegetation. Nest on beaches, usually those with high energy and deep sand.	Possible. This species occupies aquatic and beach habitat and would not be directly affected by construction, operation, or in-facility wargaming within the proposed Delta 10 beddown site. However, lighting has the potential to affect this species. The Florida Sea Turtle Nesting Beach Monitoring Program ranked PaSFB as having a medium green sea turtle nesting density, meaning the nesting density for this species within the PaSFB surveyed beach lies within the middle of density values and not within the top or bottom 25%. While this species may nest on beaches within the boundaries of PaSFB, the proposed Delta 10 beddown site is located inland of the beach. Construction and operation would not directly affect nesting habitat. Construction activities would occur during daylight hours and would not increase nighttime illumination that could affect behavior of nesting females or hatchlings.
Hawksbill sea turtle (*Eretmochelys imbricata*)	Endangered	Inhabits shallow coastal waters with rocky bottoms, beds of sea grass or algae, mangrove-bordered bays and estuaries, and submerged mud flats. Nests on undisturbed, deep-sand beaches.	Possible. This species occupies aquatic and beach habitat and would not be directly affected by construction, operation, or in-facility wargaming within the proposed Delta 10 beddown site. However, lighting has the potential to affect this species. Per the Florida Sea Turtle Nesting Beach Monitoring Program, hawksbill sea turtles are not present within PaSFB.
Leatherback sea turtle (*Dermochelys coriacea*)	Endangered	Found in open ocean near the continental shelf. Usually only approach land to nest. Nesting occurs on sloping, sandy beaches with vegetation, often near deep water.	Possible. This species occupies aquatic and beach habitat and would not be directly affected by construction, operation, or in-facility wargaming within the proposed Delta 10 beddown site. However, lighting has the potential to affect this species. The Florida Sea Turtle Nesting Beach Monitoring Program ranked PaSFB as having a medium leatherback sea turtle nesting

Species	Federal Status	Habitat	Potential Impacts Due to Delta 10 Beddown Site?
			density, meaning the nesting density for this species within the PaSFB surveyed beach lies within the middle of density values and not within the top or bottom 25%. While this species may nest on beaches within the boundaries of PaSFB, the proposed Delta 10 beddown site is located inland of the beach. Construction and operation would not directly affect nesting habitat. Construction activities would occur during daylight hours and would not increase nighttime illumination that could affect behavior of nesting females or hatchlings.
Loggerhead sea turtle (*Caretta caretta*)	Threatened	Occurs in open sea over the continental shelf, bays, estuaries, lagoons, and mouths of rivers. Nesting occurs on open, sandy beaches.	Possible. This species occupies aquatic and beach habitat and would not be directly affected by construction, operation, or in-facility wargaming within the proposed Delta 10 beddown site. However, lighting has the potential to affect this species. The Florida Sea Turtle Nesting Beach Monitoring Program ranked PaSFB as having a high loggerhead sea turtle nesting density, meaning the nesting density for this species within the PaSFB surveyed beach lies in the top 25% of density values. While this species may nest on beaches within the boundaries of PaSFB, the proposed Delta 10 beddown site is located inland of the beach. Construction and operation would not directly affect nesting habitat. Construction activities would occur during daylight hours and would not increase nighttime illumination that could affect behavior of nesting females or hatchlings.
Kemps ridley sea turtle (*Lepidochelys kempii*)	Endangered	Extremely rare species. Occurs mainly in nearshore coastal habitats of the Gulf of Mexico of the U.S. but nesting has been observed on Atlantic Ocean beaches.	Possible. This species occupies aquatic and beach habitat and would not be directly affected by construction, operation, or in-facility wargaming within the proposed Delta 10 beddown site. However, lighting has the potential to affect this species.
Plants			
Carter's mustard (*Warea carteri*)	Endangered	Endemic to Florida and known from occurrences along Lake Wales Ridge. Dependent on frequent fire to maintain open, sandy habitats.	No. PaSFB is not located within the Lake Wales Region. Per the species' 5-year review, this species

Species	Federal Status	Habitat	Potential Impacts Due to Delta 10 Beddown Site?
			has been extirpated from Brevard County.
Lewton's polygala (*Polygala lewtonii*)	Endangered	Found in sandhills characterized by longleaf pine and low scrub oaks.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.

Source: USFWS 2021, 2023a, 2023d, NatureServe 2023, FWC 2023b; Florida Fish & Wildlife Research Institute 2023
INRMP = Integrated Natural Resource Management Plan; PaSFB = Patrick Space Force Base

USFWS-designated critical habitat for federally protected aquatic species, including the loggerhead sea turtle and west Indian manatee, borders the shoreline of PaSFB. However, no designated critical habitat occurs onshore within PaSFB.

Table 3.5-2 summarizes the additional state-listed threatened and endangered species that may occur within PaSFB.

Table 3.5-2. Florida Special Status Species with Potential to Occur within PaSFB

Species	State Status	Habitat	Expected to Occur in Proposed Delta 10 Beddown Site?
Birds			
Florida sandhill crane (*Antigone canadensis pratensis*)	Threatened	Freshwater marshes, prairie, and pastures.	No. PaSFB is highly developed, and the project area is located within an inland area designated as serving an institutional land use. No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Least Tern (*Sterna antillarum*)	Threatened	Inhabits areas along the coasts of Florida including estuaries and bays.	Possible Least terns have been observed nesting on flat gravel roofs for over 30 years; however, numbers have declined significantly over the last 5 years.
Florida burrowing owl (*Athene cunicularia floridana*)	Threatened	High, sparsely vegetated, sandy ground. Natural habitats include dry prairie and sandhills; however, this species also makes extensive use of areas such as pastures, airports, parks, school grounds, and road rights-of-way.	Possible. This species has been observed within PaSFB and utilizes disturbed habitats, such as those found across the installation.
Reptiles			
Gopher tortoise (*Gopherus polyphemus*)	Threatened	Typically found in dry, upland habitats, but will also utilize disturbed habitats such as pastures and road shoulders.	Possible. This species has been observed within PaSFB and utilizes disturbed habitats, such as those found across the installation.
Plants			
Many-flowered grass-pink (*Calopogon multiflorus*)	Threatened	Dry to moist flatwoods with longleaf pine, wiregrass, and saw palmetto.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional

Species	State Status	Habitat	Expected to Occur in Proposed Delta 10 Beddown Site?
			land use. No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Sand butterfly pea (*Centrosema arenicola*)	Endangered	Sandhill, scrubby flatwoods, and dry upland woods.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Sand-dune spurge (*Chamaesyce cumulicola*)	Endangered	Coastal scrub and stabilized dunes.	No. PaSFB is highly developed, and the project area is located within an inland area designated as serving an institutional land use. No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Short-leaved rosemary (*Conradina brevifolia*)	Endangered	White sands and sand pine-oak scrub of the Lake Wales Region. Scattered overstory of sand pine and scrub oak.	No. Species is restricted to the Lake Wales Region, which is found in Polk, Highlands, and Osceola counties in Florida. This region does not extend into Brevard County, in which PaSFB is located.
Large-flowered rosemary (*Conradina grandiflora*)	Threatened	Scrub, scrubby flatwoods, and adjacent disturbed areas.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Coastal vervain (*Glandularia maritima*)	Endangered	Sandy clearings in coastal dune swales, scrub, pinelands, and live oak-cabbage palm woods. Also found in disturbed clearings.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Nodding pinweed (*Lechea cernua*)	Threatened	Open, unshaded white sands of scrub and scrubby flatwoods. Often associated with Florida rosemary.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Celestial lily (*Nemastylis floridana*)	Endangered	Wet flatwoods, prairies, marshes, and edges of cabbage palm hammocks.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Florida beargrass (*Nolina atopcarpa*)	Threatened	In grassy areas of mesic and wet flatwoods.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable habitat for this

Species	State Status	Habitat	Expected to Occur in Proposed Delta 10 Beddown Site?
			species exists within or adjacent to the proposed Delta 10 beddown site.
Giant orchid (*Pteroglossaspis ecristata*)	Threatened	Sandhill, scrub, pine flatwoods, pine rocklands, and occasionally old fields.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Coastal hoary-pea (*Tephrosia angustissima* var. *curtissii*)	Endangered	Scrub and sandy areas.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Carter's warea (*Warea carteri*)	Endangered	Sandhill, scrubby flatwoods, inland and coastal scrub.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.

Source FWC 2023a: FNAI 2023; NatureServe 2023
PaSFB = Patrick Space Force Base

Migratory Birds

Per the USFWS IPaC results, 16 migratory birds of conservation concern may occur within the ROI. The bald eagle also may be found in the ROI but is not a bird of conservation concern in this area; this species instead warrants special attention under the Bald and Golden Eagle Protection Act. Table 3.5-3 identifies the migratory birds of conservation concern identified by IPaC for PaSFB.

Birds migrating through the area may occasionally stop at or near the project area to rest or forage. However, because the project area contains minimal vegetation, is primarily dominated by mowed or maintained grassland, and has high levels of human disturbance, the proposed Delta 10 beddown site is not an important migratory stopover for most birds relative to other areas.

Table 3.5-3. Migratory Bird Species with Potential to Occur within PaSFB

Species	Breeding Season in Area	Breeding Habitat	Expected to Occur in Proposed Delta 10 Beddown Site?
American kestrel (*Falco sparverius paulus*)	April 1 – August 31	Breeding habitat includes open or partly open habitat such as prairies, deserts, wooded streams, cultivated land with scattered trees, open woodland, or along roads. Nests in holes in trees, buildings, or cliffs. May utilize abandoned woodpecker holes or nest boxes.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable breeding habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
American oystercatcher (*Haematopus palliatus*)	April 15 – August 31	Habitat includes rocky and sandy seacoasts and islands, river mouths and estuaries, and mudflats. Nests on the ground in open sites, often on high parts of	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable breeding habitat for this species

Species	Breeding Season in Area	Breeding Habitat	Expected to Occur in Proposed Delta 10 Beddown Site?
		sandy beaches. May also nest among rocks.	exists within or adjacent to the proposed Delta 10 beddown site.
Bald eagle (*Haliaeetus leucocephalus*)	September 1 – July 31	Breeding habitat includes areas close to coastal areas, bays river, lakes, reservoirs, or other bodies of water. Nests in tall trees, on pinnacles, or on cliffs near water.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable breeding habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Black skimmer (*Rynchops niger*)	May 20 – September 15	Habitat includes coastal waters and quiet waters of rivers and lakes. Nests near coasts on sandy beaches, shell banks, coastal and estuary islands, and on dredged material sites. Nests usually in association with terns. Small number of black skimmers have been observed nesting on flat gravel roofs.	Possible. This species has been observed nesting on flat gravel roofs.
Chimney swift (*Chaetura pelagica*)	March 15 – August 25	Habitat includes rural and urban environments. Nests primarily in chimneys, but also interior walls of anthropogenic structures. Natural nest sites include interior of hollow tree trunks, pileated woodpecker cavities, and rock shelters.	Possible. This species utilizes anthropogenic habitats and could be found in the structures of the developed portions of PaSFB.
Great blue heron (*Ardea herodias occidentalis*)	January 1 – December 31	Freshwater and brackish marshes, along lakes, rivers, bays, lagoons, ocean beaches, mangroves, fields, and meadows. Nests commonly high in trees in swamps and forested areas. Great blue heron have been observed utilizing PaSFB canals.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable breeding habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Gull-billed tern (*Gelochelidon nilotica*)	May 1 – July 31	Habitat includes coastlines, salt marshes, and estuaries. May occur less frequently along lakes and rivers. Nest are located along sandy barrier islands, beaches, and dredge spoil islands.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable breeding habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Lesser yellowlegs (*Tringa flavipes*)	Breeds elsewhere		Unlikely. Breeds in Canada and spends winters in South America. This species may be encountered within the ROI on stopovers during migration. However, the low-quality habitat existing within the project area is unlikely to support suitable foraging or resting habitat during migration stopovers.
Magnificent frigatebird (*Fregata magnificens*)	October 1 – April 30	Habitat is mainly located in coastal waters. Nests on islands in mangroves, low trees, and	No. PaSFB is highly developed, and the project area is located within an

Species	Breeding Season in Area	Breeding Habitat	Expected to Occur in Proposed Delta 10 Beddown Site?
		shrubs. This species is sensitive to disturbance, and nests are usually located on steep slopes of offshore islands.	area designated as serving an institutional land use. No suitable breeding habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Painted bunting (*Passerina ciris*)	April 25 – August 15	Nests in brush or vine tangle, usually 1-2 meters off the ground. The southeastern coastal population uses a variety of habitats for breeding; however, salt marsh and forest edges were found to be preferred over interior forests.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable breeding habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Prairie warbler (*Setophaga discolor*)	May 1 – July 31	Habitat includes dry scrub, low pine-juniper, mangrove, pine barrens, and burned over areas. Nests are usually located in a shrub, sampling, thicket, or fern clump.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable breeding habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Reddish egret (*Egretta rufescens*)	March 1 – September 15	Typically nests on natural islands or man-made dredge spoil islands, but may occasionally construct nests on the coastal mainland. Nests are generally constructed in mangroves, but also may be found in terrestrial vegetation.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable breeding habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Ruddy turnstone (*Arenaria interpres morinella*)	Breeds elsewhere		Unlikely. This species may be encountered within PaSFB on stopovers during migration. However, the low-quality habitat existing within the project area is unlikely to support suitable foraging or resting habitat during migration stopovers.
Short-billed dowitcher (*Limnodromus griseus*)	Breeds elsewhere		Unlikely. This species may be encountered within PaSFB on stopovers during migration. However, the low-quality habitat existing within the project area is unlikely to support suitable foraging or resting habitat during migration stopovers.
Swallow-tailed kite (*Elanoides forficatus*)	March 10 – June 30	Preferred nesting sites are in pines, although nests may also be found in cypress trees and mangroves.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable breeding habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Willet (*Tringa semipamata*)	April 20 – August 5	Breeding habitat requires large expanses of short, sparse grasslands and wetland complexes. Preferred habitats include native grasses and	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable

Species	Breeding Season in Area	Breeding Habitat	Expected to Occur in Proposed Delta 10 Beddown Site?
		wetlands with shallow water and short, sparse shoreline vegetation.	breeding habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.
Wilson's plover (*Charadrius wilsonia*)	April 1 – August 20	Habitat includes coastal sandy and shell beaches, barrier and spoil islands, tidal mudflats, bays, and estuaries. Nests are located in the open or near sparse vegetation.	No. PaSFB is highly developed, and the project area is located within an area designated as serving an institutional land use. No suitable breeding habitat for this species exists within or adjacent to the proposed Delta 10 beddown site.

Source: USFWS 2023a; NatureServe 2023
PaSFB = Patrick Space Force Base

3.4.1.2 KAFB

Vegetation

Four primary vegetative communities have been recognized within KAFB: grassland, pinyon-juniper woodlands, ponderosa pine woodlands, and riparian/wetland/arroyo (USAF 2018a). Vegetation resources at the proposed site consists of a few trees and associated maintained grassy areas.

Wildlife

Species most likely to be encountered near the proposed beddown site include those highly adaptable species common to disturbed areas, including small mammals, such as squirrels, and birds that tolerate human activity. All species documented on within KAFB are listed in Appendix D of the installation's INRMP (USAF 2018a).

Special Status Species

The USFWS's IPaC system was queried for federally listed, proposed, or candidate threatened and endangered species and designated critical habitats potentially occurring within the KAFB. The species list generated by the database search includes a total of five species (one mammal, three birds, and one fish; see Table 3.5-4). Table 3.5-4 also includes a brief assessment of each species' likelihood of occurrence within the proposed beddown site based on the species' range/distribution and habitat requirements. There is no USFWS-designated critical habitat for any of these species within KAFB.

Table 3.5-4. Federal Special Status Species with Potential to Occur within KAFB

Species	Federal Status	Habitat	Expected to Occur in Proposed Beddown Site?
Mammals			
New Mexico meadow jumping mouse (*Zapus luteus luteus*)	Endangered	Sedge-forb-willow zones along permanent streams; wet meadows within river floodplains; and narrow riparian zones along irrigation ditches.	No. Per Section 3.2.1.2, no surface water features are located within 0.5 mile of the proposed beddown site.
Birds			
Mexican spotted owl (*Strix occidentalis lucida*)	Threatened	In New Mexico, breeding and roosting occur in mixed-conifer forests that contain an oak component. These forests often contain mature or old-growth stands with complex structure.	No. The proposed beddown site is located within a well-developed portion of KAFB. No suitable habitat for this species exists within or adjacent to the proposed beddown site.

Species	Federal Status	Habitat	Expected to Occur in Proposed Beddown Site?
Southwestern willow flycatcher (*Empidonax traillii extimus*)	Endangered	Found in riparian and wetland thickets, generally of willow, tamarisk, or both. Nests in trees where the plant growth is most dense, trees and shrubs have vegetation near ground level, and where there is a low-density canopy.	No. Per Section 3.2.1.2, no surface water features are located within 0.5 mile of the proposed beddown site.
Yellow-billed cuckoo (*Coccyzuz americanus*)	Threatened	Breeds in open woodland, parks, and riparian woodlands and nests in deciduous woodlands, moist thickets, orchards, overgrown pastures. Nonbreeding individual may be found in forest, woodland, and scrub habitats.	No. The proposed beddown site is located within a well-developed portion of KAFB. No suitable habitat for this species exists within or adjacent to the proposed beddown site.
Fish			
Rio Grande silvery minnow (*Hybognathus amarus*)	Endangered	Pools and backwaters of low-gradient creeks and small or large rivers. Occurs in waters with slow to moderate flow in perennial sections of the Rio Grande and associated canals. Usually uses silt substrates.	No. The minnow occurs in the Rio Grande which is located to the west and downstream of KAFB.

Source: USFWS 2023b; NatureServe 2023
KAFB = Kirtland Air Force Base

Table 3.5-5 summarizes the additional state-listed species occurring in Bernalillo County, in which KAFB is located.

Table 3.5-5. New Mexico Special Status Species with Potential to Occur within KAFB

Species	State Status	Habitat	Expected to Occur in Proposed Beddown Site?
Mammals			
Mexican wolf (*Canis lupus baileyi*)	Endangered	Associated with high mountain country with montane coniferous forests.	No. The proposed beddown site is located within a well-developed portion of KAFB. No suitable habitat for this species exists within or adjacent to the proposed beddown site.
Spotted bat (*Euderma maculatum*)	Threatened	Prefer meadows in subalpine coniferous forests, including pinyon-juniper woodlands.	No. The proposed beddown site is located within a well-developed portion of KAFB. No suitable habitat for this species exists within or adjacent to the proposed beddown site.
Birds			
Common black-hawk (*Buteogallus anthracinus*)	Threatened	Mature, riparian, deciduous woodlands, especially those containing cottonwoods.	No. Per Section 3.2.1.2, no surface water features are located within 0.5 mile of the proposed beddown site.
Bald eagle (*Haliaeetus leucocephalus*)	Threatened	Primarily found near streams and lakes in New Mexico.	No. Per Section 3.2.1.2, no surface water features are located within 0.5 mile of the proposed beddown site.
American peregrine falcon (*Falco peregrinus anatum*)	Threatened	May be found in a variety of forest habitats. In New Mexico, breeding territories center on	No. The proposed beddown site is located within a well-developed portion of KAFB. No suitable habitat

Species	State Status	Habitat	Expected to Occur in Proposed Beddown Site?
		cliffs located within wooded areas.	for this species exists within or adjacent to the proposed beddown site.
Gray vireo (*Vireo vicinior*)	Threatened	Preferred habitat includes juniper and deciduous scrub with scattered pinyon and juniper trees.	Possible. This species is known to occur across KAFB. While the proposed beddown site is located in a disturbed, well-developed area of the installation, species territories may encompass the proposed beddown site.
Fish			
Bigscale logperch (*Percina macrolepida*)	Threatened	Typically found in larger streams with strong, non-turbulent flows, but also found in impoundments. Preferred substrate varies from silt to rubble.	No. Per Section 3.2.1.2, no surface water features are located within 0.5 mile of the proposed beddown site.
Plants			
Great Plains lady's tresses (*Spiranthes magnicamporum*)	Endangered	Wetlands and along streams at elevations of 4,560 to 6,500 feet.	No. Per Section 3.2.1.2, no surface water features are located within 0.5 mile of the proposed beddown site.

Source: NHNM 2023; BISON-M 2023; New Mexico Rare Plants 2023
KAFB = Kirtland Air Force Base

Migratory Birds

Per the USFWS IPaC results, 10 migratory birds of conservation concern may occur within the ROI. The bald eagle and golden eagle also may be found in the ROI but are not birds of conservation concern in this area; these species instead warrant special attention under the Bald and Golden Eagle Protection Act. Table 3.5-6 identifies the migratory birds of conservation concern identified by IPaC for KAFB.

Birds migrating through the area may occasionally stop at or near the project area to rest or forage. However, because the project area contains minimal vegetation, is primarily dominated by mowed or maintained grassland, and has high levels of human disturbance, the proposed beddown site is not an important migratory stopover for most birds relative to other areas.

Table 3.5-6. Migratory Bird Species with Potential to Occur within KAFB

Species	Breeding Season in Area	Breeding Habitat	Expected to Occur in Proposed Beddown Site?
Bald eagle (*Haliaeetus leucocephalus*)	December 1 – August 31	Breeding habitat includes areas close to coastal areas, bays river, lakes, reservoirs, or other bodies of water. Nests in tall trees, on pinnacles, or on cliffs near water. Eagles have been observed utilizing PaSFB canals on occasion.	No. Per Section 3.2.1.2, no surface water features are located within 0.5 mile of the proposed beddown site.
Black-chinned sparrow (*Spizella atrogularis*)	April 15 – July 31	Breeding habitat includes chaparral, sagebrush, arid scrub, gentle hillsides, rocky slopes, or brushy canyons.	No. The proposed beddown site is located within a highly developed portion of the installation. While vegetation does exist within the project area, the low-quality habitat is not expected to support suitable breeding habitat for this species.

Species	Breeding Season in Area	Breeding Habitat	Expected to Occur in Proposed Beddown Site?
Cassin's finch (*Haemorhous cassinii*)	May 15 – July 15	Habitat includes open coniferous forest. Nests are usually found in conifers and at the outer end of a limb.	No. The proposed beddown site is located within a highly developed portion of the installation. While vegetation does exist within the project area, the low-quality habitat is not expected to support suitable breeding habitat for this species.
Clark's nutcracker (*Nucifraga columbiana*)	January 15 – July 15	Habitat includes open coniferous forest or forest edge, primarily in mountains. Nests on outer end of conifer branch.	No. The proposed beddown site is located within a highly developed portion of the installation. While vegetation does exist within the project area, the low-quality habitat is not expected to support suitable breeding habitat for this species.
Evening grosbeak (*Coccothraustes vespertinus*)	May 15 – August 10	Habitat includes coniferous (spruce and fir) and mixed coniferous-deciduous woodland. Nests in dense foliage of deciduous or conifer tree.	No. The proposed beddown site is located within a highly developed portion of the installation. While vegetation does exist within the project area, the low-quality habitat is not expected to support suitable breeding habitat for this species.
Golden eagle (*Aquila chrysaetos*)	December 1 – August 31	Habitat includes open and semi-open country, especially in hilly or mountainous terrain. Nests are often located on rock ledges of cliffs, but sometimes in large trees, on steep hillsides, or on the ground.	No. The proposed beddown site is located within a highly developed portion of the installation. While vegetation does exist within the project area, the low-quality habitat is not expected to support suitable breeding habitat for this species.
Grace's warbler (*Dendrioca graciae*)	May 20 – July 20	Maintains a breeding territory of 5-16 acres. Nests are well hidden in foliage of ponderosa pine branches located approximately 26-59 feet above the ground.	No. The proposed beddown site is located within a highly developed portion of the installation. While vegetation does exist within the project area, the low-quality habitat is not expected to support suitable breeding habitat for this species.
Lewis's woodpecker (*Melanerpes lewis*)	April 20 – September 30	Breeding habitat includes open forest and woodland with a brushy understory and ground cover. In the western U.S., closely associated with open ponderosa pine forest. Tends to nest in a natural or abandoned cavity rather than excavate a new one.	No. The proposed beddown site is located within a highly developed portion of the installation. While vegetation does exist within the project area, the low-quality habitat is not expected to support suitable breeding habitat for this species.
Long-eared owl (*Asio otus*)	March 1 – July 15	Habitat includes deciduous and evergreen forests, orchards, wooded parks, and woods near water. Nests are usually located in trees and were previously abandoned by other birds or squirrels. However, sometimes nests are located in a tree cavity or, rarely, on the ground.	No. The proposed beddown site is located within a highly developed portion of the installation. Per Section 3.2.1.2, no surface water features are located within 0.5 mile of the proposed Deltas 11 and 12 beddown site. While vegetation does exist within the project area, the low-quality habitat is not

Species	Breeding Season in Area	Breeding Habitat	Expected to Occur in Proposed Beddown Site?
			expected to support suitable breeding habitat for this species.
Olive-sided flycatcher (*Contopus cooperi*)	May 20 – August 31	Breeding habitat includes forests and woodlands, especially in burned-over areas. Nests in dead standing trees, most often in conifers.	No. The proposed beddown site is located within a highly developed portion of the installation. While vegetation does exist within the project area, the low-quality habitat is not expected to support suitable breeding habitat for this species.
Pinyon jay (*Gymnorhinus cyanocephalus*)	February 15 – July 15	Habitat includes pinyon-juniper woodlands. Nests are located in shrubs or trees, such as pine, oak, or juniper.	No. The proposed beddown 1 site is located within a highly developed portion of the installation. While vegetation does exist within the project area, the low-quality habitat is not expected to support suitable breeding habitat for this species.
Virginia's warbler (*Leiothlypis virginiae*)	May 1 – July 31	Breeding habitat includes brushy, steep mountain slopes within or near dry coniferous woodlands. Nests are located on the ground under vegetation.	No. The proposed beddown site is located within a developed portion of the installation and does not contain steep mountain slopes. No suitable breeding habitat occurs within the proposed beddown site.

Source: USFWS 2023b; NatureServe 2023; NMACP 2021
KAFB = Kirtland Air Force Base

3.4.1.3 SSFB

Vegetation

Two natural plant communities are found within SSFB: shortgrass prairie and wet grassland meadows (DAF 2022a). While some disturbance has previously occurred within the proposed beddown site, the site remains undeveloped. Existing vegetation can still likely be classified as shortgrass prairie. This community is dominated by two species (buffalo grass [*Buchloe dactyloides*] and blue grama [*Bouteloua gracilis*]), which together comprise 70 to 90 percent of the vegetation. Additional species potentially found in this community include yucca (Y*ucca glauca*), pricklypear cactus (*Opuntia humifusa*), prairie zinnia (*Zinnia grandiflora*), scarlet globemallow (*Sphaeralcea coccinea*), plains blackfoot (*Melampodium leucanthum*), slimflower scurfpea (*Psoralea tenuiflora*), skunkbrush (*Rhus aromatic*), and tree cholla (*Opuntia immbricata*) (Wrangle 2023).

Wildlife

Species most likely to be encountered near the proposed beddown site include those highly adaptable species common to disturbed areas, including small mammals, such as squirrels and birds that tolerate human activity. All species documented on within SSFB are listed in Appendix C of the installation's INRMP (DAF 2022a). Species that may be encountered within the plant communities comprising SSFB include pronghorn (*Antilocapra americana*), white-tailed deer (*Odocoileus virginianus*), black-tailed prairie dog (*Cynomys ludovicianus*), swift fox (*Volpes velox*), mountain lion (*Puma concolor*), northern pocket gopher (*Thomomys talpoides*), mountain plover (*Charadrius montanus*), northern bobwhite (*Colinus virginianus*), Texas horned lizard (*Phrynosoma cornutum*), western diamondback rattlesnake (*Crotalus atrox*), massasauga (*Sistrurus catenatus*), plains leopard frog (*Rana blairi*), and northern cricket frog (*Acris crepitans*) (Wrangle 2023).

Special Status Species

The USFWS's IPaC system was queried for federally listed, proposed, or candidate threatened and endangered species and designated critical habitats potentially occurring within the SSFB. The species list generated by the database search includes a total of seven species (one mammal, two birds, two fish, and one plant; see Table 3.5-7). Table 3.5-7 also includes a brief assessment of each species' likelihood of occurrence in project area based on the species' range/distribution and habitat requirements. There is no USFWS-designated critical habitat for any of these species within SSFB.

Table 3.5-7. Federal Special Status Species with Potential to Occur within SSFB

Species	Federal Status	Habitat	Expected to Occur in Proposed Beddown Site?
Mammals			
Gray wolf (*Canis lupus*)	Endangered	No particular habitat preference. Young are born in underground burrows. A minimum of 10,000-13,000 square kilometers with low road density might be needed to support a viable population.	Unlikely. Human activity would deter this species from the area surrounding SSFB. It would be highly unlikely to encounter this species within the installation, even if suitable habitat were located nearby.
Birds			
Eastern black rail (*Laterallus jamaicensis* ssp. *jamaicensis*)	Threatened	Found among dense vegetation near water. Suitable habitats may be saline, brackish, or freshwater.	No. Per Section 3.2.1.3, no surface water features occur within the beddown site, and the only surface waters located within 0.5 mile of the site are ephemeral.
Piping plover (*Charadrius melodus*)	Threatened	Usually occur on ocean beaches or on sand or algal flats in protected bays. Winters in the southern U.S. and migrates north to breed.	No. Per Section 3.2.1.3, no surface water features occur within the beddown site, and the only surface waters located within 0.5 mile of the site are ephemeral.
Fish			
Greenback cutthroat trout (*Oncorhynchus clarkia stomias*)	Threatened	Clear, swift-flowing mountain streams with cover. Spawns in riffles.	No. Per Section 3.2.1.3, no surface water features occur within the beddown site, and the only surface waters located within 0.5 mile of the site are ephemeral.
Pallid sturgeon (*Scaphirhynchus albus*)	Endangered	Occupies large, turbid, free-flowing riverine habitats and is often found in strong current over firm gravel or sandy substrate.	No. Per Section 3.2.1.3, no surface water features occur within the beddown site, and the only surface waters located within 0.5 mile of the site are ephemeral.
Plants			
Ute Ladies'-tresses (*Spiranthes diluvialis*)	Threatened	Occurs in moist or wet habitats with low levels of competition for resources due to periodic or recent disturbance. More than half of documented populations occur in sites where natural hydrology has been affected by dams, reservoirs, or irrigation.	No. Per Section 3.2.1.3, no surface water features occur within the beddown site, and the only surface waters located within 0.5 mile of the site are ephemeral.

Source: USFWS 2023b, 2023d; NatureServe 2023
SSFB = Schriever Space Force Base

Table 3.5-8 summarizes the additional state-listed species occurring in El Paso County, in which SSFB is located.

Table 3.5-8. Colorado Special Status Species with Potential to Occur within SSFB

Species	State Status	Habitat	Expected to Occur in Proposed Beddown Site?
Mammals			
River otter (*Lontra canadensis*)	Threatened	Associated with water habitats includes streams, lakes, ponds, swamps, and marshes. When inactive, may be found in hollow logs, under roots, or in dense thickets.	No. Per Section 3.2.1.3, no surface water features occur within the beddown site, and the only surface waters located within 0.5 mile of the site are ephemeral.
Birds			
Burrowing owl (*Athene cunicularia*)	Threatened	High, sparsely vegetated, sandy ground. Natural habitats include dry prairie and sandhills; however, this species makes extensive use of areas such as pastures, airports, parks, school grounds, and road rights-of-way.	Possible. This species utilizes disturbed habitats, such as those found across the installation.
Least tern (*Sterna antillarum*)	Endangered	Associated with water. Nests on riverine sandbars or salt flats.	No. Per Section 3.2.1.3, no surface water features occur within the beddown site, and the only surface waters located within 0.5 mile of the site are ephemeral.
Fish			
Arkansas darter (*Etheostoma cragini*)	Threatened	Prefers spring-fed headwaters and creeks with cool, clear, shallow water, slow current, and herbaceous aquatic vegetation. Often found in pools with a substrate of sand, fine gravel, or detritus.	No. Per Section 3.2.1.3, no surface water features occur within the beddown site, and the only surface waters located within 0.5 mile of the site are ephemeral.
Southern redbelly dace (*Chrosomus erythrogaster*)	Endangered	Headwaters and upland creeks with clear water. Spawning occurs in shallow water near riffles among gravel.	No. Per Section 3.2.1.3, no surface water features occur within the beddown site, and the only surface waters located within 0.5 mile of the site are ephemeral.

Source: CPW 2023a, 2023b; NatureServe 2023
SSFB = Schriever Space Force Base

Although not federally-protected, the prairie dog is an integral component of the shortgrass prairie biotic community, and the ecosystem that is maintained by the prairie dog is valuable to many other species, with over 100 species of vertebrate wildlife reportedly using prairie dog colonies as habitat. This includes the federally-endangered black-footed ferret (*Mustela nigripes*), not located at SSFB, and state-threatened burrowing owl. Prairie dog burrows also act as aquifers that prevent water from eroding land while helping to cool it and can affect ecosystem processes such as disturbance and nutrient cycling rates. Prairie dogs (see USEPA letter dated July 14, 2023 in Appendix A).

Migratory Birds

Per the USFWS IPaC results, four migratory birds of conservation concern may occur within the ROI. The bald eagle and gold eagle also may be found within SSFB but are not birds of conservation concern in this area; these species instead warrant special attention under the Bald

and Golden Eagle Protection Act. Table 3.5-9 identifies the migratory birds of conservation concern identified by IPaC for SSFB.

Birds migrating through the area may occasionally stop at or near the project area to rest or forage. However, because the project area contains minimal vegetation, is primarily dominated by mowed or maintained grassland, and has high levels of human disturbance, the Delta 12 beddown site is not an important migratory stopover for most birds relative to other areas.

Table 3.5-9. Migratory Bird Species with Potential to Occur within SSFB

Species	Breeding Season in Area	Breeding Habitat	Expected to Occur in Proposed Beddown Site?
Bald eagle (*Haliaeetus leucocephalus*)	December 1 – August 31	Breeding habitat includes areas close to coastal areas, bays river, lakes, reservoirs, or other bodies of water. Nests in tall trees, on pinnacles, or on cliffs near water.	No. Per Section 3.2.1.3, no surface water features occur within the beddown site, and the only surface waters located within 0.5 mile of the site are ephemeral.
Ferruginous hawk (*Buteo regalis*)	March 15 – August 15	Nesting sites depend on available substrates and surrounding land use. If nesting on the ground, locations are generally located far from human activities and on elevated landforms in large grasslands. If nesting in trees, lone or peripheral trees are preferred over densely wooded areas.	No. While the area within and immediately surrounding the beddown site remains undeveloped, no trees exist within the project area. Furthermore, adjacent roadways and the nearby presence of humans would deter breeding within the project area.
Golden eagle (*Aquila chrysaetos*)	December 1 – August 31	Habitat includes open and semi-open country, especially in hilly or mountainous terrain. Nests are often located on rock ledges of cliffs, but sometimes in large trees, on steep hillsides, or on the ground.	Unlikely. While the land area surrounding the beddown site would be considered open, suitable nesting habitat is not expected to be found within the project area due to lack of trees or rocky cliffs or ledges.
Long-billed curlew (*Numenius americanus*)	April 1 – July 31	Breeding habitat includes prairies and grassy meadows, generally wear water. Nests are located on the ground, usually in a flat area with short grass and often near rock.	No. Per Section 3.2.1.3, no surface water features occur within the beddown site, and the only surface waters located within 0.5 mile of the site are ephemeral.
Mountain plover (*Charadrius montanus*)	April 15 – August 15	Nesting habitat includes high plains, shortgrass prairies, and desert tablelands. Nesting areas are characterized by very short vegetation, significant areas of bare ground, and flat or gentle slopes.	Possible. Suitable nesting habitat may occur within or adjacent to the beddown site.
Red-headed woodpecker (*Melanerpes erythrocephalus*)	May 10 – September 10	Habitat includes open woodlands (especially with beech or oak), open situations with scattered trees, parks, cultivated areas, and gardens. Nests in a hole excavated in a live tree, dead stub, utility pole, or fencepost.	No. Due to lack of trees and vegetation, no suitable habitat for this species would be expected within and adjacent to the beddown site.

Source: USFWS 2023c; NatureServe 2023
SSFB = Schriever Space Force Base

3.4.2 Environmental Consequences

Impacts to biological resources would be considered significant in the event that the Proposed Action caused the long-term loss, degradation, or loss of diversity within unique or high-quality

plant communities; unpermitted "take" of federally listed species; local extirpation of rare or sensitive species not currently listed under the ESA; unacceptable loss of critical habitat, as determined by the USFWS; or a violation of the MBTA or BGEPA.

3.4.2.1 Delta 10 Beddown Alternative 1 – PaSFB

Vegetation

Construction of Delta 10 Beddown Alternative 1 would have less than significant, direct adverse impacts on vegetation. Approximately 5.7 acres of the 13.7-acre site are currently developed and support Buildings 989 and 984. These buildings would not be affected by the Proposed Action, but the area could support parking requirements for Delta 10. The remaining 8 acres contains open space that was previously developed. This disturbed area supports limited, low-quality vegetation that does not represent historic, native vegetation communities. While construction would disturb or remove existing vegetation from these 8 acres, no meaningful loss of habitat or impact to overall native vegetation would occur. Grass and other landscaping would be replaced following construction using native species and seed mixes.

No further impacts to vegetation would occur during operations of the Proposed Action.

Wildlife

Construction of Delta 10 Beddown Alternative 1 would have less than significant, direct adverse impacts on local wildlife. Construction would remove existing vegetation and disturb wildlife inhabiting the 8 acres of the proposed site that are currently undeveloped. However, this area was previously developed and is located within a highly developed military installation. The limited vegetation currently present within the proposed Delta 10 Beddown Alternative 1 site generally consists of maintained grass and landscaping and does not represent high-quality habitat for wildlife.

Construction would occur in a previously disturbed area with frequent human activity; therefore, impacts to wildlife, including migratory birds, would be less than significant, as most species that inhabit areas near proposed Delta 10 Beddown Alternative 1 site either are tolerant of humans and vehicle traffic or are able to relocate to nearby areas of suitable habitat. Species may temporarily relocate during construction, but the species that currently utilize the area are likely to return following the construction period and would not be permanently displaced by the human activity. No further impacts to wildlife would occur during operations of the Proposed Action. The change in noise associated with operation would be less than significant in relation to the current, industrial nature of the area.

Special Status Species

Tables 3.5-1 and 3.5-2 identify the potential for the special status species that may occur within the project area based on extent of species range and available of potentially suitable habitat. Table 3.5-10 summarizes the potential direct and indirect effects to each of these species that may occur during construction and operation of Delta 10 Beddown Alternative 1. DAF has provided the USFWS with a copy of this Draft EA and expects USFWS to concur with these determinations.

Table 3.5-10. Potential Effects to Special Status Species

Species	Status	Potential Impact Rating	Potential Impact Summary
American crocodile (*Crocodylus acutus*)	Federally Threatened	Less than Significant	No suitable habitat for this species exists within or adjacent to the proposed Delta 10 beddown site. As such, construction would not reduce the overall amount of available habitat. A crocodile, however, has been confirmed in the local area and could end up on PaSFB. Effects may occur if the crocodile were to move through

Species	Status	Potential Impact Rating	Potential Impact Summary
			the area during construction. However, human activity and disturbance are likely to deter the presence of crocodiles during construction. PaSFB has determined the Proposed Action would not likely adversely effect this species.
Hawksbill sea turtle (*Eretmochelys imbricata*) Leatherback sea turtle (*Dermochelys coriacea*) Kemps ridley sea turtle (*Lepidochelys kempii*)	Federally Endangered	Less than Significant	The Proposed Action is not expected to adversely affect these species. While these species have been documented nesting on PaSFB beaches, proposed construction activities would occur within a developed military installation. As such, construction would not reduce the overall amount of available habitat. No direct impacts would occur. Indirect impacts are expected from noise and lighting with construction and final operation of beddown of Delta 10. PaSFB is consulting with the USFWS for a may effect but is not likely to adversely effect determination with adherence of the light management requirements within the SLD 45 USFWS Biological Opinion 41910-2009-F-0087.
Green sea turtle (*Chelonia mydas*) Loggerhead sea turtle (*Caretta caretta*)	Federally Threatened	Less than Significant	The Proposed Action is not expected to adversely affect these species. While these species have been documented nesting on PaSFB beaches, proposed construction activities would occur within a developed military installation. As such, construction would not reduce the overall amount of available habitat. No direct impacts would occur. Indirect impacts are expected from noise and lighting with construction and final operation of beddown of Delta 10. PaSFB is consulting with the USFWS for a may effect but is not likely to adversely effect determination with adherence of the lighting management requirements within the SLD 45 USFWS Biological Opinion 41910-2009-F-0087.
Eastern indigo snake (*Drymarchon couperi)*	Federally Threatened	Less than Significant	Although limited suitable habitat exists, this species is extremely rare and hasn't been observed at PaSFB for more than 5 years. PaSFB is consulting with the USFWS for a may effect but is not likely to adversely effect determination with adherence to construction site awareness and protection requirements (see discussion following table).
Least tern (*Sterna antillarum*)	State Threatened	Less than Significant	The Proposed Action is not expected to adversely affect this species. While this species has been observed nesting on flat gravel roofs on the installation and may occur in the vicinity of the proposed Delta 10 Beddown Alternative 1 site, the number of nests has declined over the last 5 years. If construction were to occur within the least tern breeding season (approximately mid-April – July), PaSFB would survey flat roofs of buildings within and adjacent to the Delta 10 Beddown Alternative 1 location to determine the potential presence of least tern nests. If nests are located within the area that would be directly affected by construction or indirectly affected due to the associated noise, construction activities would be rescheduled to occur outside of the breeding season.

Species	Status	Potential Impact Rating	Potential Impact Summary
Black Skimmer (*Rynchops niger*)	State Threatened	Less than Significant	The Proposed Action may affect but is not likely to adversely affect this species. If construction were to occur within the black skimmer breeding season (approximately mid-April – July), PaSFB would survey flat roofs of buildings within and adjacent to the Delta 10 Beddown Alternative 1 location to determine the potential presence of nests. If nests are located within the area that would be directly affected by construction or indirectly affected due to the associated noise, construction activities would be rescheduled to occur outside of the breeding season.
Florida burrowing owl (*Athene cunicularia floridana*)	State Threatened	Less than Significant	The Proposed Action may affect but is not likely to adversely affect this species. While this species has been documented on PaSFB and may occur in the vicinity of the proposed Delta 10 Beddown Alternative 1 site, proposed construction activities would occur within a developed military installation. As such, construction would not reduce the overall amount of available habitat. No direct impacts would occur. Indirect impacts expected from noise, ground disturbance, or temporary displacement of prey species during construction.
Gopher tortoise (*Gopherus polyphemus*)	State Threatened	Less than Significant	The Proposed Action may affect but is likely to adversely affect this species. While this species may occur in the vicinity of the proposed Delta 10 Alternative 1 site, proposed construction activities would occur within a developed military installation. As such, construction would not reduce the overall amount of available habitat. No direct impacts would occur. Indirect impacts expected from noise, ground disturbance, or temporary displacement of preferred plant species during construction.

PaSFB = Patrick Space Force Base

While no suitable habitat for the American crocodile occurs within or adjacent to the proposed construction area, a crocodile has been observed within the local area. It is possible that this individual could enter PaSFB and traverse the proposed Delta 10 beddown site while moving from one area of suitable habitat to another. Potential impacts to this species would be avoided through conduct of a pre-construction survey to determine the potential presence at the time of construction.

Construction personnel would be provided an Eastern indigo snake poster to maintain at the construction site for awareness and would be made familiar of the snake protection requirements. Any indigo snakes observed within the project area must be allowed to move off site on their own; all sightings must be reported to Space Force Environmental Conservation (45 CES/CEIE). If an indigo snake refuses to leave a construction site, all activities must cease and site personnel would contact 45 CES/CEIE immediately for coordination with USFWS and relocation out of the construction zone.

Construction and lighting designs may affect but are not likely to adversely affect sea turtles because design would meet approved requirements. SLD 45 has previously consulted with the USFWS on this issue, which resulted in SLD 45 Biological Opinion 41910-2009-F-0087 directing certain lighting design requirements. SLD 45 will ensure the following design requirements directed by that BO are met: the use of shielded, downward-directed true-color amber LED fixtures, fixtures set at minimal heights, and application of facility glass tinting with 30-15 percent visible light transmittance.

The FWC has developed conservation measures and permitting guidelines for the Florida burrowing owl. The FWC requires an incidental take permit if an activity were to include any of the following (FWC 2018):

- Causing injury or death of burrowing owl adults, eggs, or young.
- Collapsing a potentially occupied burrow or blocking the entrance of a potentially occupied burrow in a manner that prevents an owl from entering or exiting the burrow.
- Disturbances within 10 feet of a potentially occupied burrow entrance at any time of the year.
- Disturbances within 33 feet of a potentially occupied burrow entrance during the breeding season (February 15 – July 10).
- Intentionally and repeatedly forcing burrowing owls to fly or to exhibit signs of stress.
- Capturing, handling, and collecting burrowing owls or eggs.
- Use of a burrow scope within a potentially occupied burrow.
- Significant habitat modification, meaning an activity that results in the loss of greater than 50 percent of the total foraging habitat within a 1,970-foot radius circle around a potentially occupied burrow.

In addition to avoidance measures to avoid potential take of Florida burrowing owls, the FWC guidelines also outline recommended conservation practices that could benefit the species (FWC 2018). These recommended measures would also be implemented during construction and operation of the Proposed Action.

The PaSFB INRMP outlines recommended management guidelines that the installation implements to reduce impacts to protected species. For the gopher tortoise, these guidelines include (DAF 2020a):

- Avoid relocating gopher tortoises when possible;
- Implementing a gopher tortoise relocation plan when relocating gopher tortoises is necessary;
- Maintain a 25-foot boundary (at a minimum) around all gopher tortoise burrows within the vicinity of operations that have the potential to collapse burrows;
- Identify burrows with high-visibility signs indicating the 25-foot boundary where gopher tortoises will not be relocated during construction or operations;
- Control invasive and exotic species and noxious weeds through early detection, isolation of infested areas, and control individual plants with physical, chemical, or mechanical means, depending on the species.

Due to the location of the Delta 10 Beddown Alternative 1 site and with implementation of avoidance measures, there would be no anticipated adverse impacts to special status species.

Cumulative Impacts

As discussed above, Delta 10 beddown at PaSFB would result in less than significant impacts to biological resources. Projects identified in Appendix C would cause the potential for adverse impacts these resources from construction due to vegetation disturbance and loss of habitat and noise. The relocation of the STARCOM HQ to PaSFB would generate similar impacts to the proposed Delta 10 beddown including direct impacts of habitat loss and indirect impacts of noise from construction. These impacts cumulatively would remain less than significant due to the low-quality habitat at the project site and would be confined within the 13.7-acre site.

Lighting impacts within PaSFB from proposed projects may have the potential to impact sea turtles with sky glow and extensive illumination. The lighting designs would follow the SLD 45 USFWS Biological Opinion 41910-2009-F-0087 for light management. SLD 45 would evaluate lighting designs for compliance with the fixture selection and would include separate consultations with USFWS should light management plans be required. Construction and lighting designs may affect but are not likely to adversely affect sea turtles as long as light management requirements such as use of shielded, downward directed true color amber LED fixtures set at minimal heights, and application of facility glass tinting with 30-15 percent visible light transmittance occurs.

Measures for protection of state special status species documented at PaSFB including the Southeastern indigo snake, least tern, burrowing owl and gopher tortoise would be enacted for projects where these species may be present. The Proposed Action would result in less than significant adverse impacts to vegetation and wildlife with the potential disturbance of up to 8 acres, however, no meaningful loss of habitat or impact to overall native vegetation communities would occur. Noise generated from construction would be temporary. Projects identified in Appendix C would cause the potential for adverse impacts to vegetation and wildlife from loss of or disturbance to habitat during construction. Overall, cumulative effects would be less than significant as the projects would comply with site-restoration standards including use of native mixes following temporary construction-related disturbance.

3.4.2.2 Delta 11 Beddown Alternative 1a – KAFB

Vegetation

Renovations and operation of Delta 11 Beddown Alternative 1a would have no anticipated effect on vegetation as this alternative would only require minimal renovations/modernizations of existing facilities. No new disturbance of existing vegetation would be required.

Wildlife

Renovations and operation of Delta 11 Beddown Alternative 1a would have no anticipated effect on wildlife as this alternative would only require minimal renovations/modernizations of existing facilities.

Special Status Species

Tables 3.5-4 and 3.5-5 identify the potential for the special status species that may occur within the project area based on extent of species range and available of potentially suitable habitat. Table 3.5-11 summarizes the potential direct and indirect effects to species that may occur during renovation and operation of Delta 11 Beddown Alternative 1a.

Table 3.5-11. Potential Effects to Special Status Species

Species	Status	Potential Impact Rating	Potential Impact Summary
Gray vireo (*Vireo vicinior*)	State Threatened	Less than Significant	While this species may occur in the vicinity of the proposed Delta 11 Beddown Alternative 1a site, this alternative would only require renovation of existing facilities. No nesting or foraging habitat for this species would be affected during renovation or operation.

Cumulative Impacts

The proposed beddown at KAFB would have no impacts to biological resources, therefore, no cumulative effects would occur.

3.4.2.3 Delta 11 Beddown Alternative 1b – SSFB

Adverse impacts from construction and operations and cumulative impacts to biological resources would be similar to those discussed under Section 3.4.2.4 (less than significant) as this alternative would use the same site at SSFB.

3.4.2.4 Delta 12 Beddown Alternative 2a – SSFB

Vegetation

Construction of Delta 12 Beddown Alternative 2a would have less than significant, direct adverse impacts on vegetation. Proposed construction activities would occur on approximately 6 acres of vacant land. The site supports limited, low-quality vegetation. While construction would disturb or remove existing vegetation from these 6 acres, no meaningful loss of habitat or impact to overall native vegetation communities would occur. Removed vegetation would be replaced following construction using native species and seed mixes. Additional temporary disturbance to soils would occur at the proposed Modular Facilities Campus Area where temporary modular structures would be placed for Delta 12 personnel as permanent facilities are being constructed. Vegetation withing this area would be removed for the placement of the modular structures and the site would be restored with native vegetation at the completion of facility construction within the 6-acre site.

No further impacts to vegetation would occur during operations of the Proposed Action.

Wildlife

Construction of Delta 12 Beddown Alternative 2a would have less than significant, direct impacts on local wildlife. Construction would remove existing vegetation and disturb wildlife inhabiting the 6-acre vacant site and within the proposed Modular Facilities Campus Area. However, this area is located within an active military installation, currently experiences human activity, and is bordered by an existing roadway. The limited vegetation currently present within the proposed Delta 12 beddown site generally represents low-quality habitat for wildlife.

Construction would occur in an area with ongoing human activity; therefore, impacts to wildlife, including migratory birds, would be less than significant, as most species that inhabit areas near the proposed Delta 12 Beddown Alternative 2a site either are tolerant of humans and vehicle traffic or are able to relocate to nearby areas of suitable habitat. Species may temporarily relocate during construction, but those species that currently utilize the area are likely to return following the construction period and would not be permanently displaced by the human activity.

No further impacts to wildlife would occur during operations of the Proposed Action. The change in noise associated with operation would be less than significant in relation to the ongoing operations of the installation.

Special Status Species

Tables 3.5-7 and 3.5-8 identify the potential for the special status species that may occur within the project area based on extent of species range and available of potentially suitable habitat. Table 3.5-12 summarizes the potential direct and indirect effects to species that may occur during construction and operation of Delta 12 Beddown Alternative 2a.

Table 3.5-12. Potential Effects to Special Status Species

Species	Status	Potential Impact Rating	Potential Impact Summary
Gray wolf (Canis lupus)	Endangered	Less than Significant	The Proposed Action is not expected to adversely affect this species. Human activity would deter this species from the area surrounding SSFB and within or adjacent to any construction sites.
Burrowing owl (*Athene cunicularia*)	State Threatened	Less than Significant	The Proposed Action is not expected to adversely affect this species. While this species may occur in the vicinity of the proposed Delta 12 Beddown Alternative 2a site, potential impacts would be reduced or avoided through implementation of *Recommended Survey Protocol and Actions to Protect Nesting Burrowing Owls* (see discussion following table). No direct impacts would occur. Indirect impacts are expected from noise, ground disturbance, or temporary displacement of prey species during construction.

Colorado Parks and Wildlife, Department of Natural Resources has released "*Recommended Survey Protocol and Actions to Protect Nesting Burrowing Owls*" (CPW 2021). As burrowing owls are associated with prairie dog burrows in Colorado, this protocol outlines methods to survey prairie dog burrows for the potential presence of nesting burrowing owls. These measures include, among others:

- Conducting surveys when burrowing owls may be present on prairie dog towns (i.e., between March 15 and October 31);
- Conducting surveys in early morning or late evening; and
- Conducting at least three surveys, occurring approximately 1 week apart) at each survey point.

If burrowing owls are confirmed to be nesting within the Delta 12 beddown site, the installation would proceed with construction in accordance with the recommended timing and monitoring measures by the state to minimize impact to these species (CPW 2021). This could include avoidance ground disturbance between March 15 and October 31 or placing a buffer during construction surrounding known nesting locations.

With implementation of avoidance measures, implementation of Delta 12 Beddown Alternative 2a is not expected to adversely affect burrowing owls.

Additionally, DAF recognizes the importance of prairie dogs to the structure and function of native prairie systems and the diversity the native prairie ecosystem supports. If present, prairie dogs would be removed from the project areas prior to construction activities, following the methods described in the SSFB INRMP to further minimize adverse effects.

Cumulative Impacts

As discussed above, Delta 12 beddown at SSFB would result in less than significant impacts to biological resources. Projects identified in Appendix C would cause the potential for adverse impacts these resources from construction due to vegetation disturbance and loss of habitat and noise. The relocation of the STARCOM HQ to SSFB would generate similar impacts to the proposed Delta 12 beddown including direct impacts of habitat loss and indirect impacts of noise from construction. These impacts cumulatively would remain less than significant and confined to the 6-acre project site. Overall, cumulative effects would be less than significant as the projects

would comply to site-restoration standards including use of native mixes following temporary construction and training-related disturbance.

3.4.2.5 Delta 12 Beddown Alternative 2b – KAFB

Impacts from renovations and operations and cumulative impacts to biological resources would be similar to those discussed under Section 3.4.2.2 (no impact) as this alternative would use the same site at KAFB.

3.4.2.6 No Action Alternative

Under the No-Action Alternative, none of the proposed construction or renovation activities would occur; therefore, there would be no change to biological resource conditions within or adjacent to the site boundaries described above.

3.5 Noise

3.5.1 Affected Environment

3.5.1.1 PaSFB

The primary sources of consistent noise near the project sites are vehicular traffic on Highway A1A and State Route 404, training exercises and aircraft activities on the on-base airfield. Flight operations and training exercises occur in the airfield north and west of the project sites. Aircraft flyovers from the airfield can result in intermittent, acute increases in noise levels over short periods of time.

Under implementation of the Air Installation Compatible Use Zone (AICUZ) program, noise modeling studies show that noise contours around the airfield range from 65 decibels (dB) to 80+ dB day-night average sound level (DNL) and that noise levels exceeding 65 A-weighted decibel (dBA) DNL occur almost entirely within the PaSFB property boundary, on the open water, or public road corridor right-of-way (45th Space Wing, 2018). The noise modeling results indicate that the 13.7-acre site is located on the 65 dBA contour line and Building 991 is located approximately 5,000 feet outside the 65 dBA contour line.

Table 3.5-1 presents noise-sensitive receptors within a 0.5-mile radius from the 13.7-acre project site and Building 991. The closest receptors are beach users located outside of the installation, approximately 400 feet and 350 feet east of the 13.7-acre project site and Building 991.

Table 3.5-1. Noise-Sensitive Receptors Within 0.5-Mile Radius of the Project Sites at PaSFB

Receptor	Direction from Project Site	Distance from Project Site
13.7-acre Project Site		
Beach (off-base)	east	300 feet
Golf course	southwest	1,500 feet
Residential area	south	1,600 feet
Child-care facility	south	2,300 feet
Building 991		
Beach (off-base)	east	350 feet
Residential area (off-base)	south	380 feet
Residential area	north	600 feet
Medical center	northwest	2,000 feet
Golf course	northwest	2,400 feet

3.5.1.2 KAFB

KAFB consists of a joint-use airfield with the Albuquerque International Sunport, located approximately 1 mile southwest from the project site. As such, aircraft operations from this airfield are a dominant source of noise in the project vicinity. Additionally, vehicle traffic is a consistent source of noise at the project site as it is surrounded by roadways and parking lots. According to a noise study that was conducted in 2022, the project site is located just outside the 65 dBA-contour line projected around the airfield (USAF 2022a).

Table 3.5-2 presents noise-sensitive receptors within 0.5-mile radius of the project site. All of the noise-sensitive receptors identified in the table are located within the installation.

Table 3.5-2. Noise-Sensitive Receptors Within 0.5-Mile Radius of the Project Site at KAFB

Receptor	Direction from Project Site	Distance from Project Site
Athletic fields, local park	northwest	1,600 feet
Local park	northeast	1,700 feet
Daycare facility	north	2,200 feet

Receptor	Direction from Project Site	Distance from Project Site
Elementary school	northwest	2,500 feet
Residential area	northeast	2,500 feet
Residential area	north	2,800 feet

3.5.1.3 SSFB

SSFB is located in a remote region where predominant noise sources are from vehicles and aircraft. Although there is no airfield on SSFB, the project vicinity experiences some increased noise levels from aircraft as it is located near other major installations that conduct flight activities (e.g., U.S. Air Force Academy and Peterson SFB) and, additionally, to the Colorado Springs Airport. The project areas are located within areas designated for administration use; adjacent existing land uses include industrial and community land uses (DAF 2022a). Based on a noise survey of the developed portion of the base, typical noise levels generally range from 30 dBA to 60 dBA (DAF 2022a). The primary source of consistent elevated noise near the project sites is from vehicle traffic on-base and on Highway 94 (located approximately 2 miles north of the project site).

Table 3.5-3 presents noise-sensitive receptors within 0.5-mile radius of the project sites. Both noise-sensitive receptors identified in the table are located within the installation.

Table 3.5-3. Noise-Sensitive Receptors Within 0.5-Mile Radius of the Project Site at SSFB

Receptor	Direction from Project Site	Distance from Project Site
Childcare development center	northwest	1,200 feet
Medical center	northeast	2,200 feet

3.5.2 Environmental Consequences

A noise impact would be significant if it would: 1) violate applicable noise limit guidelines; 2) cause harm or injury to receptors, including on-site workers and nearby communities; or 3) substantially affect normal operations of noise-sensitive receptors during construction or operation of the Proposed Action.

General

***Construction*.** Construction of the Proposed Action would result in temporary increases in ambient noise levels in the vicinity of the project sites on an intermittent basis for all alternatives during the 12 to 18 month facility construction periods and 6 to 12 month facility renovation periods. Noise-generating activities would include the use of construction equipment onsite and vehicles accessing and exiting the project site. The specific types of construction equipment and methods would be similar to those occurring under standard building construction activities. Activities associated with outdoor construction include ground clearing, excavation/grading, and finishing. To estimate potential noise levels at nearby receptors, a conservative estimate of 90 dBA (at 50 feet) was used for the analysis by combining noise levels of several pieces of typical construction equipment and assuming simultaneous use (FTA 2018).

Although noise levels would be loud in the immediate vicinity of a construction site, the intermittent nature of peak construction noise levels would not result in unsafe noise conditions. Adverse noise impacts would be minimized to the extent possible by standard noise control measures, such as project scheduling (e.g., limiting loud construction activities to standard working hours and within a typical 8-hour workday) and using noise controls on equipment (e.g., mufflers). Occupational Safety and Health Administration (OSHA) regulations (e.g., wearing hearing protection and limiting exposure) would be followed to reduce the impact of noise on construction workers. The DAF anticipates that it would adhere to stipulations included in typical noise

ordinances, such as limiting construction to daytime hours and avoiding construction on weekends and holidays.

Vehicles from commuting construction workers and truck shipments of materials, equipment, and wastes would intermittently increase ambient noise levels along major transportation routes. This increase would be temporary and restricted to daytime hours.

Operation. Operation of the Proposed Action at an beddown location would not result in significant adverse impacts as substantial elevated increases in noise levels would not occur. The greatest noise-generating activity would be from new personnel generating increased traffic volumes on the local roadways. As discussed in the following subsections below for each alternative, the intensity and magnitude of noise impacts from traffic would depend on the alternative chosen.

3.5.2.1 Delta 10 Beddown Alternative 1 – PaSFB

Construction Impacts. Construction noise levels at the closest receptor of the 13.7-acre site at PaSFB are estimated to be around 72 dBA at a beach located 400 feet east and 59.8 dBA at housing units located 1,600 feet south of the project site. Although a 72 dBA noise level could cause annoyance for the beach users, the actual noise level would be substantially less as there is a security wall and a row of vegetation between the beach and the project site that would act as sound buffers and reduce construction noise. At 59.8 dBA, the housing units would detect intermittent noise increases that could be considered intrusive outdoors. Standard buildings with windows open and shut would further reduce noise levels indoors by approximately 15 dBA and 25 dBA, respectively (USEPA 1978). Therefore, the estimated indoor noise level could be reduced to approximately 44.8 dBA with windows open and 34.8 dBA with windows shut, which are noise levels considered relatively quiet. Housing units closest to Building 991 would not detect temporary and intermittent increases in noise levels as the activities would be limited to renovation activities. Overall, increases in the ambient noise environment during construction would result in less than significant adverse impacts.

Operation Impacts. During normal operating conditions under Delta 10 Beddown Alternative 1, increases in ambient noise levels would be primarily associated with vehicle traffic from the additional 108 personnel commuting to/from PaSFB (a 1 percent increase of the approximate 10,400 personnel at PaSFB). Detectable increases in noise levels would generally be limited to noise-sensitive receptors on local roadways that would serve as major commuting routes, including Highway 404 and Highway A1A (see Section 3.6). The increased traffic volumes from the new personnel are considered less than significant would generally be limited to the peak a.m. and p.m. commuting hours.

Delta 10 beddown would also require an additional 200 to 600 personnel for wargaming events, occurring on a quarterly basis each year and only over a 10-day period and would contribute to increases in ambient noise levels on the local roadways. It is assumed that some on-base lodging and carpooling would be used by the personnel, which could reduce some of the new traffic-related noise. As this increase in traffic would be temporary, occurring only on a quarterly basis, and generally limited to commuting hours, adverse noise impacts from this increase in personnel from wargaming events would be intermittent and less than significant.

Cumulative Impacts

As described above, the Delta 10 beddown at PaSFB would result in less than significant impacts to the existing noise environment. The projects listed in Appendix C include a range of past, present, and future actions. The staggered timelines of these projects would limit cumulative impacts of noise during construction. Construction of the STARCOM HQ and proposed Delta 10 beddown simultaneously would not result in significant adverse impacts to the noise environment. Similar noise receptors would be affected, however, noise levels for these receptors would not be

anticipated to exceed levels presented within this EA as similar types of equipment and construction activities would occur. Due to the temporary nature of construction noise generated from construction and renovations and the insignificant noise sources generated from increase of traffic compared to existing conditions, no significant cumulative effects would occur from implementation of other projects listed in Appendix C.

3.5.2.2 Delta 11 Beddown Alternative 1a – KAFB

Renovation Impacts. Construction noise generated from the Proposed Action for building renovation at the project site would be relatively low as this alternative would only involve renovation and modernization of existing buildings. As such, that the closest noise-sensitive receptor – outdoor recreational facilities located 1,600 feet northwest of the site – would not detect any increases in ambient noise levels. Intermittent increases in noise levels from trucks and commuting vehicles would occur on roadways leading up to and within the installation. Overall adverse noise impacts are expected to be less than significant and short-term as the additional volume of vehicles would be low and any noise increases would be comparable to or lower than aircraft-generated noise at the Sunport.

Operation Impacts. During normal operating conditions, the only substantial noise source would be from vehicles of commuting personnel. Increases in ambient noise levels would occur from the additional 225 Delta 11 and 64 additional Delta 12 personnel commuting to/from KAFB under normal operating conditions (for a total of 289 new personnel, or a 1 percent increase of the over 23,000 personnel at KAFB). Detectable increases in noise levels would generally be limited to receptors on the local roadways. The 1 percent increase in traffic volumes from the new personnel are considered less than significant and would generally be limited to the peak a.m. and p.m. commuting hours.

Cumulative Impacts

As described above, the Delta 11 beddown at KAFB would result in less than significant impacts to the existing noise environment. The projects listed in Appendix C include a range of past, present, and future actions. The staggered timelines of these projects would limit cumulative impacts of noise during renovation. Due to the temporary nature of construction noise generated from renovations and the insignificant noise sources generated from increase of traffic compared to existing conditions, no significant cumulative effects would occur from implementation of other projects listed in Appendix C.

3.5.2.3 Delta 11 Beddown Alternative 1b – SSFB

Impacts to the noise environment from construction and operations and cumulative impacts would be similar to those discussed under Section 3.5.2.4 (less than significant) as this alternative would use the same site at SSFB. As Deltas 11 and 12 are currently activated at SSFB no additional impacts to the noise environment from operations would occur. A negligible reduction in noise related to traffic (less than 1 percent of the approximate 8,000 personnel at SSFB) would be realized as the 61 personnel associated with Delta 12 HQ and 12 DOS would be permanently located to KAFB (as described in Section 3.5.2.5).

3.5.2.4 Delta 12 Beddown Alternative 2a – SSFB

Construction Impacts. Construction noise levels at the closest noise-sensitive receptor would be a child development center, located 1,200 feet northeast of the project site, which could experience an outdoors noise level of 62.3 dBA. At 62.3 dBA, the development center would detect intermittent noise increases that could be considered intrusive outdoors. Standard buildings with windows open and shut would further reduce noise levels indoors by approximately 15 dBA and 25 dBA, respectively (USEPA 1978). Therefore, the estimated indoor noise level

could be reduced to approximately 47.3 dBA with windows open and 37.3 dBA with windows shut, which are noise levels considered relatively quiet. A medical center approximately 2,200 feet east of the project site would experience short-term and intermittent increases in noise levels. Intermittent increases in noise levels would also occur from trucks and commuting vehicles would occur on roadways leading up to and within the installation. Overall adverse noise impacts are expected to be less than significant.

Operation Impacts. During operations, the only substantial noise source would be from vehicles of commuting personnel. Under the Proposed Action, ambient noise levels would decrease as 225 personnel associated with Delta 11 would relocate to KAFB (a 3 percent decrease of the approximate 8,000 personnel at SSFB), thereby reducing noise levels associated with commuter traffic and noise impacts would be considered long-term and beneficial under this scenario.

Cumulative Impacts

As described above, the Delta 12 beddown at SSFB would result in less than significant impacts to the existing noise environment. The projects listed in Appendix C include a range of past, present, and future actions. The staggered timelines of these projects would limit cumulative impacts of noise during construction. Construction of the STARCOM HQ and proposed Delta 12 beddown simultaneously would not result in significant adverse impacts to the noise environment. Similar noise receptors would be affected, however, noise levels for these receptors would not be anticipated to exceed levels presented within this EA as similar types of equipment and construction activities would occur. Due to the temporary nature of construction noise and the reduction of noise from decrease of traffic compared to existing conditions, no significant cumulative effects would occur from implementation of other projects listed in Appendix C.

3.5.2.5 Delta 12 Beddown Alternative 2b – KAFB

Impacts to the noise environment from renovations and operations would be similar to those discussed under Section 3.5.2.2 (less than significant) as this alternative would use the same site at KAFB. Impacts to the noise environment from operations would be less than those described in Section 3.5.2.2 which considers 289 personnel versus the 61 personnel associated with Delta 12 HQ and 12 DOS (less than a 1 percent increase of the over 23,000 personnel at KAFB).

3.5.2.6 No Action Alternative

Under the No Action Alternative, beddown of Deltas 10, 11 and/or 12 would not occur, and no related facilities would be built or renovated at PaSFB, KAFB and/or SSFB. Therefore, there would be no noise impacts at these sites.

3.6 Transportation

3.6.1 Affected Environment

3.6.1.1 PaSFB

PaSFB is located on the East Coast of Central Florida and is situated on a barrier island with the Banana River and Indian River directly to the west and the Atlantic Ocean on the east, separated by State Highway A1A (SH-A1A). Access to the base is mainly provided by SH-A1A and State Route 404 (SR-404) (also referred to as the Pineda Expressway). SH-A1A traverses in a north-south direction along the eastern border of the base and separates the main installation from the beach areas along the coastline. SR-404 is a causeway that traverses in an east-west direction along the southern border of the installation and connects the mainland to PaSFB and SH-A1A. This causeway has a partial interchange with SR-513, with only an eastbound exit ramp and a westbound entrance ramp. SR-513 is a major north-south thoroughfare on the island and connects to PaSFB's southern entry point. Annual average daily traffic (AADT) data for these public roadways are presented in Table 3.6-1. Traffic volumes on these roadways substantially decreased since 2020 and have remained relatively low (FDOT 2023a), which likely resulted from COVID restrictions implemented at the installation.

Table 3.6-1. Annual Average Daily Traffic on Public Roadways Serving PaSFB

Street (Location)	Number of Lanes	2019 AADT (vehicles per day)	2022 AADT (vehicles per day)
SH-A1A (between SR-404 and Orlando Ave, north of PaSFB)	4	21,500	16,800
SR-404 (east of South Gate)	4	22,000	21,000
SR-404 (west of South Gate)	4	54,000	46,000
SR-513 (south of SR-404)	4	16,300	14,000

AADT – Annual Average Daily Traffic; PaSFB – Patrick Space Force Base; SH-A1A – State Highway A1A; SR-404 – State Route 404; SR-513 – State Route 513
Source: FDOT 2023a

As shown in Figure 3.6-1, PaSFB has three entry control points (controlled gates) for vehicle and pedestrian access. The Main Gate/East Gate provides access from SH-A1A and is in the northern portion of the base at the intersection of SH-A1A and Jupiter Street (on-base). The South Gate provides access from SR-513 along the southern border of the base at the intersection SR-513 and South Patrick Drive (on-base). A Commercial Vehicles Gate is located on SH-A1A, a mile north from SR-404.

On-base, South Patrick Drive is the main arterial that carries the majority of the north-south traffic and connects most areas of the base. Several connector roads off of South Patrick Boulevard provide access to various parts of the installation, including New Mace Road and South Tech Road, which provide access to Building 991 and the 13.7-acre project site, respectively. Access to support functions in the south is constrained by the location and configuration of South Gate. Traffic congestion during peak hours creates long queues onto access roadways and into adjacent neighborhoods. There are separate (from this action) proposed projects to improve the transportation infrastructure that would address congestion issues at PaSFB, including the construction of a new gate on SH-A1A (near Matador Street), a new intersection to accommodate the new gate, and a multi-use pathway that would connect the new gate to South Gate (DAF 2022a).

Figure 3.6-1. PaSFB Transportation Network

3.6.1.2 KAFB

KAFB is located adjacent to and southeast of Albuquerque and is served by two interstate highways, I-40 to the north and I-25 to the west. The City of Albuquerque's street grid includes several major arterials that tie into KAFB, providing access to the base, including Gibson Boulevard SE, Wyoming Boulevard SE, and Eubank Boulevard SE. Traffic volumes on public roadways surrounding the installation have experienced moderate levels of both increases and decreases since 2019. Available AADT data for these public roadways are provided in Table 3.6-2.

Table 3.6-2. Annual Average Daily Traffic on Public Roadways Serving KAFB

Street (Location)	Number of Lanes	2019 AADT (vehicles per day)	2022 AADT (vehicles per day)
Gibson Boulevard SE (near Hickam Gate)	6	27,813	34,046
Gibson Boulevard SE (near Maxwell Gate)	6	32,254	29,095
Gibson Boulevard SE (near Truman Gate)	6	56,696	53,973
Louisiana Boulevard SE (near Gibson Gate)	4	11,924	13,038
Wyoming Boulevard SE (near Wyoming Gate)	6	7,495	7,134
Eubank Boulevard SE (near Eubank Gate)	6	23,756	26,038

AADT – Annual Average Daily Traffic; KAFB – Kirtland Air Force Base; SE - Southeast
Source: NMDOT 2023

As shown in Figure 3.6-2, KAFB has seven entry control points (controlled gates):

1. Carlisle Gate at the extension of Carlisle Boulevard SE;
2. Truman Gate at Truman Street SE;
3. Maxwell Gate off Gibson Boulevard SE, which provides access to the Maxwell housing area that is separated from the main base;
4. Gibson Gate on Gibson Boulevard SE, between Pennsylvania Street SE and Louisiana Boulevard SE;
5. Wyoming Gate at Wyoming Boulevard SE;
6. Eubank Gate at the extension of Eubank Boulevard SE; and
7. Hickam Gate in the northwest corner of the installation, which provides access for contractors and is also used for truck inspections.

Truman Gate and Gibson Gate are the only 24-hour, 7-days per week gates at the base. Access to AFRL facilities and the 58 SOW is through the Truman Gate. Access to the densely populated east side of the Installation is provided through the gates on Gibson, Eubank, and Wyoming Boulevards. The Hickam Gate creates a backup onto the city's roadways during peak times. Congestion also occurs at Gibson Gate, Eubank Gate, and Wyoming Gate during the peak morning commute time.

On-base, the transportation network consists of major and minor arterials and smaller collector roads. Major arterials on the east side of the Main Base include Wyoming Boulevard, Gibson Boulevard, and Frost Street. Major east-west routes across the installation consist of Hardin Boulevard, Randolph Avenue, and Aberdeen Avenue. Minor arterials include Pennsylvania Street and 20th Street, which serve DOE/SNL facilities. The primary transportation route to the southern portion of the Installation is on Pennsylvania Street. The project site is located on H Street SE, between Texas Street SE and 1st Street SE, which are all two-lane roads.

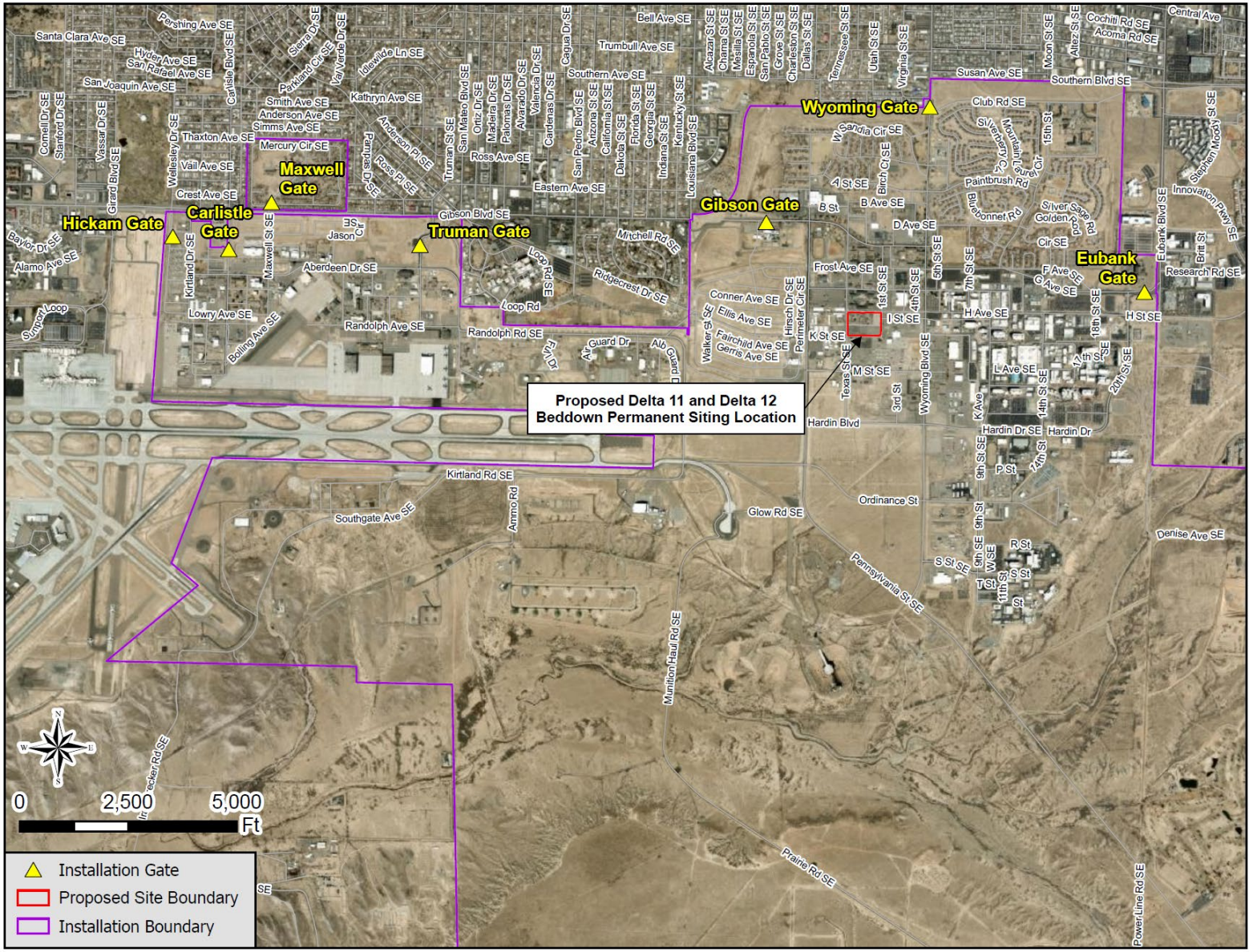

Figure 3.6-2. KAFB Transportation Network

In 2020, a comprehensive traffic study was conducted at the base, which provided short-term improvements to address existing deficiencies and long-term conceptual designs to address future growth conditions, capacity issues, and noncompliance with design standards (SDDCTEA 2020). The study included an analysis of sixteen intersections throughout the base under existing and future growth conditions. The report recommended that the majority of study intersections with existing signals should keep and optimize their signalization to accommodate future growth. The traffic report also noted that an increase in queuing and delays occur throughout the Wyoming Boulevard corridor as this roadway consists of many signals that are close to one another. As such, the installation indicated that intersections along Wyoming Boulevard would be upgraded to an adaptive traffic control system to address this issue. Other substantial recommendations on long-term traffic improvements include:

- Aberdeen Drive and Truman Street – Queuing at this intersection causes traffic to back up through the Truman Gate. The traffic report provided a long-term solution of upgrading the gate in correlation with optimizing signal timings and the addition of dedicated turning lanes.
- Additional traffic analyses - The installation is considering a connector road to connect Randolph Road to G Avenue at Pennsylvania Street. The connector would then continue to connect G Avenue at Texas Street to Frost Avenue at 1st Street. The report recommended that traffic analyses be conducted to analyze the impact of the connector as it relates to the operations of the affected intersections.

3.6.1.3 SSFB

SSFB is located approximately 4 miles east of Colorado Springs city limits and 9 miles east of Peterson SFB. As shown in Figure 3.6-3, regional access to SSFB is provided by SH-94 to Enoch Road and South Curtis Road. SH-94, located 1.5 miles north of the base, is the primary access route that connects SSFB with Colorado Springs and other El Paso County communities where installation personnel reside. The base has two entry control points, the North Entry and the West Entry. The North Entry is located on Enoch Road. The West Entry is located on Irwin Road and 0.6 miles east of South Curtis Road.

SH-94 is a two-lane highway that intersects North Curtis Road and North Enoch Road, north of the base. Over the past few years, the AADT volume on SH-94, near its intersection with North Enoch Road, has remained steady at 11,000 vehicles per day (CDOT 2018, 2019, 2020, 2021). Recent improvements along the SH-94 corridor between Peterson SFB and Enoch Road were completed to reduce crashes and improve road safety, including construction of a westbound passing lane, intersection signalization, an improved turn movement, and installation of new security cameras at Marksheffel Road and Enoch Road (CDOT 2022).

Other roadways on and adjacent to SSFB include Blue Road, South Page Road, Handle Road, and Irwin Road (see Figure 2.3-6). The project sites are located on Irwin Road and Blue Road. Irwin Road is a 4-lane, paved road and Blue Road is an unpaved road.

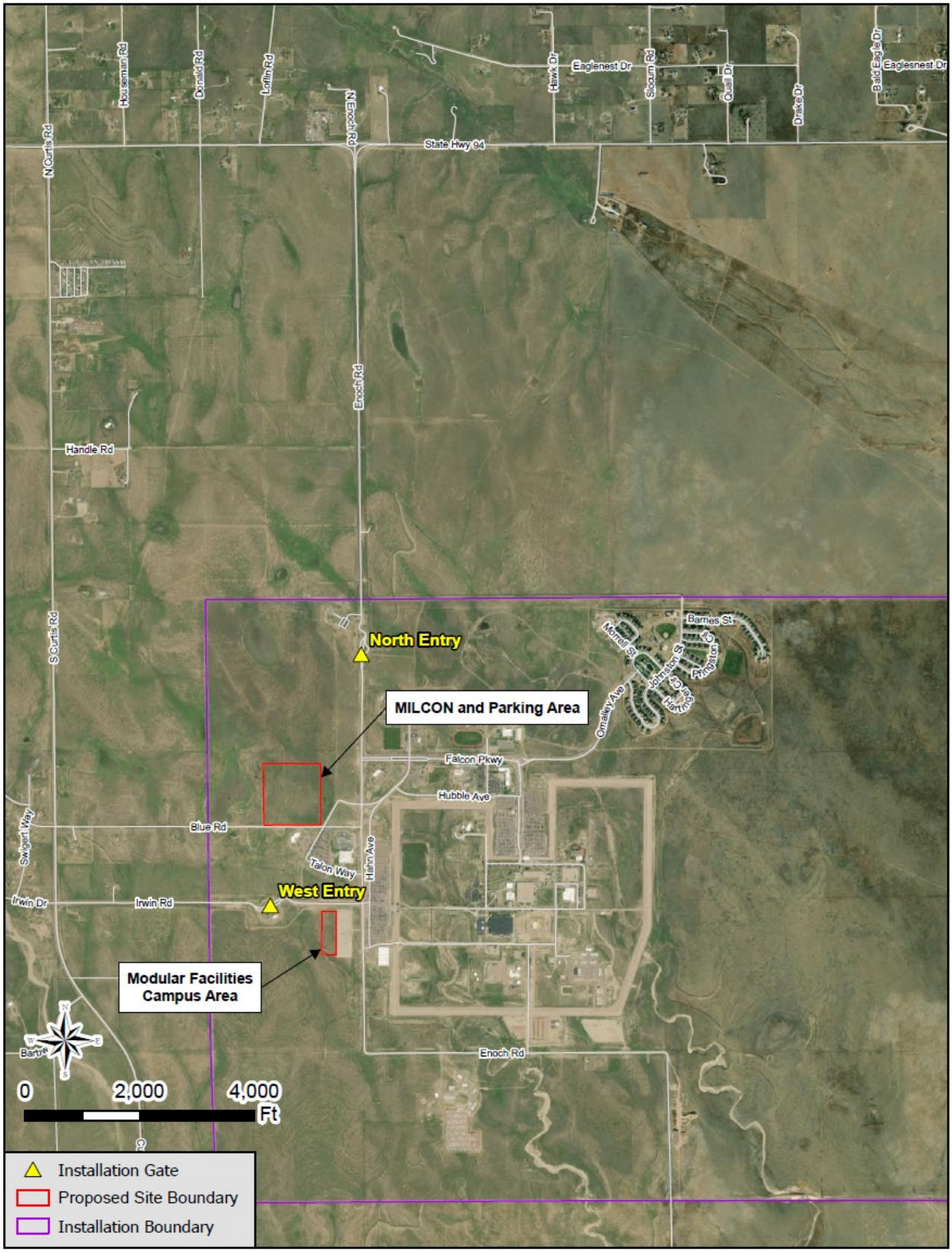

Figure 3.6-3. SSFB Transportation Network

3.6.2 Environmental Consequences

An impact on transportation resources would be significant if it would: 1) increase traffic volumes that would exceed the capacity of local roadways and intersections; 2) increase traffic volumes resulting in deficient operations at the installation; or 3) increase traffic volumes resulting in traffic hazards to workers and users at the installation.

General

Construction. Construction of new buildings and renovation of existing facilities (12 to 18 months for facility construction and 6 to 12 months for facility renovation) would result in temporary increases in construction-related traffic from commuting workers and truck transport of materials, equipment, and waste at the project sites. Although the number and frequency of vehicles traveling to and from the project sites are unknown at this time, based on the size and nature of each of the construction activities involved at each project site, that the number of vehicles traveling to and from the selected site during construction would be fewer than 100. The majority of the vehicle trips generated on a daily basis would be from the commuting workers. As a result of increased traffic volumes during construction, there would be increased congestion on the major roadways leading up to the installations and cause delays at the entrance points, though this impact would generally be limited to peak commuting hours.

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 an installation. Routes in the TMP would follow major highways and roads, and would avoid local, residential, and neighborhood roads. 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 on the roadways and at the entry points. In addition, construction vehicles would access the installation via commercial gates, thus diverting traffic from the main installation gates and reducing traffic and congestion at other gates at the base. The TMP would also identify appropriate parking and staging areas for construction vehicles and equipment on-site.

Most construction activities would occur during a standard working schedule, Monday through Friday between 7 a.m. and 5 p.m. To the extent possible, high volumes of anticipated construction traffic (e.g., during large concrete pours) would be scheduled outside of peak morning and evening commuting hours to minimize disruption to local traffic on and outside the selected installation.

The magnitude and intensity of impacts on roadways would depend on the alternative chosen; however, overall, increases in traffic at an installation would be temporary, within the capacity of the existing vehicular transportation networks, and would not contribute to major degradation of traffic conditions. Additionally, adherence to a TMP would minimize potential impacts to the transportation network. Overall, construction would have less than significant short-term adverse impacts on transportation resources under all Proposed Action alternatives.

Operation. Operation of the Proposed Action would result in increased traffic volumes at and near the installation from new personnel under all alternatives. As discussed in the following subsections for each alternative, the magnitude and intensity of impacts from traffic would depend on the alternative chosen. Overall, operation would have less than significant long-term adverse impacts on transportation resources under all Proposed Action alternatives.

3.6.2.1 Delta 10 Beddown Alternative 1 – PaSFB

Construction Impacts. It is estimated that construction-related vehicles traveling to/from the installation would be less than 100 vehicles per day. Truck shipments would access the

installation from the Commercial Vehicle Gate located on SR-A1A, on the eastern border of the installation.

Based on AADT volumes presented in Table 3.6-3, SR-404, SH-A1A, and SR-513 would have the capacity to handle the additional construction traffic, especially considering recent reductions in traffic volumes on these roadways. The commuter vehicles could increase congestion and delays at the intersection of SR-404 and SH-A1A during the peak a.m. and p.m. commuting hours from the workers. Adverse traffic impacts on these roadways are expected to be less than significant (a less than 1 percent to 2 percent increase in AADT volumes on local roads). As discussed in the previous section, implementation of a TMP would help reduce traffic impacts near and within the installation.

Operation Impacts. During normal operating conditions under Delta 10 Beddown Alternative 1, increases in traffic volumes would result from the 108 new personnel commuting to/from PaSFB. The new personnel could generate 216 additional daily vehicle trips (assuming 2 vehicle trips from each of the 108 workers) on SR-404 and to a smaller extent, on SH-A1A and SR-513, resulting in increased traffic congestion, delays, and safety hazards though these impacts would largely occur during peak a.m. and p.m. commuting hours. Table 3.6-3 presents the percent increase in daily traffic on the public roadways serving PaSFB resulting from the Proposed Action.

Table 3.6-3. Percent Increase in Daily Traffic at the PaSFB under Delta 10 Beddown Alternative 1

Street (Location)	Number of Lanes	2022 AADT (vehicles per day)[1]	New Daily Traffic Volumes[2]	Percent increase in daily traffic[3]
SH-A1A (between SR-404 and Orlando Avenue, north of PaSFB)	4	16,800	17,016	1%
SR-404 (east of South Gate)	4	21,000	21,216	1%
SR-404 (west of South Gate)	4	46,000	46,216	< 0.5%
SR-513 (south of SR-404)	4	14,000	14,216	2%

AADT – Annual Average Daily Traffic; PaSFB – Patrick Space Force Base; SH-A1A – State Highway A1A; SR-404 – State Route 404; SR-513 – State Route 513

1 – Source: FDOT 2023a

2 – New Daily Traffic Volumes = 2022 AADT volumes + 216 daily vehicle trips

3 – Based on 108 new personnel generating 216 daily vehicle trips.

This analysis assumes that most of the new vehicle trips would add to existing traffic volumes on SR-404 as it provides a direct connection between the more densely populated areas on the mainland and PaSFB. Workers would likely use South Gate to enter/exit the base and could exacerbate the existing congestion issues at this entrance during peak commuting hours. Any new personnel housed on base would reduce some of the daily vehicle trips on public roadways and the entrance gates during commuting hours.

Based on recent AADT data presented in Table 3.6-3, the percent increase in traffic volumes on the public roadways serving the installation would be relatively low and the roadways would have excess capacity to handle the additional daily vehicle trips, especially considering the decline of traffic volumes since 2020. Even with the additional traffic volumes, the new daily traffic volumes on these roadways would be considerably less than past daily vehicle volumes on these roadways (see 2019 AADT volumes in Table 3.6-1). As such, long-term adverse impacts to transportation resources would be considered less than significant.

Delta 10 beddown would also require an additional 200 to 600 personnel for wargaming events, occurring on a quarterly basis each year and only over a 10-day period and would contribute to increases in traffic volumes on the nearby public roadways. Although some on-base lodging and carpooling could be used by personnel, it is assumed that the majority would stay off-base and commute to the base. DAF plans to utilize a parking lot located off-base that meets the wargaming

150-parking space requirement and would then bus the personnel from the lot to the proposed Wargaming Facility. The lot is located on SH-A1A, across the eastern boundary of the base and about 0.25 miles north of the Commercial Vehicle Gate. It is anticipated that details on the use of this lot during wargaming events would be included in the TMP once the MILCON facility is completed.

Though increased congestion and delays could be noticed by other users on SR-404 and SH-A1A during wargaming events, the public roadways would have the capacity to handle this increase in traffic volumes. For comparison, total traffic volumes during these events would still be under or slightly above traffic levels that occurred several years ago. Additionally, as this increase in traffic would be temporary, occurring only on a quarterly basis, and generally limited to commuting hours, adverse impacts to transportation resources during the wargaming events would be considered temporary, intermittent and less than significant.

Cumulative Impacts

As discussed above, Delta 10 beddown at PaSFB would result in less than significant impacts to transportation. Projects identified in Appendix C would contribute to impacts to traffic, including the potential permanent location for the STARCOM HQ at the same location as the proposed Delta 10 beddown site. Construction projects would cause short-term impacts due to construction traffic and potential temporary road closures; however, staggered timelines of these projects would limit cumulative impacts to transportation. As indicated in Appendix C, the Florida Department of Transportation has ongoing planning studies of the causeways leading to PaSFB which includes the addition of lanes and other improvements. This would also help alleviate additional traffic of any additional personnel from the proposed Delta 10 beddown as well as other actions such as the STARCOM HQ beddown proposed for PaSFB. Overall, cumulative effects would be less than significant as the installation would update, develop, and implement applicable transportation management procedures during construction and training events to accommodate traffic volume increases.

3.6.2.2 Delta 11 Alternative 1a – KAFB

Renovation Impacts. Construction-related vehicle volumes for building renovations would be relatively low as this alternative would only involve renovation and modernization of existing buildings. Truck shipments would access the installation from the Hickam Gate, located 3 miles west of the project site. To access the project site, workers could use any one of the installation's gates, though the closest gates to the project site are Gibson Gate, Wyoming Gate, and Eubank Gate. Vehicles would then use Wyoming Boulevard SE or Pennsylvania Street SE to access H Avenue SE.

Based on AADT volumes presented in Table 3.6-4, roadways leading up to the installation would have excess capacity and could, therefore, handle the additional traffic generated from construction associated with building renovation activities. The majority of additional daily traffic would be from commuting workers and would be limited to peak a.m. and p.m. commuting hours and would add to the delays at the entrance gates; however, the additional delay would be low due to the number of workers. As such, adverse traffic impacts on the roadways are expected to be short-term and less than significant. As discussed in the previous section, implementation of a TMP would help reduce traffic impacts near and within the installation. The USSF would coordinate with KAFB CE Environmental and Base Traffic Working Group prior to renovation activities to ensure a TMP or similar measures are employed to minimize impacts.

Operation Impacts. Under Delta 11 Beddown Alternative 1a, increases in traffic volumes during operation of the Proposed Action would result from the 289 new personnel commuting to/from the project site. The new personnel could generate 578 additional daily vehicle trips (assuming 2

vehicle trips from each of the 289 workers) on roadways leading up to and within the installation, resulting in increased traffic congestion, delays, and safety hazards though these impacts would largely occur during peak a.m. and p.m. commuting hours. Table 3.6-4 estimates the new daily traffic volumes and percent increases in daily traffic on the major public roadways serving the installation.

Table 3.6-4. Percent Increase in Daily Traffic at the KAFB under Delta 11 Beddown Alternative 1a

Street (Location)	Number of Lanes	2022 AADT[1] (vehicles per day)	New Daily Traffic Volumes[2]	Percent increase in daily traffic[3]
Gibson Boulevard SE (near Hickam Gate)	6	34,046	34,624	2%
Gibson Boulevard SE (near Maxwell Gate)	6	29,095	29,673	2%
Gibson Boulevard SE (near Truman Gate)	6	53,973	54,551	1%
Louisiana Boulevard SE (near Gibson Gate)	4	13,038	13,616	4%
Wyoming Boulevard SE (near Wyoming Gate)	6	7,134	7,712	8%
Eubank Boulevard SE (near Eubank Gate)	6	26,038	26,616	2%

AADT – Annual Average Daily Traffic; KAFB – Kirtland Air Force Base; SE - Southeast
1 – Source: NMDOT 2023
2 – New Daily Traffic Volumes = 2022 AADT volumes + 578 daily vehicle trips
3 – Based on 289 new personnel generating 578 daily vehicle trips.

The 578 new daily vehicle trips were applied to all the roadways shown in Table 3.6-4. This analysis assumes that most of the new vehicle trips would add to existing traffic volumes on Gibson Boulevard as several of the installation's gates are located on this roadway. Traffic volumes presented in Table 3.6-4 indicate that this corridor experiences relatively high traffic volumes, likely due to workers at KAFB. Additionally, workers could use any one of the installation's gates and exacerbate existing congestion issues that occur during the morning commute period at Gibson Gate, Eubank Gate, and Wyoming Gate. Any new personnel housed on base would reduce some of the daily vehicle trips on public roadways and the entrance gates during commuting hours.

Based on recent AADT data presented in Table 3.6-4, the percent increase in traffic volumes on the public roadways serving the installation would be relatively low and the roadways would have excess capacity to handle the additional daily vehicle trips. Noticeable delays would mostly occur at the gates during the a.m. and p.m. commute times and could cause backups on the public roadways. Long-term adverse impacts to transportation resources would be considered less than significant. The installation would update, develop, and implement applicable transportation management procedures accordingly to accommodate traffic volume increases associated with the Proposed Action.

Cumulative Impacts

As described above, the Delta 11 beddown at KAFB would result in less than significant impacts to transportation. Projects identified in Appendix C would contribute to impacts to traffic. Construction projects would cause short-term impacts due to construction traffic and potential temporary road closures; however, staggered timelines of these projects would limit cumulative impacts to transportation. Projects involving increases in training (i.e., additional personnel) would generate short-term impacts to traffic within the installation and along roads providing access to KAFB. As shown in Appendix C, Bernalillo County is currently updating their comprehensive plan which will address topics including connectivity which would buffer long-term impact to transportation from population growth. This includes projections of an 30,000 additional people within Bernalillo County by 2040 (Bernalillo County 2023) in efforts to manage and address population growth in a sustainable manner. Overall, cumulative effects would be less than

significant as the installation would update, develop, and implement applicable transportation management procedures during construction and training events to accommodate traffic volume increases associated with the applicable projects.

3.6.2.3 Delta 11 Beddown Alternative 1b – SSFB

Impacts from construction and operations and cumulative impacts to transportation would be similar to those discussed under Section 3.6.2.4 (less than significant) as this alternative would use the same site at SSFB. Additionally, as Deltas 11 and 12 are currently activated at SSFB, no increases to traffic would occur. A slight reduction to traffic would be realized as the 61 personnel associated with Delta 12 HQ and 12 DOS would be permanently located to KAFB (as described in Section 3.6.2.5).

3.6.2.4 Delta 12 Beddown Alternative 2a – SSFB

Construction Impacts. It is estimated that construction-related vehicles traveling to/from the installation would be less than 100 vehicles per day. Trucks and vehicles from the construction workers would likely access the project sites from the West Entry via SH-94 and South Curtis Road. These roadways would have the capacity to handle the additional construction traffic volumes. Minimal interaction with on-base traffic would occur as the project sites are located on the western portion of the base, away from most of the installation's facilities. Some temporary, traffic conflicts and delays could occur on Irwin Road during the commuting hours from construction of the temporary facilities as it is near the West Entry. Most new traffic would be from the commuting workers and would temporarily result in longer delays at the West Entry. This impact would be limited to the peak a.m. and p.m. commuting hours. Adverse impacts to transportation resources during construction would be short-term and less than significant.

Operation Impacts. Under Delta 12 Beddown Alternative 2a, changes in traffic volumes during operation of the Proposed Action would result from changes in the number of commuting personnel. If only Delta 12 HQ and 12 DOS would be located at SSFB as described in Section 2.4.2.3, selected Delta 11 subunits and 1 TES of Delta 12 would be relocated from SSFB to KAFB and traffic volumes to/from SSFB could decrease by 450 daily vehicle trips (assuming 225 workers generated 2 vehicle trips per day). Existing congestion, delays, and traffic hazards would be reduced, thereby resulting in a long-term beneficial impact to transportation resources under this scenario.

Cumulative Impacts

As discussed above, Delta 12 beddown at SSFB would result in less than significant impacts to transportation. Projects identified in Appendix C would contribute to impacts to traffic. Construction projects would cause short-term impacts due to construction traffic and potential temporary road closures; however, staggered timelines of these projects would limit cumulative impacts to transportation. Projects involving increases in training (i.e., additional personnel) would generate short-term impacts to traffic within the installation and along roads providing access to SSFB. As indicated in Appendix C, NMDOT is planning improvements to the I-25 corridor within Albuquerque to alleviate congestion. This would also help alleviate additional traffic of any additional personnel from the proposed Delta 11 beddown as well as other actions such as the STARCOM HQ beddown in which SSFB is being considered as an alternative site. Overall, cumulative effects would be less than significant as SSFB would experience a decrease in population due to the Proposed Action.

3.6.2.5 Delta 12 Beddown Alternative 2b – KAFB

Impacts from renovations and cumulative impacts would be similar to those discussed under Section 3.6.2.2 (less than significant) as this alternative would use the same site at KAFB. Additionally, impacts to transportation from operations would be less that those described in 3.6.2.2 which considers 289 personnel versus the 61 personnel associated with Delta 12 HQ and 12 DOS.

3.6.2.6 No Action Alternative

Under the No Action Alternative, beddown of Deltas 10, 11 and/or 12 would not occur, and no related facilities would be built or renovated at PaSFB, KAFB and/or SSFB. Therefore, there would be no impacts to transportation resources at these sites.

3.7 Hazardous Materials and Waste

3.7.1 Affected Environment

3.7.1.1 PaSFB

Hazardous materials ranging from paint, solvents, adhesives, cleaners, metal treatments, and fuels are used on PaSFB. The collection, management, transportation, and disposition of hazardous wastes are defined and strictly regulated by the RCRA, as amended, and by applicable Federal and state regulations. All hazardous material purchases are required to be authorized. The materials are required to be tracked through the HAZMART Pharmacy. 45 SW Operations Plan 19-14, *Petroleum Products and Hazardous Waste Management Plan*, describes waste management procedures on PaSFB. This plan also contains procedures for remediation of the Solid Waste Management Units, ERP sites, and Areas of Concern at PaSFB (AFCEC 2017).

Previous investigations of the Alternative 1 site have confirmed the presence of PAHs and pesticides in the soil and PAHs, pesticides, metals, and SVOCs in the groundwater. PAHs have the potential to be mutagenic and carcinogenic if humans are exposed to it, although they have a low degree of acute toxicity in humans. SVOCs can potentially cause cancer, reproductive disorders, nervous system damage, and disruption to the immune system. They are slow to decompose and can persist in the affected environment for long durations. Pesticides can have a variety of impacts on human health based on their toxicity and the amount present. Some may impact the nervous system, while others may be carcinogenic.

The PAHs, SVOCs and metals are suspected to have been released onto the site through leaks. The leaks of PAHs may have originated through anthropogenic activities, as they can be released from asphalt in pavement, and exhaust, oil drips, and tire abrasion from vehicles. These PAHs can eventually end up in stormwater runoff that washes into the soil, resulting in contamination. Components of buildings, such as roofing material, contain PAHs and may have served as an additional source for stormwater runoff. During the demolition of Wings B and C of Facility 989, it is possible that small pieces of PAH-containing building debris were mixed into the surrounding soil. Equipment used during demolition could have additionally mixed small pieces of debris into the soil (HGL 2022). Much of the pesticide contamination is also believed to have originated from leaks, though some were the result of discharges to storm sewer outfalls (HGL 2022).

A perfluoroalkyl and polyfluoroalkyl substances (PFAS) Site Investigation (SI) confirming presence or absence of suspected PFAS release sites was completed at PaSFB in 2017. SI results identified several areas (seven USAF sites) across the central/central-south portion of the base that have elevated/high concentrations of PFAS in groundwater in excess of the Lifetime Health Advisory (drinking water standard) for perfluorooctanesulfonic acid/perfluorooctanoic acid (PFOS/PFOA). These sites are not fully delineated; however, a full Remedial Investigation (RI) is anticipated within the next few years. The RI is a large, base-wide comprehensive effort and results will not be made available until after the investigation is complete. Additionally, the 45th Civil Engineer Squadron, Environmental Office (45 CES/CEIE) is planning a PaSFB Infiltration and Inflow study to identify areas of groundwater infiltration that could carry PFAS or other contaminants into the sewer system (DAF 2022a). PFOS, PFOA, and/or PFBS were detected in soil at Aqueous Film Forming Foam (AFFF) Release Areas, however, all detections were below applicable Regional Screening Levels (RSLs), based on a residential exposure scenario. Potential exposure receptors for PFAS detections below RSLs include PaSFB personnel, on-site workers, visitors, and trespassers that may come into contact with surface and/or subsurface soil at the respective AFFF release areas via inhalation or dermal contact (AFWEI 2017).

The proposed site is partially developed with Buildings 989 and 984 occupying 5.7 acres. The remaining 8 acres of the site contains open space that was previously developed, formerly occupied by a paint booth, a one-ton crane, transformer storage area, a heavy electrical equipment repair shop, a machine shop, a circuit board lab, a geophysical data terminal, a motion picture lab, and a photographic lab. Additional investigations of groundwater and soils are planned as a part of a future RI to identify appropriate remedies and address contamination allowing the site to be developed for unrestricted reuse.

3.7.1.2 KAFB

Hazardous waste generated at KAFB consists of used oil, lithium and other batteries, mercury containing equipment, fluorescent lamps, aerosols, petroleum, paint, lubricants, ignitables, corrosives, reactives, RCRA 8 metals, benzene, carbon tetrachloride, chlorobenzene, chloroform, o-Cresol, m-Cresol, 1,4-Dichlorobenzene, methyl ethyl ketone, tetrachloroethylene, trichlorethylene, spent halogenated/nonhalogenated solvents, acutely hazardous compounds (P001, P042, P075, P081), toxic compounds (U002, U003, U072, U080, U159, U188), special waste material (as defined by the New Mexico Solid Waste Regulations), asbestos-containing material (ACM) and lead-contaminated material (DAF 2022c, and USEPA 2023a). The installation is designated and permitted as a Large Quantity Generator by the USEPA (DAF 2022c). The installation maintains a HWMP, which contains procedures for managing hazardous wastes in accordance with applicable DoD, federal, and state regulations and requirements (USAF 2022b). Under the HWMP, host and tenant units that generate 1,000 pounds or more of hazardous wastes that are disposed of through KAFB's waste program must develop, implement, and document written Pollution Prevention and waste minimization initiatives and plans. Unit Environmental Coordinators will serve as Points of Contact and maintain applicable Waste Minimization Plans (USAF 2022b). KAFB also maintains an SPCC Plan, which it implements in conjunction with the HWMP, to address incident response and emergency responsibilities resulting from spills or discharges of hazardous and toxic materials and waste (HTMW) (USAF 2018b).

The proposed beddown site is developed with buildings, roads, parking lots, and other infrastructure. 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 and parking lots creates potential for the presence of leaked fuels or oil from vehicles; these instances would be minimal and addressed via the SPCC Plan.

The proposed site is located approximately 1.3 miles east-northeast of the Bulk Fuels Facility pipeline, which was identified to be leaking in 1999; however, the leak was believed to have existed several decades prior to discovery. The resultant fuel plume has not affected the proposed site, and efforts are underway to address surrounding contamination and clean-up drinking water wells (KAFB 2020). The Bulk Fuels Facility is listed as an Installation Restoration Plan (IRP) site[1]; no other IRP or Military Munitions Response Program sites are located on or surrounding the proposed site (DoD 2018). In addition, the NMED identified two active USTs within ½-mile of the site (Facility IDs 29536 and 31721; see Appendix A NMED letter dated July 17, 2023). NMED also confirmed there are no release sites that are active or have a "no further action" status within the area of the proposed project site, however, two facilities are located within ½-mile that are identified as sites where a petroleum storage tank release (leak or spill) has been confirmed and

[1] An IRP site is an area of DoD land with contamination from past activities being restored to usable conditions. It falls under one of two comprehensive programs established under the Defense Environmental Restoration Program to identify, investigate and clean up hazardous substances, pollutants, and contaminants that pose environmental health and safety risks at active military installations and formerly used defense sites.

one facility located within ½-mile identified where a release (leak or spill) has been confirmed (Facility IDs 29536, 54798 and 28500; see Appendix A NMED letter dated July 17, 2023).

A PFAS release site due to a historic spill at the south taxiway is located approximately 1.2 miles 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 2017b). This suggests limited migration of PFAS, and also suggests that the proposed beddown site has not been impacted (AFCEC 2021).

Several SWMUs are in the vicinity of the proposed site. Testing determined that while there could be limited concentrations of contaminants of potential concerns in these areas, they do not represent a significant release of anthropogenic contamination to the environment or threat to human health (CH2M HILL 2006). The NMED reviewed these findings and determined that these SWMUs were eligible to qualify for no further action status (NMED 2008).

3.7.1.3 SSFB

Hazardous materials used and waste generated at SSFB includes waste antifreeze, paint, acids, batteries, oils, spent solvents, petroleum, oil, and lubricants, industrial solvents, glycols, corrosives, ignitables, thinners and a variety of other universal waste materials. SSFB is classified as a Very Small Quantity Generator of hazardous waste (DAF 2022b). Hazardous waste at SSFB is managed in accordance with AFMAN 32-7002 Chapter 5, Hazardous Waste Management and RCRA regulations (as adopted and implemented under corresponding regulations found at Title 6 CCR 1007-3). SSFB maintains a Hazardous Waste Management Plan and Pollution Prevention Management Action Plan to assure compliance with these regulations and manage the accumulation, transportation, and disposal of hazardous waste.

At SSFB, wastes are initially accumulated in Initial Accumulation Points and are later stored at a Central Accumulation Point (CAP) until the waste is transported off the base for proper disposal. SSFB is designated as a Very Small Quantity Generator (previously known as a Conditionally Exempt Small Quantity Generator) of hazardous waste. Hazardous waste can be accumulated for an indefinite time at the CAP in Building 660. However, at no time can the amount of hazardous waste stored at the CAP exceed 1 kilogram (kg) of acutely hazardous waste or 1,000 kg of hazardous waste. SSFB does not operate under a RCRA Part B permit.

Analytical results from a 2019 SI indicated the presence of PFAS in surface soil, sediment, and/or surface water in excess of applicable RSLs and/or Lifetime Health Advisories at two AFFF release sites. Concentrations of PFOS in the surface soil adjacent to the Existing Lagoon release site and sediment within it exceeded applicable screening levels, as well as concentrations of PFOS and PFOA in surface water. In addition, the concentration of PFOS detected in the surface soil sample collected within the current Fire Training Area release site exceeded applicable screening levels (HydroGeoLogic, 2020). None of these release sites are close to the proposed Delta 12 beddown site.

The proposed Delta 12 beddown site is currently undeveloped and undisturbed, consisting of grasslands and shrubs. The site for the proposed Modular facilities Campus Area is located near the overflow parking lot of the west entrance to the restricted area. There is no history of HTMW use, storage, generation, or disposal at these sites. There is also no record of contamination on-site.

3.7.2 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).

General

Construction. 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 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. Overall, construction would have less than significant short-term adverse impacts on HTMW under all Proposed Action alternatives.

Operation. 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. 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 waste that is unable to be treated on site and needs to be moved off-site 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 SPCC Plan) for the site; if an alternative site is selected for which such plans do not exist, a new HTMW management plan would be developed. Overall, operations would have less than significant long-term adverse impacts on HTMW under all Proposed Action alternatives.

3.7.2.1 Delta 10 Beddown Alternative 1 – PaSFB

Construction crews have the potential to encounter ACMs and other hazardous substances while conducting renovations of Building 991. Structures built before the late 1970s are likely to contain ACMs, polychlorinated biphenyls (PCBs), and lead-based paint prior to these substances being banned. AFI 32-1052, *Facility Asbestos Management*, provides direction for the management of ACMs on USAF installations. Prior to work being accomplished in any building on PaSFB, protocol requires that the 45th Civil Engineer Squadron Environmental Office be contacted to locate any ACMs that may be present (AFCEC 2017). ACM and LBP surveys would be required as part of the thorough inspection requirement for the National Emissions Standards for Hazardous Air Pollutants (NESHAP) prior to renovation. In coordination with SLD 45, the contractor would notify FDEP at least 10 working days prior to removal actions as required in 62-257 Florida Administrative Code (FAC). FDEP administers the asbestos removal program under Chapter 62-257, FAC. The Asbestos NESHAP has been adopted by reference in Section 62-30 204.800, FAC. OSHA also provides worker protection for employees who work around or remediate ACMs. Friable ACMs, which can be pre-existing or generated during a demolition activity, refers to any material containing more than one percent asbestos that can be crumbled, pulverized, or reduced to powder when dry, by using hand pressure or similar mechanical pressure (USSF 2023).

ACMs and lead-containing wastes would be disposed of in accordance with federal regulations, including the NESHAP, OSHA, and Toxic Substance Control Act. Transport and disposal documentation records of ACMs and LBP, including signed manifests, would also be required. All friable ACMs must be encapsulated or removed, the site must be approved by FDEP, and the asbestos waste disposed of in an approved off-site landfill. Implementation of these waste

management requirements would minimize any potential adverse impacts resulting from ACMs or LBP, and neither of these materials would be employed in new construction (USSF 2023).

Due to previous findings of PAHs and pesticides in the soil and PAHs, pesticides, metals, and SVOCs in the groundwater of the site, surface and subsurface construction operations could come in contact with contaminated soil and groundwater and potentially expose personnel to contamination. Cleanup of any contamination would occur prior to MILCON activities. As stated in Section 3.7.1.1, PaSFB is conducting additional investigations of groundwater and soils as a part of a future RI to identify appropriate remedies and address contamination allowing the site to be developed for unrestricted reuse. Management of contaminated soils or groundwater would be conducted under PaSFB's Hazardous and Solid Waste Amendment permit 0070733-004-HO. Issued by the FDEP, this permit requires the 45th Space Wing to investigate any release of contaminants to the environment at PaSFB, and to take appropriate corrective action for any such release. This includes historical releases at PaSFB, which are investigated and managed in accordance with this permit (HGL 2022). If contamination is encountered proper testing must be conducted to understand how prevalent the contaminates are and the steps needed to contain them should further action be required. If necessary, proper remediation strategies must be developed and employed. This may involve the removal of contaminated soil or implementation of wells for monitoring groundwater quality. Any contaminated groundwater that is pumped during construction activities must be treated before discharge. Construction is not prohibited on/near PaSFB Solid Waste Management Unit sites (USSF 2022).

Implementation of existing Hazardous and Solid Waste Amendment permit, SPCC Plans, and/or other spill contingency plans at the alternative site would ensure that construction-related spills, releases, or discoveries of HTMW are managed and addressed. With implementation of these practices, construction impacts from the use, handling, management, storage, and disposal of HTMW would be short-term and less than significant under the Delta 10 Alternative 1.

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 soil imported to the site during construction would be free of contamination. The removal or remediation of contaminated soil at the selected alternative site, if required, would result in a long-term beneficial impact on HTMW management.

Generally, HTMW quantities associated with the Proposed Action would remain small relative to the total quantities used, generated, and disposed of at PaSFB. The Proposed Action would have no potential to inhibit ongoing cleanup activities occurring on sites near the alternative sites. Therefore, long-term impacts from HTMW during the operation of the Proposed Action would be less than significant.

Cumulative Impacts

As discussed above, Delta 10 beddown at PaSFB would result in less than significant impacts to HTMW. Activities in Appendix C could generate HTMW, similar to construction activities on contaminated sites and renovations to facilities pre-dating the late 1970s. Construction and operation of the STARCOM HQ (if constructed at PaSFB) would not result in significant cumulative impacts to HTMW as cumulative HTMW concerns from construction would be similar for both actions which would occur in the same area. Operations of all facilities would remain small relative to the total quantities used, generated, and disposed of at PaSFB. All waste would be handled and disposed of according to applicable federal and state requirements and overall cumulative impacts would be less than significant. Beneficial impacts would occur from removal of the HTMW from aging facilities and remediation of contaminated sites, if present.

3.7.2.2 Delta 11 Beddown Alternative 1a – KAFB

No HTMW contamination has been identified on the proposed site. While petroleum residues could be present in soils due to the presence of on-site parking lots/roads, these instances would be minimal. Should the DAF identify a new HTMW concern at the selected alternative site prior to or during building renovation, 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). Installment of a proposed new generator for Building 20362 for tank sizes of 1,320-gallons and greater for an AST and greater than 110-gallons for UST would fall under the regulatory requirements of 20.5 NMAC. For these sized tanks or greater, tank installation requirements in 20.5.106 or 20.5.109 NMAC must be followed with a 30-day notification given to the NMED's Petroleum Storage Tank Bureau.

Although the Proposed Action at KAFB involves building renovations, if an abandoned storage tank system or petroleum impacted soil and/or water is discovered during these renovations, the Petroleum Storage Tank Bureau would be notified per 20.5.118 NMAC.

Renovation crews also have the potential to encounter ACMs and other hazardous substances while conducting renovations. Structures built before the late 1970s are likely to contain ACMs, PCBs, and lead-based paint, as this was prior to these substances being banned. Furthermore, other structures at KAFB have been suspected of containing these substances, increasing the likelihood of their presence in the structures onsite. Prior to renovation, surveys for these substances would be completed, as necessary, by a certified contractor and appropriate measures would be taken to reduce the potential exposure to, and release of, toxic substances during any required substance removal activities (USSF 2022b). A provision for buildings containing ACMs exists under the 20.11.20.22 New Mexico Administrative Code (NMAC), *Demolition and Renovation Activities; Fugitive Dust Control Construction Permit and Asbestos Notification Requirements*: "All demolition and renovation activities shall employ reasonably available control measures at all times, and, when removing ACM, shall also comply with the federal standards incorporated in 20.11.64 NMAC, *Emission Standards for Hazardous Air Pollutants for Stationary Sources*. A person who demolishes or renovates any commercial building, residential building containing five or more dwellings, or a residential structure that would be demolished in order to build a nonresidential structure or building shall file an asbestos notification with the department no fewer than 10 calendar days before the start of such activity. Written asbestos notification certifying to the presence of ACM is required even if regulated ACM is not or may not be present in such buildings or structures."

Generally, HTMW quantities associated with the Proposed Action would remain small relative to the total quantities used, generated, and disposed of at KAFB. Any hazardous waste generated during operations would be transferred to one of KAFB's "Less than 90-Day Accumulation Areas" onsite by Hazardous Waste Accumulation Site (HWAS) Contract Support personnel in accordance with the KAFB HWMP. Subsequently this waste would be transported off-site by licensed contractors to permitted facilities for disposal. The USSF would coordinate with KAFB CE Environmental to ensure proper management and disposal of HTMW. Finally, the Proposed Action would have no potential to inhibit ongoing cleanup activities occurring on sites near the alternative sites. Therefore, long-term impacts from HTMW during the operation of the Proposed Action would be less than significant.

Cumulative Impacts

As described above, the Delta 11 beddown at KAFB would result in less than significant impacts to HTMW. Construction crews for the buildings proposed for renovation as part of the Proposed Action, along with other projects identified in Appendix C that involve renovation or demolition of structures built before the last 1970s have the potential to encounter ACMs, PCBs, and lead-

based paint. Prior to renovation and demolition activities, surveys for these substances would be completed, as necessary, by a certified contractor and appropriate measures would be taken to reduce the potential exposure to, and release of, toxic substances during any required substance removal activities. All waste would be handled and disposed of according to applicable federal and state requirements and overall cumulative impacts would be less than significant. Beneficial impacts would occur from removal of the HTMW from aging facilities.

3.7.2.3 Delta 11 Beddown Alternative 1b – SSFB

Impacts from construction and operations and cumulative impacts to HTMW would be similar to those discussed under Section 3.7.2.4 (less than significant) as this alternative would use the same site at SSFB.

3.7.2.4 Delta 12 Beddown Alternative 2a – SSFB

The proposed site contains no existing structures. ACMs, PCBs, and lead-based paint are unlikely to be encountered by construction crews and are not a concern.

Implementation of existing SPCC Plans or other spill contingency plans at the alternative site would ensure that construction-related spills or releases are managed and addressed. With implementation of these practices, adverse construction impacts from the use, handling, management, storage, and disposal of HTMW would be short-term and less than significant.

No HTMW contamination has been identified on the proposed site. While petroleum residues could be present in soils due to the presence of on-site parking lots/roads, these instances would 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 soil imported to the site would be free of contamination.

Generally, HTMW quantities associated with the Proposed Action would remain small relative to the total quantities used, generated, and disposed of at SSFB. Therefore, long-term adverse impacts from HTMW during the operation of the Proposed Action would be less than significant.

Cumulative Impacts

The proposed beddown at SSFB would have no impacts on HTMW from construction and less than significant impacts on HTMW from operations. Operation of the STARCOM HQ (if constructed at SSFB) would not result in significant cumulative impacts to HTMW as cumulative HTMW generated from operations of all facilities would remain small relative to the total quantities used, generated, and disposed of at SSFB.

3.7.2.5 Delta 12 Beddown Alternative 2b – KAFB

Adverse impacts from renovations and operations and cumulative impacts to HTMW would be similar to those discussed under Section 3.7.2.2 (less than significant) as this alternative would use the same site at KAFB.

3.7.2.6 No Action Alternative

Under the No Action Alternative, beddown of Deltas 10, 11 and/or 12 would not occur. There would be no changes in the quantity of HTMW and non-hazardous solid waste used, generated, or disposed of at any of the proposed sites. Implementation of the No Action Alternative would have no impact on HTMW.

3.8 Socioeconomics

3.8.1 Affected Environment

3.8.1.1 PaSFB

PaSFB is located south of the City of Cocoa Beach and north of South Patrick Shores and the City of Satellite Beach in Brevard County, Florida. The ROI for the analysis of socioeconomic impacts for the Proposed Action at PaSFB includes the Census county divisions (CCDs)[2] within and adjacent to PaSFB. These include the Indialantic-Melbourne Beach CCD (where PaSFB is located); Melbourne CCD (to the west of PaSFB); Merritt Island CCD (northwest of PaSFB); Cocoa-Rockledge CCD (northwest of PaSFB); and Cocoa Beach-Cape Canaveral CCD (north of PaSFB). This ROI captures socioeconomic characteristics for the area nearest to PaSFB and the geographic area where most impacts from the Proposed Action would occur. Additionally, data for Brevard County, the State of Florida, and the U.S. are provided for further information and areas of comparison. The data supporting this analysis were collected from standard sources, including federal agencies such as the U.S. Census Bureau and U.S Department of Education.

Population

Past and current population data for CCDs near PaSFB and comparison populations are shown in Table 3.8-1. Population in the area surrounding PaSFB has been increasing since 2010. The rate of population growth near PaSFB has been slower compared to the county and the state, but faster than the country. Population projections for CCDs are not available; however, population growth in Brevard County is anticipated to continue at current rates. Population is projected to reach 678,310 by 2030 (10.6% increase from 2020 levels) and 754,535 by 2050 (19.6% increase from 2020 levels) (Florida Legislature 2023).

Table 3.8-1. Population Trends Near PaSFB

Geographic Area	2010 Population	2020 Population	Change (+/-)	Percent Change
Indialantic-Melbourne Beach CCD	43,107	46,717	3,610	7.7
Melbourne CCD	120,263	133,563	13,300	10.0
Merritt Island CCD	42,611	45,097	2,486	5.5
Cocoa-Rockledge	117,219	128,920	11,701	9.1
Cocoa Beach-Cape Canaveral CCD	23,408	23,584	176	0.7
Total ROI	**346,608**	**377,881**	**31,273**	**8.3**
Brevard County	543,376	606,612	63,236	10.4
Florida	18,801,310	21,538,187	2,736,877	12.7
United States	308,745,538	331,449,281	22,703,743	6.8

Source: USCB 2010; USCB 2020a
CCD = Census county division

Housing

A housing unit refers to a house, an apartment, a mobile home or trailer, a group of rooms, or a single room occupied as separate living quarters, or if vacant, intended for occupancy as separate living quarters. Both occupied and vacant housing units are included in the total housing unit inventory. A housing unit is classified as occupied if it is the usual place of residence of a person

[2] A CCD is defined as a subdivision of a county or equivalent entity that is a relatively permanent statistical area established cooperatively by the Census Bureau and state, tribal, and local government authorities.

or group of people; conversely, a housing unit is classified as vacant if it is not the usual place of residence of a person or group of people. The rental vacancy rate is the proportion of the rental inventory which is vacant for rent (USCB 2020b).

Housing options available for PaSFB personnel include privatized military family housing and unaccompanied housing on Base, and off Base housing in the surrounding community. The PaSFB Military Housing Office is available to assist KAFB personnel in housing decisions. The total housing units, occupied housing units, rental vacancy rates, homeowner vacancy rates, and home values near PaSFB and comparison populations are shown in Table 3.8-2. Rental vacancy rates indicate there are housing options in the region, and are generally comparable to the county, state, and country. The exceptions are for Cocoa Beach-Cape Canaveral CCD and Indiatlantic-Melbourne Beach CCD, which have higher rental vacancy rates. Home values in the area are higher in Indiatlantic-Melbourne Beach, Merritt Island, and Cocoa Beach-Cape Canaveral CCDs compared to the county, state, and country.

Table 3.8-2. Housing Characteristics Near PaSFB

Geographic Area	Total Housing Units	Vacant Housing Units	Rental Vacancy Rate (%)[a]	Homeowner Vacancy Rate (%)	Median Gross Rent ($)	Median House Value ($)
Indialantic-Melbourne Beach CCD	23,938	3,403	11.0	1.8	1,528	351,700
Melbourne CCD	63,635	5,946	9.3	1.7	1,184	233,900
Merritt Island CCD	21,140	1,793	6.7	2.0	1,080	327,400
Cocoa-Rockledge	57,096	4,202	7.9	1.6	1,182	236,700
Cocoa Beach-Cape Canaveral CCD	19,067	5,958	15.2	2.3	1,092	321,600
Brevard County	288,794	31,768	8.9	1.9	1,185	235,500
Florida	9,865,350	1,336,283	9.1	2.0	1,301	248,700
United States	140,498,736	13,681,156	7.4	1.5	1,163	244,900

Source: USCB 2020c; USCB 2021a
CCD = Census county division; % = percent; $ = U.S. dollars

Economic Activity (Employment and Earnings)

Table 3.8-3 displays general economic indicators near PaSFB including labor force, unemployment rate, per capita income, and median household income. The size of a county's civilian labor force is measured as the sum of those currently employed and unemployed. People are classified as unemployed if they do not have a job, have actively looked for work in the prior four weeks, and are currently available for work (USCB 2023a). The unemployment rate is calculated based on the number of unemployed persons divided by the labor force. Unemployment rates generally were comparable to the county, state, and nation, with the exception of the Indialantic-Melbourne and Melbourne CCDs, which were comparably lower.

Several measures can be used to describe earnings in the ROI, including per capita income and median household income. Per capita income is the mean income computed for every man, woman, and child in a particular group and is derived by dividing the total income of a particular group by the total population. Household income is the sum of the income of all people 15 years and older living in the household. The median income divides the income distribution into two equal groups, one having incomes above the median, and other having incomes below the median (USCB 2023a). Per capita income and median household income in the ROI is generally comparable to or higher than the county, state, and nation.

Table 3.8-3. Economic Characteristics Near PaSFB

Geographic Area	Population in Labor Force	Employed (civilian labor force)	Unemployment Rate (%)	Per Capita Income ($)	Median Household Income ($)
Indialantic-Melbourne Beach CCD	21,463	20,070	4.1	49,097	80,208
Melbourne CCD	64,957	62,330	3.7	35,221	63,894
Merritt Island CCD	21,355	20,010	5.5	44,360	79,594
Cocoa-Rockledge	62,314	58,976	4.8	35,532	65,632
Cocoa Beach-Cape Canaveral CCD	11,182	10,486	5.2	51,683	65,489
Brevard County	281,507	266,213	4.8	36,278	63,632
Florida	10,448,290	9,824,911	5.3	35,216	61,777
United States	167,869,126	157,510,982	5.5	37,638	69,021

Source: USCB 2021b
CCD = Census county division; % = percent; $ = U.S. dollars

Employment by Industry

Employment statistics by industry near PaSFB and for comparison populations are shown in Table 3.8-4. The leading industries near PaSFB are professional, scientific, and management, and administrative and waste management services, as well as educational services, and health care and social assistance.

Table 3.8-4 Employment Statistics by Industry Near PaSFB

Industry	CCD (%)					Brevard County (%)	Florida (%)
	Cocoa Beach-Cape Canaveral	Cocoa-Rockledge	Indialantic-Melbourne Beach	Melbourne	Merritt Island		
Agriculture, forestry, fishing and hunting, and mining	0.0	0.4	0.6	0.7	0.1	0.5	0.8
Construction	5.5	7.2	5.2	7.3	6.8	7.0	8.0
Manufacturing	8.8	10.3	12.9	12.8	12.3	11.8	5.1
Wholesale trade	2.2	2.0	1.9	1.7	1.3	1.7	2.6
Retail trade	8.7	12.4	9.4	12.3	11.6	12.1	12.3
Transportation and warehousing, and utilities	8.6	4.1	2.8	4.2	5.3	4.3	6.0
Information	1.8	1.3	1.2	1.4	1.8	1.3	1.7
Finance and insurance, and real estate and rental and leasing	8.4	6.4	7.3	4.8	4.3	5.6	7.8

Industry	CCD (%)					Brevard County (%)	Florida (%)
	Cocoa Beach-Cape Canaveral	Cocoa-Rockledge	Indialantic-Melbourne Beach	Melbourne	Merritt Island		
Professional, scientific, and management, and administrative and waste management services	17.7	13.6	17.5	12.9	14.6	14.0	13.5
Educational services, and health care and social assistance	14.4	21.2	21.9	21.0	18.2	21.1	21.1
Arts, entertainment, and recreation, and accommodation and food services	13.9	9.9	10.4	11.0	10.8	10.3	11.5
Other services, except public administration	2.8	4.9	3.6	5.2	3.8	4.8	5.2
Public administration	7.2	6.3	5.2	4.8	9.1	5.5	4.3

Source: USCB 2021b
CCD = Census county division; % = percent

According to the Economic Impact Analysis for the Patrick Space Force Base and Cape Canaveral Space Force Station, the total economic impact for both PaSFB and Cape Canaveral Space Force Station during FY 2022 was approximately $2.4 billion. In addition, both installations are responsible for a combined 17,941 jobs created and $492 million value of indirect jobs created (SLD 45 2022).

Licensure Portability

In an effort to address retention and family readiness issues, the Department of the Air Force launched the Support of Military Families program. The program focuses on evaluating public education opportunities and occupational license portability (i.e., the ability of a license to transfer between states). The program is intended to provide communities with insight into how the Department assesses their support to Airmen, Guardians, and their families in the areas of public education and license portability. This information helps apprise communities on opportunities to reduce educational and spousal employment challenges for military families. In turn, these efforts are intended to strengthen member retention, improve quality of life, and ease transitions for Airmen and Space professionals. Using information from this program, civic leaders near Department of the Air Force installations can work with state government officials to draft legislation to improve education policy and licensure portability for military spouses. Sharing proposed language and best practices amongst civic leader groups associated with the Department of the Air Force has also resulted in positive momentum and legislation that has reduced the barriers for military spouses and licensure portability at large (DAF 2021a).

The most recent assessment of the Support of Military Families program was released in 2021. Licensure portability is considered for professions including Accounting, Nursing, Cosmetology, Physical Therapy, Emergency Medical Service, Psychology, Engineering, Teaching, Law, and other various professions. The methodology evaluates current state policies and programs intended to eliminate barriers to license portability for military spouses and uses colors to graphically display results for all criteria and locations. Red, yellow, and green colors can be described as least, moderately, or most supportive of military families, respectively. The red, yellow, green continuum indicates how easily military spouse professionals are allowed to transfer their licenses between states, and whether they can begin work immediately (DAF 2021a).

The State of Florida received an overall green assessment in 2021 as assessed under the Support of Military Families program for licensure portability, indicating state statutes (primarily F.S.A. § 455.02) are effective in removing barriers to licensure and certification portability (DAF 2021b). All occupations assessed at PaSFB for licensure portability were given a "green" rating, indicating that military spouses can easily transfer professional licenses and certificates from other states that help sustain their careers.

Schools

PaSFB is located in the Brevard County School District. School Liaison Officers are available at PaSFB that work closely with school district staff to network, educate, and work in partnership with local schools and establish support programs. Table 3.8-5 contains data on schools in Brevard County and Florida for comparison.

Table 3.8-5. Education Statistics for Schools Near PaSFB

Geographic Area	Number of Schools	Students	Teachers	Student / Teacher Ratio
Brevard County	168	80161	5102	15.7 : 1
Public	112	72497	4433	16.35 : 1
Private	56	7664	669	11.6 : 1
Florida[1]	4,191	2,833,186	159,866	17.7 : 1

Source: NCES, 2023a, 2023b

[1] Data provided is for public schools only.

Public Services

Law enforcement services at PaSFB are provided by the 45th Security Forces Squadron and fire protection and emergency services through the PaSFB Fire and Emergency Services. The 45th Medical Group operates as an outpatient medical facility with family practice, pediatrics, dental, flight medicine, and women's health clinics. Services provided at the clinics include radiology and a clinical laboratory. The group also offers a clinical pharmacy, nutritional medicine programs, and base support services such as public health, bioenvironmental engineering, and aerospace physiology.

Public services in the ROI consist of law enforcement, fire protection, emergency medical services, and medical services. The Brevard County Sheriff's Office provides law enforcement services for the County and has civil and patrol divisions. Other law enforcement agencies in the area include the Satellite Beach Police Department and the Cocoa Beach Police Department; both municipalities also have Fire Departments within five miles of PaSFB. A Brevard County Fire and Rescue Station is located just south of PaSFB. Brevard County Emergency Medical Services system is the sole 911 ambulance provider in Brevard County. The nearest major hospital to PaSFB is the Cape Canaveral Hospital which offers emergency room services and inpatient care.

3.8.1.2 KAFB

KAFB is located southeast of Albuquerque, New Mexico. The ROI for the analysis of socioeconomic impacts for the Proposed Action at KAFB includes the Albuquerque and Isleta Pueblo CCD as these areas capture socioeconomic characteristics nearest to KAFB and the geographic area where most impacts from the Proposed Action would occur. The Pueblo Isleta CCD captures data for the Pueblo of Isleta tribal lands. Additionally, data for Bernalillo County, the State of New Mexico, and the U.S. are provided for further information and areas of comparison.

Population

Past and current population data for CCDs near KAFB and comparison populations are shown in Table 3.8-6. Population in the area surrounding KAFB and the county has remained relatively flat and has grown at a slower rate compared to the state and county.

Population projections for CCDs are not available. Population projections for Bernalillo County have not been made since 2010, following the 2010 Decennial Census. As of that time, population growth in Bernalillo County was anticipated to continue at current rates. Population is projected to reach 693,134 by 2030 (2.4% increase from 2020 levels) and 694,327 by 2040 (2.6% increase from 2020 levels) (The University of New Mexico, 2023).

Table 3.8-6. Population Trends Near KAFB

Geographic Area	2010 Population	2020 Population	Change (+/-)	% Change
Albuquerque CCD	633,223	641,085	7,862	1.2
Isleta Pueblo CCD	2,489	2,372	-117	-4.7
Total ROI	**635,712**	**643,457**	**7,745**	**1.2**
Bernalillo County	662,564	676,444	13,880	2.1
New Mexico	2,059,179	2,117,522	58,343	2.8
United States	308,745,538	331,449,281	22,703,743	6.8

Source: USCB 2010; USCB 2020a
CCD = Census county division; % = percent

Housing

Housing options available for KAFB personnel include privatized military family housing and unaccompanied housing on Base, and off Base housing in the surrounding community. The KAFB Military Housing Office is available to assist KAFB personnel in housing decisions. The total housing units, occupied housing units, rental vacancy rates, homeowner vacancy rates, and home values near KAFB and comparison populations are shown in Table 3.8-7. Rental vacancy rates and vacant housing unit total indicate there are housing options in the region. Home values in Albuquerque are comparable to the county, and higher than the state, but lower than the nation. Rent levels are comparable to the county and state, and lower than the nation. Median household values in the Isleta Pueblo CCD are substantially lower than the comparison populations.

Table 3.8-7. Housing Characteristics Near KAFB

Geographic Area	Total Housing Units	Vacant Housing Units	Rental Vacancy Rate (%)a	Homeowner Vacancy Rate (%)	Median Gross Rent ($)	Median House Value ($)
Albuquerque CCD	285,214	18,797	7.9	1.5	931	213,500
Isleta Pueblo CCD	1,007	101	0.8	0.1	N/A[1]	82,600
Bernalillo County	299,451	20,153	7.9	1.6	934	216,200

Geographic Area	Total Housing Units	Vacant Housing Units	Rental Vacancy Rate (%)a	Homeowner Vacancy Rate (%)	Median Gross Rent ($)	Median House Value ($)
New Mexico	940,859	111,345	9.0	1.7	897	184,800
United States	140,498,736	13,681,156	7.4	1.5	1,163	244,900

Source: USCB 2020c; USCB 2021a
[1] Median gross rent data was not recorded for this area for the 2021 American Community Survey.
CCD = Census county division; % = percent; $ = U.S. dollar

Economic Activity (Employment and Earnings)

Table 3.8-8 displays general economic indicators near KAFB including labor force, unemployment rate, per capita income, and median household income. Unemployment rates in the Albuquerque CCD were comparable to the county and nation, and lower than the state. Unemployment rates in the Isleta Pueblo CCD are higher than all comparison populations.

Table 3.8-8. Economic Characteristics Near KAFB

Geographic Area	Population in Labor Force	Employed (civilian labor force)	Unemployment Rate (%)	Per Capita Income ($)	Median Household Income ($)
Albuquerque CCD	325,003	303,513	5.6	33,406	55,807
Isleta Pueblo CCD	1,202	1,112	7.5	21,061	47,857
Bernalillo County	342,131	319,686	5.6	33,670	56,920
New Mexico	964,460	889,428	6.6	29,624	54,020
United States	167,869,126	157,510,98	5.5	37,638	69,021

Source: USCB 2021b
CCD = Census county division; % = percent; $ = U.S. dollar

Employment by Industry

Employment statistics by industry near KAFB and for comparison populations are shown in Table 3.8-9. The leading industries near KAFB are educational services, and health care and social assistance; professional, scientific, and management, and administrative and waste management services; and arts, entertainment, and recreation, and accommodation and food services.

Table 3.8-9 Employment Statistics by Industry Near KAFB

Industry	Albuquerque CCD (%)	Isleta Pueblo CCD (%)	Bernalillo County (%)	New Mexico (%)
Agriculture, forestry, fishing and hunting, and mining	1.0	4.0	1.0	4.0
Construction	6.9	3.3	6.8	7.3
Manufacturing	4.2	0.5	4.2	4.1
Wholesale trade	2.1	0.1	2.2	1.8
Retail trade	10.6	11.5	10.4	11.0
Transportation and warehousing, and utilities	3.7	1.9	3.7	4.6
Information	1.6	0.9	1.7	1.3
Finance and insurance, and real estate and rental and leasing	5.7	4.1	5.6	4.8
Professional, scientific, and management, and administrative and waste management services	14.7	8.2	14.9	12.0

Industry	Albuquerque CCD (%)	Isleta Pueblo CCD (%)	Bernalillo County (%)	New Mexico (%)
Educational services, and health care and social assistance	26.8	21.6	26.8	25.5
Arts, entertainment, and recreation, and accommodation and food services	10.2	23.7	10.2	10.4
Other services, except public administration	5.6	4.0	5.6	5.4
Public administration	6.7	16.1	6.9	7.7

Source: USCB 2021b
CCD = Census county division; % = percent

During FY 2020, more than 23,000 individuals were employed by KAFB, of which 3,505 were active-duty personnel. Direct payroll expenditures from the installation totaled $2.26 billion. When non-payroll expenditures associated with KAFB and local job creation value are included, total economic impact exceeded $7.4 billion, with local economic impact representing approximately $4.6 billion of that total (KAFB 2023a).

Licensure Portability

The State of New Mexico received an overall yellow assessment in 2021 as assessed under the Support of Military Families program for licensure portability, indicating state statutes (primarily NM HB 120) contain barriers to licensure and certification portability for military spouses. This assessment was awarded for joining interstate compacts for Nursing and providing current certification as a National Registry EMT for the EMS profession. Barriers remain for Accounting, Cosmetology, Engineering, Physical Therapy, Psychology and Teaching which include "substantial equivalency" requirements. This allows acceptance of another state's license if the requirements for obtaining the license are sufficiently similar to their own state's requirements and precludes acceptance if the requirements are not similar. Additional barriers also remain for other occupations as current statute does not exclude any other occupations from licensure portability burdens and for Law as there are currently no rules established to accommodate licensing for military spouses in the legal profession.

Schools

KAFB is located in the Albuquerque School District. School Liaison Officers are available at KAFB that work closely with school district staff to network, educate, and work in partnership with local schools and establish support programs. Table 3.8-10 contains data on schools in Bernalillo County and New Mexico for comparison.

Table 3.8-10. Education Statistics for Schools Near KAFB

Geographic Area	Number of Schools	Students	Teachers	Student / Teacher Ratio
Bernalillo County	251	98,300	7,390.5	13.3 : 1
Public	207	90,658	6,697.1	13.5 : 1
Private	44	7,642	693.4	11.0 : 1
New Mexico[1]	890	316,785	21,475	14.8 : 1

Source: NCES 2023a, 2023b
[1] Data provided is for public schools only.

Public Services

Law enforcement services at KAFB are provided by the 377th Security Forces Squadron, and fire protection through the KAFB Fire Department. The 377th Medical Group operates as an outpatient medical facility with primary care, preventative care, mental health, specialty care, case

management, dental, vision, and women's health. Services provided at the clinics include radiology and a clinical laboratory. The group also offers a clinical pharmacy. No emergency services are provided; those in need of urgent care are directed to off-Base services (KAFB 2023b).

Public services in the ROI consist of law enforcement, fire protection, emergency medical services, and medical services. Law enforcement services are provided by the Bernalillo County Sheriff's Office for the County and the City of Albuquerque Police Department. Albuquerque Fire Rescue provides fire and emergency medical services to the City of Albuquerque and has seven stations within a five-mile radius of the project area. The nearest major hospital to KAFB is the Presbyterian Hospital which offers emergency room services and inpatient care.

3.8.1.3 SSFB

SSFB is located east of Colorado Springs, Colorado. The ROI for the analysis of socioeconomic impacts for the Proposed Action at SSFB includes the Southeast El Paso CCD (where SSFB is located); the Elsmere CCD (to the northwest); the Colorado Springs CCD (to the west), and the Fountain CCD (to the southwest). This ROI captures socioeconomic characteristics for the area nearest to SSFB and the geographic area where most impacts from the Proposed Action would occur. Additionally, data for El Paso County, the State of Colorado, and the U.S. are provided for further information and areas of comparison.

Population

Past and current population data for CCDs near SSFB and comparison populations are shown in Table 3.8-11. Population in the ROI has been increasing in the ROI comparably to the county and state, which is faster than the country. Population growth rate in the Southeastern El Paso CCD, where SSFB is located, and the Elsmere CCD, which is the next closest CCD to SSFB, has been particularly high since 2010.

Population projections for CCDs are not available. Population projections for El Paso County indicated that population growth in the county is anticipated to continue at an accelerated rate. Population is projected to reach 855,206 by 2030 (15% increase from 2020 levels) and 1,024,159 by 2045 (29% increase from 2020 levels) (PPACG 2023).

Table 3.8-11. Population Trends Near SSFB

Geographic Area	2010 Population	2020 Population	Change (+/-)	% Change
Southeastern El Paso CCD	12,768	18,804	6,036	47.3
Elsmere CCD	61,541	78,874	17,333	28.2
Colorado Springs CCD	372,622	406,361	33,739	9.1
Fountain CCD	75,311	91,369	16,058	21.3
Total ROI	**522,242**	**595,408**	**73,166**	**14.0**
El Paso County	622,263	730,395	108,132	17.4
Colorado	5,029,196	5,773,714	744,518	14.8
United States	308,745,538	331,449,281	22,703,743	6.8

Source: USCB 2010; USCB 2020a
CCD = Census county division; % = percent

Housing

Housing options available for SSFB personnel include on Base privatized military family housing, unaccompanied housing at Peterson SFB, and off Base housing in the surrounding community. The SSFB Military Housing Office is available to assist SSFB personnel in housing decisions.

The total housing units, occupied housing units, rental vacancy rates, homeowner vacancy rates, and home values near SSFB and comparison populations are shown in Table 3.8-12. Rental vacancy rates and vacant housing unit total indicate there are housing options in the region. Home values in the ROI are generally lower than the county, state, and nation; however, median gross rent levels are generally higher in the ROI, with the exception of Colorado Springs.

Table 3.8-12. Housing Characteristics Near SSFB

Geographic Area	Total Housing Units	Vacant Housing Units	Rental Vacancy Rate (%)[a]	Homeowner Vacancy Rate (%)	Median Gross Rent ($)	Median House Value ($)
Southeastern El Paso CCD	6,761	413	4.0	2.3	1,607	283,300
Elsmere CCD	28,705	904	5.5	0.8	1,679	323,100
Colorado Springs CCD	174,181	9,583	6.2	0.9	1,242	302,500
Fountain CCD	28,484	1,089	5.8	1.2	1,648	276,700
El Paso County	287,459	14,776	6.2	0.9	1,347	331,400
Colorado	2,491,404	233,589	7.5	1.2	1,437	397,500
United States	140,498,736	13,681,156	7.4	1.5	1,163	244,900

Source: USCB 2020c; USCB 2021a
CCD = Census county division; % = percent; $ = U.S. dollar

Economic Activity (Employment and Earnings)

Table 3.8-13 displays general economic indicators near SSFB, including labor force, unemployment rate, per capita income, and median household income. Unemployment rates range from lower than comparison populations in Southeastern El Paso and Elsmere CCDs, nearest to SSFB, to higher than comparison populations in Colorado Springs, and Fountain CCDs. Per capita income and median household income in the ROI are generally lower than the county and state, with the exception of the Elsmere CCD, which has higher median household income than the county, state, and nation.

Table 3.8-13. Economic Characteristics Near SSFB

Geographic Area	Population in Labor Force	Employed (civilian labor force)	Unemployment Rate (%)	Per Capita Income ($)	Median Household Income ($)
Southeastern El Paso CCD	8,369	7,044	3.6	29,130	71,368
Elsmere CCD	42,868	38,550	4.6	36,253	88,612
Colorado Springs CCD	219,761	197,006	6.4	36,138	65,962
Fountain CCD	48,325	34,271	7.8	28,179	72,289
El Paso County	388,055	335,868	6.1	37,619	75,909
Colorado	3,157,660	2,975,830	4.6	42,807	80,184
United States	167,869,126	157,510,98	5.5	37,638	69,021

Source: USCB 2021b
CCD = Census county division; % = percent; $ = U.S. dollar

Employment by Industry

Employment statistics by industry in near SSFB and for comparison populations are shown in Table 3.8-14. The leading industries near SSFB are educational services, and health care and social assistance, as well as professional, scientific, and management, and administrative and waste management services. SSFB is home to 8,000 military and civilian employees. The base

indirectly contributes an estimated $1.3 billion to the local Colorado Springs, Colorado, area annually (Space Base Delta I 2023).

Table 3.8-14 Employment Statistics by Industry Near SSFB

Industry	CCD (%)				El Paso County (%)	Colorado (%)
	Southeastern El Paso	Elsmere	Colorado Springs	Fountain		Southeastern El Paso
Agriculture, forestry, fishing and hunting, and mining	3.3	0.5	0.6	0.8	0.7	2.1
Construction	13.1	6.7	8.0	8.6	7.7	8.1
Manufacturing	6.3	6.5	5.7	5.2	5.8	6.9
Wholesale trade	0.8	1.2	1.7	1.6	1.6	2.4
Retail trade	11.2	10.4	11.3	13.2	10.8	10.4
Transportation and warehousing, and utilities	6.9	4.8	4.1	5.2	4.3	5.0
Information	1.3	3.0	2.5	1.8	2.4	2.7
Finance and insurance, and real estate and rental and leasing	3.0	8.7	7.1	4.8	7.5	7.3
Professional, scientific, and management, and administrative and waste management services	17.9	13.3	14.7	12.3	14.4	14.6
Educational services, and health care and social assistance	21.1	23.9	23.6	21.9	23.7	21.4
Arts, entertainment, and recreation, and accommodation and food services	5.2	8.0	10.5	8.7	9.6	9.7
Other services, except public administration	3.4	6.1	5.5	7.5	5.7	4.9
Public administration	6.4	6.8	4.6	8.4	5.7	4.7

Source: USCB 2021b
CCD = Census county division; % = percent

Licensure Portability

The State of Colorado received an overall green assessment in 2021 as assessed under the Support of Military Families program for licensure portability, indicating state statutes (primarily C.R.S.A. § 12-20-202) are effective in removing barriers to licensure and certification portability. Military spouses can easily transfer professional licenses and certificates from other states and sustain their careers. Barriers remain for Engineering due to substantial equivalence requirements for licensure reciprocity and for other occupations given their exclusion of various occupations (doctors, architect, etc.) from the licensure portability statute. Since 2019, Colorado improved the temporary licensing process for the Engineering profession (HB 20-1326).

Schools

SSFB is located in the Ellicott School District. Additional school districts are located in the surrounding area within El Paso County, including El Paso County School District, School District

No. 3, Colorado Springs School District, and Harrison School District. School Liaison Officers are available at SSFB that work closely with school district staff to network, educate, and work in partnership with local schools and establish support programs. Table 3.8-15 contains data on schools in El Paso County and Colorado for comparison.

Table 3.8-15. Education Statistics for Schools Near SSFB

Geographic Area	Number of Schools	Students	Teachers	Student / Teacher Ratio
El Paso County	268	120,690	7,535.6	16.0 : 1
Public	245	117,716	7,257	16.2 : 1
Private	23	2,974	279	10.7 : 1
Colorado[1]	1,941	880,597	53,903	16.3 : 1

Source: NCES 2023a, 2023b

[1] Data provided is for public schools only.

Public Services

Law enforcement services at SSFB are provided by the 50th Security Forces Squadron and fire protection and emergency services through the 50th Civil Engineer Squadron Fire Department. Medical services for personnel aboard SSFB are provided at Peterson SFB by the 21st Medical Squadron. The squadron supplies high-quality primary care, dental, aerospace medicine, pharmacy, medical and dental laboratory, mental health, radiology, bioenvironmental engineering, public health, and health promotion services.

Public services in the ROI consist of law enforcement, fire protection, emergency medical services, and medical services. The El Paso County Sheriff's Office provides law enforcement services for the County. Other law enforcement agencies in the area include the Colorado Springs Police Department. The nearest fire departments to SSFB include the Ellicott Fire Protection District and the Falcon Fire Department. The nearest major hospital to SSFB is the UCHealth Memorial Hospital Central facility which provides comprehensive inpatient and outpatient services.

3.8.2 Environmental Consequences

3.8.2.1 Delta 10 Beddown Alternative 1 – PaSFB

Population and Public Services

During construction, an increased demand for construction workers could lead to a temporary increase in population throughout the ROI. The population increase would not contribute to adverse impacts as the local workforce and public services throughout Brevard County and the surrounding area would support much of the construction activity. Non-local workers are not expected to relocate semi-permanently or permanently near the project area; rather, they would find temporary lodging in the region. Short-term beneficial impacts may occur from additional spending in the ROI and tax revenues generated.

During operations, 108 personnel would be newly stationed at PaSFB year-round. Under an upper-bound scenario, it is assumed that all 108 personnel would come from outside the ROI and would bring a family. According to the DoD Demographics Profile of the Military Community, active-duty personnel have an average of 1.2 family members, so if each of the 108 personnel moved to the ROI with their family, the total population increase would be 238, which is 0.06 percent of the population of the ROI (DoD 2023). Therefore, the permanent increase in population due to operations and family relocation would not contribute to adverse impacts on public

services. Long-term, beneficial impacts are expected from increased spending in the ROI and tax revenues generated.

Delta 10 beddown would also require an additional 200 to 600 personnel for wargaming events, occurring on a quarterly basis each year and only over a 10-day period. As this impact would be temporary, no long-term impacts from population increase are expected; there could be temporary strains on public services, and there could also be intermittent beneficial impacts from increased spending in the ROI and tax revenues generated.

Housing

Most construction workers that would be hired as a result of the Proposed Action would come from the local workforce; however, if construction workers from outside the ROI move to the area in search of jobs, there could be some temporary increased demand for housing. The local communities in the ROI have a large supply of vacant housing units (21,302 units total) and the rental vacancy rates are generally near or above the national average. Therefore, no adverse impacts on housing availability during construction are anticipated.

During operations, the 108 new permanent employees and their dependents would stimulate the local housing market and increase long-term demand for renting or purchasing homes. If all 108 employees and their dependents (i.e., 238 individuals total) moved from outside the ROI and needed new housing off-Base, this would represent 0.5 percent of the vacant housing units in the ROI; therefore, no adverse impacts on housing availability and affordability are expected.

The additional 200 to 600 personnel that would periodically travel to PaSFB for wargaming events would utilize either on Base housing or off base temporary lodging (e.g., hotels). Therefore, no long-term impacts on housing availability or house values are expected.

Employment and Earnings

Construction activities would temporarily support employment in the ROI through the direct hiring of construction workers and through jobs created in supporting industries due to construction spending on supplies and materials in the ROI. The hiring of local workers and the wages paid to workers in the ROI would result in short-term beneficial impacts.

During operations, 108 permanent jobs would be created in the ROI. While many of the personnel would relocate from outside the ROI, once they settle in the ROI, their wages would stimulate and benefit the local economy from increased spending, resulting in long-term beneficial impacts.

The 108 new permanent employees that would be relocated as result of the Proposed Action would likely come from outside the ROI, and any of their potential working-age dependents could be additions to the local workforce, which would have long-term beneficial impacts on unemployment levels and further drive spending in the ROI. According to the DoD Demographics Profile of the Military Community, active-duty personnel have an average of 0.5 working-age dependents per employee, which equates to 59 working-age dependents.

Given that the State of Florida received an overall “green” assessment under the Support of Military Families program for licensure portability, and that all occupations assessed at PaSFB for licensure portability were given a “green” rating, there would be minimal issues with any working-age dependents transferring licenses from their original state. Therefore, less than significant adverse impacts to employment status of working-age dependents are expected.

The additional 200 to 600 personnel that would periodically travel to PaSFB for wargaming events would also result in short-term, intermittent beneficial impacts from increase spending. These personnel, or their working-age dependents, would not relocate to the ROI.

Schools

Any temporary increase in construction employment created by the Proposed Action would not induce non-local workers to permanently relocate to the ROI. Therefore, no relocation of school aged children to the ROI would occur during construction.

The 108 new permanent employees that would be relocated as a result of the Proposed Action would likely come from outside the ROI and their children would be additions to the local school enrollment. According to the DoD Demographics Profile of the Military Community, active-duty personnel have an average of 0.7 children per employee, which equates to 76 children. If all children were school age, this would represent a permanent 0.1 percent increase in the number of students in Brevard County, which would not cause an adverse impact on schools.

Cumulative Impacts

As described above, the Delta 10 beddown at PaSFB would result in less than significant impacts to socioeconomics. Other stationing activities (i.e., STARCOM HQ beddown) and construction projects listed in Appendix C would have short-term and beneficial impacts to the economy from construction and long-term beneficial impacts from the stationing of STARCOM HQ. Cumulatively, no significant impacts are anticipated to housing and schools as the combined actions would result in a less than 1 percent increase in population. Overall, cumulative effects would be less than significant from increased stationing of the STARCOM HQ.

3.8.2.2 Delta 11 Beddown Alternative 1a – KAFB

Population and Public Services

During building renovations, an increased demand for construction workers could lead to a temporary increase in population throughout the ROI. The temporary population increase would not contribute to adverse impacts to the local workforce or public services throughout Bernalillo County and the surrounding area would support much of the renovation activity. Short-term beneficial impacts may occur from additional spending in the ROI and tax revenues generated.

During operations, 289 personnel would be newly stationed at KAFB year-round. Under an upper-bound scenario, it is assumed that all 289 personnel would come from outside the ROI and would bring a family. Based on an average of 1.2 family members per active-duty personnel, the total population increase would be 636 if each of the 289 personnel moved to the ROI with their family, which is 0.1 percent of the population of the ROI (DoD 2023). Therefore, the permanent increase in population due to operations and family relocation would not contribute to adverse impacts on public services. Long-term, beneficial impacts are expected from increased spending in the ROI and tax revenues generated.

At SSFB, there would be a comparative decrease in 289 personnel, and up to 636 individuals in the ROI considering potential dependents. This would represent a less than one percent population decline in the ROI and would not represent an adverse impact to population and public services.

Housing

Most construction workers that would be hired as a result of the Proposed Action would come from the local workforce; however, if construction workers from outside the ROI move to the area in search of jobs, there could be some increased demand for housing. The local communities in the ROI have large supply of vacant housing units (18,898 units) and the rental vacancy rates are generally near or above the national average. Therefore, no impacts on housing availability during renovations would occur.

During operations, the 289 new permanent employees and their dependents would stimulate the local housing market and increase demand for renting or purchasing homes. If all 289 employees and their dependents (i.e., 636 individuals total) moved from outside the ROI and needed new housing off-Base, this would represent 1.5 percent of the total vacant housing units in the ROI; therefore, no adverse impacts on housing availability and affordability are expected.

At SSFB, the comparative decrease in 289 personnel and their dependents could lead to a slight increase in vacant housing in the ROI, which could have slight downward pressure on housing prices. However, considering this would represent at most only a 1 percent increase in vacant housing, no adverse impacts on housing area anticipated.

Employment and Earnings

Renovation activities would temporarily support employment in the ROI through the direct hiring of construction workers and through jobs created in supporting industries due to spending on supplies and materials in the ROI. The hiring of local workers and the wages paid to workers in the ROI would result in short-term beneficial impacts.

During operations, 289 permanent jobs would be created in the ROI. While many of the personnel would relocate from outside the ROI, once they settle in the ROI, their wages would stimulate and benefit the local economy from increased spending, resulting in long-term beneficial impacts. Any of their potential working-age dependents could be additions to the local workforce, which would have long-term beneficial impacts on unemployment levels and further drive spending in the ROI. There could be up to 145 working-age dependents that relocate to the ROI, based on an average of 0.5 working-age dependents per active-duty individual (DoD 2023).

Given that the State of New Mexico received an overall “yellow” assessment under the Support of Military Families program for licensure portability, there may be some barriers to working-age dependents of active-duty personnel transferring jobs, depending on their profession. As a result, less than significant short-term adverse impacts to employment status of adult dependents could occur.

At SSFB, the comparative decrease in 289 personnel and their dependents would result in reductions in spending in the community, which could result in less than significant adverse impacts to the local economy.

Schools

Any temporary increase in employment created by the Proposed Action renovations would not induce non-local workers to permanently relocate to the ROI. Therefore, no relocation of school aged children to the ROI would occur during renovations.

The 289 new permanent employees that would be relocated as a result of the Proposed Action would likely come from outside the ROI and their children would be additions to the local school enrollment. There could be up to 202 children that relocate to the ROI, based on an average of 0.7 children per active-duty individual (DoD 2023). If all children were school age, this would represent a 0.2 percent increase in the number of students in Bernalillo County which would not cause an adverse impact on schools.

At SSFB, the comparative decrease in 289 personnel and their dependents would result in a decrease of up to 202 children, which could have beneficial impacts on schools by improving student to teacher ratios.

Cumulative Impacts

As described above, the Delta 11 beddown at KAFB would result in less than significant impacts to socioeconomics. Construction projects and training events involving a temporary increase in personnel listed in Appendix C would provide short-term and beneficial impacts to the economy.

3.8.2.3 Delta 11 Beddown Alternative 1b – SSFB

Impacts from construction would be similar to those discussed under Section 3.8.2.4 (less than significant adverse and beneficial impacts) as this alternative would use the same site at SSFB. Additionally, as SSFB currently has Deltas 11 and 12 activated at SSFB, less than significant adverse and beneficial impacts to socioeconomic conditions from operations would be realized as the 61 personnel associated with Delta 12 HQ and 12 DOS would be permanently located to KAFB (as described in Section 3.8.2.5).

3.8.2.4 Delta 12 Beddown Alternative 2a – SSFB

Population and Public Services

An increased demand for construction workers could lead to a temporary increase in population throughout the ROI. The temporary population increase would not contribute to adverse impacts to the local workforce or public services throughout El Paso County and the surrounding area would support much of the construction activity. Non-local workers are not expected to relocate semi-permanently or permanently near the project area; rather, they would mostly find temporary lodging in the region. Temporary beneficial impacts may occur from additional spending in the ROI and tax revenues generated.

During operation of the Proposed Action, 61 personnel from Delta 12 that are currently activated at SSFB would be permanently stationed at SSFB year-round; hence there would be no long-term impacts from population changes. If DAF also selects Alternative 1a as discussed above, 289 personnel from Delta 11 and the 1 TES of Delta 12 that are currently activated at SSFB would be relocated to KAFB. Based on an average of 1.2 family members per active-duty personnel, the total population decrease would be 636 if each of the 289 personnel moved outside of the ROI to KAFB, which is less than 0.01 percent of the population of the ROI (DoD 2023). Reduction in population is not anticipated to have adverse impacts on population or public services.

Housing

Most construction workers that would be hired as a result of the Proposed Action would come from the local workforce; however, if construction workers from outside the ROI move to the area in search of jobs, there could be some increased demand for housing. The local communities in the ROI have a large supply of vacant housing units (11,989 units) and the rental vacancy rates are generally near or above the national average. Therefore, no impacts on housing availability during renovations would occur.

During operations, the 61 new permanent employees and their dependents would not adversely impact the local housing market as it is assumed most of these individuals and their dependents are currently located within the ROI. Any permanent relocation would be offset by the loss of the 289 personnel from Delta 11 and the 1 TES of Delta 12 and their dependents proposed for permanent stationing at KAFB if DAF also selects Alternative 1a. This would represent an increase of 1 percent of the total vacant housing units in the ROI; therefore, no adverse impacts on housing availability and affordability are expected.

Employment and Earnings

Construction activities would temporarily support employment in the ROI through the direct hiring of construction workers and through jobs created in supporting industries due to construction spending on supplies and materials in the ROI. The hiring of local workers and the wages paid to workers in the ROI would result in short-term beneficial impacts.

During operation of the Proposed Action, 61 permanent jobs would remain in the ROI and would continue to stimulate and benefit the local economy from spending. If DAF also selects Alternative 1a, an overall loss of 289 jobs supported by the current activation of Delta 11 and Delta 12 at SSFB and the regional loss of their working-age dependents in the ROI transferring to KAFB under Alternative 1a would occur, resulting in less than significant long-term adverse impacts from decreased spending in the ROI and tax revenues generated.

The State of Colorado received an overall green assessment as assessed under the Support of Military Families program for licensure portability; however, the 2021 assessment indicated there could be some issues for dependents with engineering licenses, doctors, and architects, given their exclusion for the state licensure portability statute. Therefore, there may be some barriers to working-age dependents of active-duty personnel transferring jobs if they have not already relocated to the region, depending on their profession. As a result, less than significant short-term adverse impacts to employment status of adult dependents could occur until updated licenses or certifications are granted.

Schools

Any temporary increase in construction employment created by the Proposed Action would not induce non-local workers to permanently relocate to the ROI. Therefore, no relocation of school aged children to the ROI would occur during construction.

The 61 new permanent employees that would be permanently located as a result of the Proposed Action would likely already reside in the ROI and their children would be part of the local school enrollment; therefore, no impacts to schools would occur. If Alternative 1a is selected, 289 personnel from Delta 11 and the 1 TES of Delta 12 would be relocated to KAFB which could result in a reduction of up to 202 children that relocate outside ROI, based on an average of 0.7 children per active-duty individual (DoD 2023). This would represent a decrease of less than 1 percent in enrollment of the number of students in El Paso County, which would not cause an adverse impact on schools.

Cumulative Impacts

As described above, the Delta 12 beddown at SSFB would result in less than significant impacts to socioeconomics. Construction projects and training events involving a temporary increase in personnel listed in Appendix C would have short-term and beneficial impacts to the economy from construction and long-term beneficial impacts from the stationing of STARCOM HQ. Cumulatively, no significant impacts are anticipated to housing and schools as the combined actions would result in a less than 1 percent increase in population. Overall, cumulative effects would be less than significant.

3.8.2.5 Delta 12 Beddown Alternative 2b – KAFB

Impacts from renovations would be similar to those discussed under Section 3.8.2.2 (less than significant adverse and beneficial impacts) as this alternative would use the same site at KAFB. Additionally, impacts to socioeconomic conditions would be less than those described in 3.8.2.2 which considers 289 personnel versus the 61 personnel associated with Delta 12 HQ and 12 DOS.

3.8.3 No Action Alternative

Under the No-Action Alternative, none of the proposed construction or renovation activities would occur; therefore, there would be no change to socioeconomic conditions near PaSFB, KAFB, or SSFB.

3.9 Environmental Justice

3.9.1 Affected Environment

3.9.1.1 PaSFB

Environmental Justice

Table 3.9-1 summarizes the percentage of minority and low-income populations within 1 mile of the project area, Brevard County, Florida, and the United States for comparison purposes.

Table 3.9-1. Minority and Low-Income Populations in the PaSFB ROI

Geographic Area	Total Population	Minority (%)	Low Income (%)
1 Mile ROI Total	7,582	19.4	7.2
Census Tract 669, Block Group 1	755	13.5	0.0
Census Tract 669, Block Group 2	912	21.5	1.0
Census Tract 669, Block Group 3	2,091	11.7	5.5
Census Tract 669, Block Group 4	1,105	19.0	11.0
Census Tract 669, Block Group 5	1,411	15.2	2.3
Census Tract 671, Block Group 1	1,308	38.4	16.8
Brevard County (Reference Area)	606,612	29.0	10.6
Meaningfully Greater Criterion	**-**	***34.8***	***12.7***
Florida	21,538,187	48.5	13.1
United States	331,449,281	42.2	12.6

Source: USCB 2020d; USCB 2021c, USCB 2021d
% = percent

The average minority population percentage of Brevard County is approximately 29 percent. If a block group's percentage of minority individuals meets the 50 percent criterion or exceeds 120 percent of the total minority population within Brevard County (i.e., 34.8 percent), the area is considered to have a minority population. Because the minority population percentage relative to the general population of Brevard County would not exceed the 50 percent threshold defined by CEQ, the secondary threshold of 34.8 percent is used to identify areas with meaningfully greater minority populations within 1 mile of the project area. There are six block groups within the ROI, and one of those block groups (i.e., Block Group 1, Census Tract 671) contains individual racial group minority populations or aggregate minority populations that meet the environmental justice criteria. This block group represents exclusively areas on PaSFB. The total minority population residing within 1 mile of the project area is approximately 1,469 or 19.4 percent of the entire population. Therefore, the overall composition of the ROI is predominantly nonminority. Minority populations in the ROI are predominantly Hispanic or Latino, followed by populations of two or more races and Black or African American.

Low-income populations were evaluated using the absolute 50 percent and the relative 120 percent or greater criteria for potentially affected block groups within the ROI. If a block group's percentage of low-income individuals meets the 50 percent criterion or is more than 120 percent of the total low-income population within Brevard County (i.e., 12.7 percent), then the area is considered to have a low-income population. Out of the six block groups within the 1 mile ROI, one block group has a low-income population that exceeds the meaningfully greater criteria (i.e., Block Group 1, Census Tract 671). This block group represents exclusively PaSFB, and considering the margins of error that are inherently present in the dataset, as well as general salary levels and other social and economic benefits offered to enlisted personnel, it is possible

that the low-income population in this block group is less. The total low-income population residing within 1 mile of the project area is approximately 549 or 9.8 percent of the entire population.

Based on a review of the USEPA's EJSCREEN model, no block groups within a 1-mile radius of the project area were identified as meeting or exceeding the 80th national percentile threshold for any environmental justice indicators (USEPA 2023b).

Protection of Children's Health and Safety and Elderly Populations

Table 3.9-2 shows the population of children under age 5 and ages 5 to 19, as well as elderly populations within 1 mile of the project area, Brevard County, Florida, and the United States for comparison. Within 1 mile of the project area, there are four sites identified that children may regularly attend (e.g., childcare centers or schools, community centers, or recreational facilities). These include Patrick Shores Beach (350 feet from the project area), an on-Base childcare facility (2,300 feet from the project area), South Patrick Community Park (3,200 feet) and Sea Park Elementary (4,100 feet from the project area). Within 1 mile of the project area, no sites were identified where elderly populations may be regularly present (e.g., senior care facilities, hospitals).

Table 3.9-2. Children and Elderly Populations in the PaSFB ROI

Location	Children under Age 5 (%)	Children 5 to 19 Years (%)	Individuals Greater than 65 Years (%)
1-Mile ROI	4.3	14.8	21.0
Brevard County	4.6	15.9	23.5
Florida	5.2	17.0	20.4
United States	5.9	19.3	16.0

Source: USCB 2021e
% = percent

3.9.1.2 KAFB

Environmental Justice

Table 3.9-3 summarizes the percentage of minority and low-income populations within 1 mile of the project area, Bernalillo County, New Mexico, and the United States for comparison purposes.

Table 3.9-3. Minority and Low-Income Populations in the KAFB ROI

Geographic Area	Total Population	Minority (%)	Low Income (%)
1-Mile ROI Total	8,628	57.0	27.1
Census Tract 9800, Block Group 1	765	40.1	0.0
Census Tract 9800, Block Group 3	2,523	37.9	15.5
Census Tract 9800, Block Group 4	727	45.5	0.0
Census Tract 9.04, Block Group 2	2,135	63.2	19.9
Census Tract 9.06, Block Group 3	560	68.6	45.3
Census Tract 9.07, Block Group 2	994	87.3	41.7
Census Tract 9.08, Block Group 4	924	81.8	53.4
Bernalillo County	676,444	62.5	16.1

Geographic Area	Total Population	Minority (%)	Low Income (%)
Meaningfully Greater Criterion	**-**	***75.0***	***19.3***
New Mexico	2,117,522	63.5	18.3
United States	331,449,281	42.2	12.6

Source: USCB 2020d; USCB 2021c, USCB 2021d
% = percent

The average minority population percentage of Bernalillo County is approximately 62.5 percent. Because the minority population percentage relative to the general population of Bernalillo County exceeds 50 percent, that threshold is used to identify areas with minority populations within 1 mile of the project area. There are seven block groups within the ROI, and four of those block groups contain individual racial group minority populations or aggregate minority populations that meet the environmental justice criteria. The total minority population residing within 1 mile of the project area is approximately 4,951 or 57.0 percent of the entire population. Therefore, the overall composition of the ROI is less than the 62.5 percent for Bernalillo County. Minority populations in the ROI are predominantly Hispanic or Latino.

The Pueblo of Isleta borders KAFB to the south, although it is over 7 miles from the project area. Within the 1-mile ROI, the percentage of individuals identifying as American Indian or Alaska Native ranges from approximately 1 to 10 percent depending on the block group. Block Group 2, Census Tract 9.04 (5.8 percent), Block Group 3, Census Tract 9.06 (9.5 percent), and Block Group 4, Census Tract 9.08 (9.3 percent) all are greater than 120 percent of the county comparison population of 4.5 percent.

Low-income populations were evaluated using the absolute 50 percent and the relative 120 percent or greater criteria for potentially affected block group within the ROI. If a block group's percentage of low-income individuals meets the 50 percent criterion or is more than 120 percent of the total low-income population within Bernalillo County (i.e., 19.3 percent), then the area is considered to have a low-income population. Of the seven block groups within the 1-mile ROI, four block groups have a low-income population that exceeds the meaningfully greater criteria. In particular, three block groups have low-income percentages that range between 42 and 53 percent, indicating high levels of poverty in these areas. The total low-income population residing within 1 mile of the project area is approximately 2,341 or 27 percent of the entire population.

Based on a review of the USEPA's EJSCREEN model, six of the seven block groups within a 1-mile radius of the project area were identified as meeting or exceeding the 80th national percentile threshold for one of the environmental justice indicators. These exceedances are summarized in Table 3.9-4. Review of EJSCREEN suggests elevated risk to environmental justice populations throughout the ROI for exposure to air pollution, traffic levels, contaminated sites, and degraded surface water quality.

Protection of Children's Health and Safety and Elderly Populations

Table 3.9-5 shows the population of children under age 5 and ages 5 to 19, as well as elderly populations within 1 mile of the project area, Bernalillo County, New Mexico, and the United States for comparison. Within 1 mile of the project area, six sites were identified that children may regularly attend, including athletic fields (1,600 feet from the project area); Marquez Park (1,700 feet from the project area), a daycare facility (2,200 feet from the project area), Wherry Elementary school (2,500 feet from the project area), Sandia Base Elementary (3,900 feet from the project area), and Phil Chacon Park South (4,300 feet). Within 1 mile of the project area, no sites were identified where elderly populations may be regularly present.

Table 3.9-4. Block Groups in KAFB ROI that Exceed 80th National Percentile for EJSCREEN

Geographic Area	PM2.5	Ozone	Diesel PM	Air Toxics – Cancer Risk	Air Toxics – Respiratory	Toxic Releases to Air	Traffic Proximity	Lead Paint	Superfund Proximity	RMP Proximity	Hazardous Waste Proximity	Underground Storage Tanks	Wastewater Discharge
Census Tract 9800, Block Group 1													
Census Tract 9800, Block Group 3		X	X						X		X		X
Census Tract 9800, Block Group 4		X											X
Census Tract 9.04, Block Group 2		X	X		X			X	X			X	X
Census Tract 9.06, Block Group 3		X	X	X	X		X		X		X	X	X
Census Tract 9.07, Block Group 2		X	X	X	X			X	X		X		X
Census Tract 9.08, Block Group 4		X	X	X	X		X	X	X		X		X

Source: USEPA 2023b

Table 3.9-5. Children and Elderly Populations in the KAFB ROI

Location	Children under Age 5 (%)	Children 5 to 19 Years (%)	Individuals Greater than 65 Years (%)
1-Mile ROI	9.9	21.9	5.5
Bernalillo County	5.4	18.8	16.4
New Mexico	5.7	20.0	17.5
United States	5.9	19.3	16.0

Source: USCB 2021e
% = percent

3.9.1.3 SSFB

Environmental Justice

Table 3.9-6 summarizes the percentage of minority and low-income populations within 1 mile of the project area, El Paso County, Colorado, and the United States for comparison purposes.

Table 3.9-6. Minority and Low-Income Populations in the SSFB ROI

Geographic Area	Total Population	Minority (%)	Low Income (%)
Block Group 1, Census Tract 46.03	2,495	36.2	12.1
El Paso County, Colorado	730,395	34.2	9.6
Meaningfully Greater Criterion	**-**	***41.0***	***11.5***
Colorado	5,773,714	34.9	9.6
United States	331,449,281	42.2	12.6

Source: USCB 2020d; USCB 2021c, USCB 2021d
% = percent

The average minority population percentage of El Paso County is approximately 34.2 percent. If a block group's percentage of minority individuals meets the 50 percent criterion or exceeds 120

percent of the total minority population within El Paso County (i.e., 41 percent), the area is considered to have a minority population. Because the minority population percentage relative to the general population of El Paso County would not exceed the 50 percent threshold defined by CEQ, the secondary threshold of 41 percent is used to identify areas with meaningfully greater minority populations within 1 mile of the project area. The single block group within the ROI does not contain individual racial group minority populations or aggregate minority populations that meet the environmental justice criteria. As this is the only block group within the 1-mile ROI, the overall composition of the ROI is predominantly non-minority. Minority populations in the ROI are predominantly Hispanic or Latino.

Low-income populations were evaluated using the absolute 50 percent and the relative 120 percent or greater criteria for potentially affected block group within the ROI. If a block group's percentage of low-income individuals meets the 50 percent criterion or is more than 120 percent of the total low-income population within El Paso County (i.e., 11.5 percent), then the area is considered to have a low-income population. There is only one block group within the 1-mile ROI; this block has a low-income population that exceeds the meaningfully greater environmental justice criteria.

Based on a review of the USEPA's EJSCREEN model, Block Group 1, Census Tract 46.03 exceeds the 80th national percentile threshold for Wastewater Discharge environmental justice indicator (USEPA 2023b). This indicator suggests an existing elevated relative risk for exposure to pollutants in downstream water bodies. In addition, in accordance with the CDPHE and USEPA Memorandum of Understanding (MOU) on Advancing Environmental Justice through Enforcement and Compliance Assurance in Disproportionately Impacted Communities, the Colorado EnviroScreen tool was considered to evaluate potential impacts to communities near SSFB. Block Group 1, Census Tract 46.03 has an EnviroScreen score of 41.393, which means that approximately 59 percent of block groups in Colorado are more likely to be affected by environmental health injustices (CDPHE 2023a).

Protection of Children's Health and Safety and Elderly Populations

Table 3.9-7 shows the population of children under age 5 and ages 5 to 19, as well as elderly populations within 1 mile of the project area, El Paso County, Colorado, and the United States for comparison. Section 3.1 and Section 3.5 also discuss air quality and noise-sensitive receptors.

Table 3.9-7. Children and Elderly Populations in the SSFB ROI

Location	Children under Age 5 (%)	Children 5 to 19 Years (%)	Individuals Greater than 65 Years (%)
1-Mile ROI	16.1	22.3	11.3
El Paso County	6.5	20.4	12.9
Colorado	5.7	19.0	14.3
United States	5.9	19.3	16.0

Source: USCB 2021e
% = percent

3.9.2 Environmental Consequences

This EA identifies the following impacts during construction that may disproportionately affect environmental justice populations or disproportionately affect children or elderly populations surrounding the project area.

- **Air Quality Impacts** – Less than significant short-term, adverse air quality impacts would occur during construction as described in Section 3.1. These would include increased air

emissions from grading and clearing, and criteria pollutant emissions from the use of diesel- and gasoline-powered equipment, and other construction activities and equipment usage. Because these emissions would occur at ground level, they would cause short-term increases in air pollutant emissions in the immediate vicinity of the project area but would not be transported more than 1 mile except on windy days. Emissions would be reduced through the use of BMPs such as watering of soils.

- **Noise Disturbance** – Less than significant short-term, adverse impacts from noise would occur as a result of construction activities and equipment, as described in Section 3.5.
- **Traffic Congestion** – Less than significant short-term adverse transportation and traffic impacts would occur during construction locally from increased congestion as described in Section 3.6. These impacts would occur primarily on main roads traveling in and out of the installations.
- **Job Opportunities –** Short-term, beneficial impacts on employment locally would result from the creation of jobs during construction and spending locally as described in Section 3.8.

The EA identifies the following impacts during operations that may affect minority and low-income populations and children's health and safety surrounding the project area.

- **Air Quality Impacts –** Less than significant long-term adverse air quality impacts would occur locally during operations as described in Section 3.1. Emissions would be primarily from employee commutes, facility space HVAC use, and emergency generator operation.
- **Noise Disturbance –** Less than significant long-term adverse impacts from noise would occur locally during operations as described in Section 3.5, primarily from new personnel generating increased traffic volumes on the local roadways.
- **Traffic Congestion –** Less than significant long-term adverse impacts to traffic congestion would occur from a detectable increase in traffic on local roadways from relocated employees.
- **Job Opportunities –** Long-term beneficial impacts on employment locally would result from the creation of jobs and increased spending during operations as described in Section 3.9.

3.9.2.1 Delta 10 Beddown Alternative 1 – PaSFB

Environmental Justice

As discussed in Section 3.9.1.1, no environmental justice populations meeting the evaluation criteria have been identified outside of PaSFB that would be affected by the Proposed Action; therefore, Alternative 1 would not result in disproportionately high and adverse impacts on environmental justice populations either during construction or operations.

Protection of Children's Health and Safety and Elderly Populations

There could be less than significant impacts to children or elderly populations surrounding the project area during construction. Based on the distance of the project area from sensitive receptors, the physical separation of the project area by other structures, the nature of anticipated impacts, impacts to children or elderly populations would not be disproportionate or significant. Although the Proposed Action would result in adverse noise impacts, impacts on children or the elderly would not cause an environmental health or safety risk. Air quality impacts would be minimized through BMPs as described in Section 3.1. Standard construction site safety

precautions (e.g., fencing and other security measures) would reduce potential risks for children to minimal levels.

Impacts to children or elderly populations surrounding the project area at PaSFB during operations would be less than significant and associated with minor increases in traffic. Based on the distance of the project area from sensitive receptors and the nature of anticipated impacts, children or elderly populations would not be disproportionately or significantly affected.

Cumulative Impacts

As discussed above, Delta 10 beddown at PaSFB would result in less than significant impacts to environmental justice populations. Projects identified in Appendix C would contribute to impacts on environmental justice populations that occur within the ROI. Similar to the Proposed Action, these impacts would be temporary and phased over time (not all occurring simultaneously). Overall, cumulative effects would be less than significant and not disproportionally high and adverse with most long-term impacts restricted to the project footprints occurring at PaSFB.

3.9.2.2 Delta 11 Beddown Alternative 1a – KAFB

Environmental Justice

Environmental justice populations have been identified directly off Base that would be impacted during renovations. As discussed in Section 3.9.1.2, many of these populations fall within the 80th percentile or greater for various EJSCREEN indices, including those related to air pollution and traffic congestion. Therefore, this suggests that construction emissions from renovations and traffic from the Proposed Action could result in a disproportionate impact on these populations. Construction emissions from renovations could result in less than significant short-term adverse impacts to environmental justice populations as the nearest off-Base residence is 0.75 mile from the project area where the majority of emissions would be generated, and BMPs as described in Section 3.1 would be implemented to reduce these emissions.

There would be a temporary increase in traffic on roadways near the project area during renovations; however, construction traffic for renovations is not expected to occur during peak travel times and roadways would remain open during renovation activities. The USSF would coordinate with KAFB CE Environmental and Base Traffic Working Group prior to renovation activities to ensure a TMP or similar measures are employed to minimize impacts. Early coordination would ensure that necessary safety precautions are taken and nearby residents, commuters, and installation personnel have been notified. Impacts from renovation noise would be temporary, lasting only the length of construction and during daytime hours. Overall, while the short-term air, traffic, and noise impacts on environmental justice populations would occur, the impacts would not be significant and not of a disproportionate or adverse level. There could be short-term beneficial impacts to low-income populations from increased spending and job opportunities locally.

Tribal Nations may suffer adverse effects where there are greater percentages of American Indians or Alaskan Natives in impacted areas than in a reference area, where current or ancestral lands held by the tribe are impacted, where important cultural practices or ceremonies may be impacted, or where subsistence consumption of fish and wildlife may be impacted. Although minority populations, including those identifying as American Indians or Alaskan Natives, could experience adverse impacts as described above; the Pueblo of Isleta is located 7 miles from the project area; therefore, no adverse effects to populations at this location would occur.

Operational traffic from the Proposed Action could result in an adverse impact on environmental justice populations as described above for renovations. There could be less than significant long-term adverse traffic impacts near KAFB associated with an increase in personnel and their

dependents, as described in Section 3.6. Roadways would continue to maintain capacity, and impacts would be concentrated near the gates of the installation during peak commute times. Further, the installation would implement measures to address traffic issues. Impacts from increased air emission and noise levels would not result in environmental health or safety effects on local populations and would not differ from the impact to the entire population surrounding the site. There could be long-term beneficial impacts to low-income populations from increased spending and job opportunities locally during operations.

American Indians or Alaskan Natives could experience similar adverse impacts during operations as described above for renovations. However, because the Pueblo of Isleta is located 7 miles from the project area, no adverse effects to their population at this location would occur.

Protection of Children's Health and Safety and Elderly Populations

Renovations or operations would not cause adverse an environmental health or safety risk for children or elderly populations surrounding the project area at KAFB.

Cumulative Impacts

As discussed above, Delta 11 beddown at KAFB would result in less than significant impacts to environmental justice populations. Projects identified in Appendix C would contribute to impacts on environmental justice populations that occur within the ROI. Similar to the Proposed Action, these impacts would be temporary and phased over time (not all occurring simultaneously). Overall, cumulative effects would be less than significant and not disproportionally high and adverse with most long-term impacts being restricted to the project footprints occurring at KAFB.

3.9.2.3 Delta 11 Beddown Alternative 1b – SSFB

Impacts on environmental justice populations, children, and the elderly at SSFB would be similar to those discussed for Alternative 2a under Section 3.9.2.4. Overall, while short-term and long-term air, traffic, and noise impacts on environmental justice populations would be considered disproportionate, the impacts would not be significant.

3.9.2.4 Delta 12 Beddown Alternative 2a – SSFB

Environmental Justice

Environmental justice populations have been identified in the 1-mile ROI that could be impacted during construction. Impacts would be similar to as described as for KAFB. However, considering the lower concentration of environmental justice populations, impacts would be relatively lower compared to Alternative 1a. Further, there could be short-term beneficial impacts to low-income populations from increased spending and job opportunities locally. Overall, while short-term air, traffic, and noise impacts on environmental justice populations would occur, the impacts would not be significant and would not be in disproportionate contrast to impacts to the entire population of the area.

Overall, while long-term air, traffic, and noise impacts on environmental justice populations during operations would occur, the impacts would not be significant and not in a disproportionate level in relation to the entire population. Further, there could be long-term beneficial impacts to low-income populations from increased spending and job opportunities locally during operations.

Protection of Children's Health and Safety and Elderly Populations

Impacts to health and safety for children or elderly populations surrounding the project area at SSFB would not cause an environmental health or safety risk during construction or operations.

Cumulative Impacts

As discussed above, Delta 12 beddown at SSFB would result in less than significant impacts to environmental justice populations. Projects identified in Appendix C would contribute to impacts on environmental justice populations that occur within the ROI. Similar to the Proposed Action, these impacts would be temporary and phased over time (not all occurring simultaneously). Overall, cumulative effects would be less than significant and not disproportionally high and adverse on environmental justice populations with most long-term impacts being restricted to the project footprints occurring at SSFB.

3.9.2.5 Delta 12 Beddown Alternative 2b – KAFB

Impacts on environmental justice populations, children, and the elderly at SSFB would be similar to those discussed for Alternative 1a under Section 3.9.2.2.

3.9.3 No Action Alternative

Under the No-Action Alternative, none of the proposed construction or renovation activities would occur; therefore, there would be no impacts on environmental justice populations, children, or elderly populations near PaSFB, KAFB, or SSFB.

Appendix A
Intergovernmental Coordination, Public and Agency Participation

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Intergovernmental Coordination, Public and Agency Participation

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 2023. A sample of these letters, as well as all responses received, is provided in this appendix.

A.1 Federal, State and Local Agencies Consultation

The DAF coordinated with federal, state, and local agencies and other entities 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. A sample early notification letter is presented in Exhibit 1. Section A.1.1 contains a list of stakeholders DAF sent the early notification letters and Section A.1.2 contains responses received.

A.1.1 List of Stakeholders

PaSFB, Florida

Elected Officials

Senator Rick Scott
United States Senate
502 Hart Senate Office Building
Washington, DC 20510

Senator Marco Rubio
United States Senate
284 Russell Senate Office Building
Washington, DC 20510

Representative Bill Posey
United States House of Representatives
2150 Rayburn House Office Building
Washington, DC 20510

Federal

Federal Aviation Administration Southern Region
Stacey Zee
Manager, Operations Support Branch
Office of Commercial Space Transportation
800 Independence Ave, SW
Washington, DC 20591

United States Army Corps of Engineers
John Palmer
Section Chief
Cocoa Permits Section
400 High Point Drive, Suite 600
Cocoa, FL 32926

U.S. Environmental Protection Agency
Ntale Kajumba
Chief, NEPA Program Office
Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-8960

United States Fish and Wildlife Service
Robert Carey
Division of Environmental Review
Florida Ecological Services Office
7915 Bay Meadows Way, Suite 200
Jacksonville, FL 32256

State

Florida Department of Environmental Protection Central District
Aaron Watkins
Director
3319 Maguire Boulevard
Orlando, FL 32803

Florida State Clearinghouse Project Review and Single Point of Contact
Chris Stahl
Clearinghouse Coordinator
3900 Commonwealth Blvd, Mail Station 47
Tallahassee, FL 32399

East Central Florida Regional Planning Council
Tara McCue, AICP
Executive Director
455 N. Garland Ave
Fourth Floor
Orlando, FL 32801

Florida Department of Transportation
John Tyler
District 5 Secretary
719 South Woodland Boulevard
DeLand, FL 32720

Florida Division of Historical Resources
Alissa Slade Lotane
State Historic Preservation Officer and Director of Historical Resources
Bureau of Historic Preservation R.A. Gray Building 500 South Bronough Street
Tallahassee, FL 32399

Space Coast Transportation Planning Organization
Sarah Kraum
Senior Transportation Planner
2725 Judge Fran Jamieson Way
Building B, Room 105, MS #82
Melbourne, FL 32940

St. Johns River Water Management District
Jeff Prather
Division Director, Regulatory Services
525 Community College Parkway, SE
Palm Bay, FL 32909

Local

Brevard County
Frank Abbate
County Manager
Viera Government Center
2725 Judge Fran Jamieson Way
Building C
Viera, FL 32940

Amanda Elmore
Deputy Director, Natural Resources
Viera Government Center
2725 Judge Fran Jamieson Way, A-219
Viera, FL 32940

City of Cocoa Beach
Robin Hayes
City Manager
2 S. Orlando Ave
Cocoa Beach, FL 32931

City of Melbourne
Shannon Lewis
City Manager
900 E. Strawbridge Ave
Melbourne, FL 32901

City of Satellite Beach
Courtney Barker, AICP
City Manager
565 Cassia Blvd
Satellite Beach, FL 32937

Karl Baumann
Community Development Director/Building Official
565 Cassia Blvd
Satellite Beach, FL 32937

KAFB, New Mexico

Elected Officials

Senator Martin Heinrich
United States Senate
303 Hart Senate Office Building
Washington, DC 20510

Senator Ben Lujan
United States Senate
498 Russell Senate Office Building
Washington, DC 20510

Representative Melanie Stansbury
United States House of Representatives District 1
1421 Longworth House Office Building
Washington, DC 20515

Representative Yvette Herrell
United States House of Representatives District 2
1305 Longworth House Office Building
Washington, DC 20515

Representative Teresa Leger Fernandez
United States House of Representatives District 3
1432 Longworth House Office Building
Washington, DC 20515

Federal

Bureau of Indian Affairs Southwest Regional Office
Patricia Mattingly
Acting Regional Director
1001 Indian School Road NW
Albuquerque, NM 87104

Bureau of Land Management New Mexico State Office
Sabrina Flores
District Manager
Albuquerque District Office
Pan American Building
100 Sun Avenue NE
Albuquerque, NM 87109

Department of Energy National Nuclear Security Administration
Daryl Hauck
Manager
Sandia Field Office
PO Box 5400
Albuquerque, NM 87187

Jim Sanderson
NEPA Compliance Officer
Office of General Counsel
PO Box 5400 Albuquerque, NM 87187

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

Natural Resources Conservation Service
Nickolas Goodman
District Conservationist
Los Lunas Service Center
2600 Palmilla Road
Los Lunas, NM 87031

Rigoberto Lopez
Acting State Conservationist
Natural Resources Conservation Service New Mexico State Office
100 Sun Avenue NE, Suite 602

U.S. Army Corps of Engineers Albuquerque District
George MacDonell
Chief of Environmental Resources Section
4101 Jefferson Plaza NE
Albuquerque, NM 87109

U.S. Department of Interior
Becky Hunt
Regional Environmental Officer
Office of Environmental Policy and Compliance
Albuquerque Region
1001 Indian School Road NW, Suite 348
Albuquerque, NM 87104

U.S. Environmental Protection Agency Region 6
Earthea Nance
Regional Administrator
1201 Elm Street, Suite 500
Dallas, TX 75270

Michael Jansky
Project Review Lead
1201 Elm Street, Suite 500
Dallas, TX 75270

United States Fish and Wildlife Service
Amy Leuders
Regional Director
Southwest Regional Office
500 Gold Avenue SW
Albuquerque, NM 87103

Shawn Sartorius
Field Supervisor
New Mexico Ecological Services Field Office
2105 Osuna Road NE
Albuquerque, NM 87113

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

State

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

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

New Mexico Department of Game and Fish Conservation Services
Matt Wunder
Chief
One Wildlife Way
Santa Fe, NM 87507

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

New Mexico Environment Department
James Kenney
Cabinet Secretary
1190 St. Francis Drive, Suite N4050
Santa Fe, NM 87505

Bruce Baizel
General Counsel
1190 St. Francis Drive, Suite N4050
Santa Fe, NM 87505

New Mexico State Land Office
Craig Johnson
Assistant Commissioner for Commercial Resources
310 Old Santa Fe Trail
Santa Fe, NM 87501

Stephanie Garcia Richard
Commissioner of Public Lands
310 Old Santa Fe Trail
Santa Fe, NM 87501

Local

City of Albuquerque
Mayor Tim Keller
PO Box 1293
Albuquerque, NM 87103

Alan Varela
Director
City of Albuquerque Planning Department
600 2nd NW
Albuquerque, NM 87102

Isaac Benton
President
Albuquerque City Council
PO Box 1293
Albuquerque, NM 87103

Bernalillo County
Adriann Barboa
Chair
Board of Commissioners
415 Silver SW
Albuquerque, NM 87102

Julie Morgas Baca
Bernalillo County Manager
Bernalillo County Manager's Office
415 Silver SW, 8th Floor
Albuquerque, NM 8710s

Mid-Region Council of Governments
Dewey Cave
Executive Director
809 Copper Avenue NW
Albuquerque, NM 871022

SSFB, Colorado

Elected Officials

Senator Michael Bennet
United States Senate
261 Russell Senate Office Building
Washington, DC 20510

Senator John Hickenlooper
United States Senate
374 Russell Senate Office Building
Washington, DC 20510

Representative Doug Lamborn
United States House of Representatives
2371 Rayburn House Office Building
Washington DC 20510

Federal

Department of Energy
Adria Bodour
NEPA Compliance Officer
National Nuclear Security Administration Sandia Field Office
PO Box 5400
Albuquerque, NM 87187

Linda Tello
Alternative NEPA Compliance Officer
National Nuclear Security Administration Sandia Field Office
PO Box 5400
Albuquerque, NM 87187

Kelly Bowles
Sandia National Laboratories, New Mexico (SNL/NM)
NEPA Program Manager
P.O. Box 5800, MS 0915
Albuquerque, NM 87185-0915

Natural Resources Conservation Service
Clint Evans
State Conservationist
Colorado State Office
PO Box 25426
Denver, CO 80225

U.S. Army Corps of Engineers Pueblo Office
Whom It May Concern
201 West 8th Street, Suite 350
Pueblo, CO 81003

U.S. Environmental Protection Agency
Melissa McCoy
Chief, NEPA Branch
Region 8
1595 Wynkoop St.
Denver, CO 80202

U.S. Fish and Wildlife Service Colorado
Nicole Alt
Colorado Ecological Services Supervisor
Ecological Services Field Office
134 Union Blvd, Suite 670
Lakewood, CO 80228

State

Colorado Department of Agriculture
Kate Greenberg
Commissioner
305 Interlocken Parkway
Bloomfield, CO 80021

Colorado Department of Public Health and Environment
Jill Hunsaker Ryan
Executive Director
Environmental Health and Protection
4300 Cherry Creek Drive South
Denver, CO 80246

Michael Ogletree
Director
Air Pollution Control Division
4300 Cherry Creek Drive South
Denver, CO 80246

Colorado Department of Transportation
Shoshana Lew
Executive Director
2829 W. Howard Place
Denver, CO 80204

Colorado Natural Heritage Program
David Anderson
Director
Colorado State University
1475 Campus Delivery
Fort Collins, NO 80523

History Colorado
Dawn DiPrince
SHPO
1200 Broadway
Denver, CO 80203

Local

El Paso County
Todd Marts
Executive Director
Community Services Department
2002 Creek Crossing Street
Colorado Springs, CO 80905

Stan VanderWerf
Board of County Commissioners
Centennial Hall, 200 South Cascade, Suite 100
Colorado Springs, CO 80903

Meggan Herington
Executive Director
Development Services Department
2880 International Circle, Suite 110
Colorado Springs, CO 80910

James Terbush
Board of Health President
Public Health Department
1675 West Garden of the Gods Roads, Suite 2044
Colorado Springs, CO 80907

Pikes Peak Area Council of Governments
Andrew Gunning
Executive Director
14 S Chestnut Street
Colorado Springs, CO 80905

Early Notification Letter Sample

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE INSTALLATION AND MISSION SUPPORT CENTER
JOINT BASE SAN ANTONIO LACKLAND TEXAS

02 June 23

Molly Thrash
Air Force Civil Engineer Center
National Environmental Policy Act Division (AFCEC/CZN)
2261 Hughes Ave, Ste 155
JBSA Lackland TX 78236-9853

Ntale Kajumba
Chief, NEPA Program Office
U.S. Environmental Protection Agency Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-8960

Dear Ntale Kajumba,

The U.S. Department of the Air Force (DAF) is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to evaluate potential environmental impacts associated with the United States Space Force (USSF) decision to locate components of three Space Delta units (Delta 10, Delta 11, and Delta 12) of the Strategic Training and Readiness Command (STARCOM) at DAF installations in the U.S. (see Attachment 1). The Delta 10 beddown is constrained by mission requirements to Patrick Space Force Base (PaSFB) in Florida (see Attachment 2). The Delta 11 and Delta 12 beddowns are proposed for Kirtland Air Force Base (KAFB) in New Mexico (see Attachment 3) and Schriever Space Force Base (SSFB) in Colorado (see Attachment 4).

The purpose of the Proposed Action is to beddown Delta 10 and selected Squadrons within Deltas 11 and 12 in conformance with Air Force Instruction (AFI) 10-503, *Strategic Basing*. The Proposed Action is needed to implement the DAF's Strategic Basing Process and to provide Delta 10 and selected Squadrons within Deltas 11 and 12 appropriate permanent facilities to perform their missions effectively.

As part of the DAF's Environmental Impact Analysis Process (EIAP), we request your input in identifying general or specific issues or areas of concern you feel should be addressed in the environmental analysis.

To ensure the DAF has sufficient time to consider your input in the preparation of the Draft Environmental Assessment, please forward your written comments or requests for additional information to Ms. Molly Thrash, preferably by email to sherry.thrash@us.af.mil, or by mail to AFCEC/CZN, 2261 Hughes Ave, Ste 155, JBSA Lackland, TX 78236, or by phone at

(480) 740-1234. We request your comments within 30 days of receipt of this letter to ensure we can address them during the EIAP. Thank you for your assistance.

MOLLY THRASH, GS-13, DAF
Environmental Program Manager, AFCEC
NEPA Division

4 Attachments:
1. Deltas 10, 11, and 12 Beddown Locations Under Consideration
2. Proposed Delta Beddown 10 Permanent Siting Locations at PaSFB
3. Proposed Delta 11 and Delta 12 Beddown Permanent Siting Locations at KSF
4. Proposed Delta 11 and Delta 12 Beddown Permanent Siting Locations at SSFB

Attachment 1:
Deltas 10, 11, and 12 Beddown Locations Under Consideration

Attachment 2: Proposed Delta Beddown 10 Permanent Siting Locations at PaSFB

Attachment 3: Proposed Delta 11 and Delta 12 Beddown Permanent Siting Locations at KSFB

Attachment 4: Proposed Delta 12 Beddown Permanent and Modular Facility Siting Locations at SSFB

A.1.2. Stakeholder Responses

Florida Department of Transportation

From: Walsh, William
Sent: Monday, June 5, 2023 2:41 PM
To [redacted]
Cc: Blouin, Jesse [redacted]; Smith, Kellie [redacted]
Subject: Space Delta unit 10 - Patrick Air Force Base

Hi Molly:

Thank you for the opportunity to comment on the Space Delta Unit (Delta 10) at Patrick Air Force Base. We understand that the Air Force is preparing an Environmental Assessment for the project to address the requirements of NEPA. It does not appear the this project will adversely impact any FDOT facilities. Your preparation of the Environmental Assessment and its approval will satisfy your obligations under NEPA.

Thank you again for the opportunity to comment. Best wishes with this important project.

Sincerely,

Bill Walsh.

William G. Walsh
Environmental Manager
FDOT, District 5
[redacted]
[redacted]

National Nuclear Security Administration

From: Tello, Linda
To: Stacy Herrick
Cc: Robert Naumann; Bodour, Adria
Subject: RE: Scoping Information - USAF Environmental Assessment for Beddown of three Space Delta Units
Date: Monday, June 5, 2023 4:28:19 PM
Attachments: image001.png
EXTERNAL Scoping Information - USAF Environmental Assessment for Beddown of three Space Delta Units.msg

Hi Stacy,

When reviewing the document what came to mind was parking facilities for the additional personnel and if there would be additional dining facilities for the Space Force. Presently, parking and dining facilities are limited on Kirtland AFB, and adding additional personnel would make those two items more challenging. Also, I have cc'd Dr. Adria Bodour on my response. She is the current NEPA Compliance Officer for the DOE/NNSA/SFO.

Linda Tello, Ph.D., P.E.
General Engineer | Environmental Program Manager
U.S. Department of Energy, Sandia Field Office
National Nuclear Security Administration
[redacted]

New Mexico State Land Office

From: Bordegaray, James [redacted]
Sent: Monday, June 12, 2023 10:11 AM
To: THRASH, SHERRY CIV USAF AFMC AFCEC/CZN [redacted]
Subject: [URL Verdict: Neutral][Non-DoD Source] EA for USSF Delta 11 and Delta 12

Good morning Ms. Thrash,
I'm in receipt of a letter to Mr. Craig Johnson regarding the subject above. Mr. Johnson is no longer the commercial resources assistant commissioner. Please address any further or new correspondence directly to me as the point of contact for this office.

Regarding the letter, the New Mexico state Land Office does not have any objections or concerns with the location noted at KAFB bisected by "J" Street and containing buildings 20363; 20362; 20364; and 20361.

-jim-

Jim Bordegaray
Director
Commercial Resources Division
[redacted]
New Mexico State Land Office
310 Old Santa Fe Trail
P.O. Box 1148
Santa Fe, NM 87504-1148
[redacted]
nmstatelands.org

-

.....

Florida State Clearinghouse

From:	State_Clearinghouse
To:	Stacy Herrick
Cc:	Robert Naumann; State_Clearinghouse
Subject:	RE: Scoping Information - USAF While it is covered by EO 12372, the Florida State Clearinghouse does not select the project for review. You may proceed with your project. Environmental Assessment for Beddown of three Space Delta Units
Date:	Thursday, June 8, 2023 3:20:35 PM
Attachments:	image002.png

While it is covered by EO 12372, the Florida State Clearinghouse does not select the project for review. You may proceed with your project.

Please continue to send future electronic requests directly to the State of Florida Clearinghouse email address, state.clearinghouse@floridadep.gov

Good Luck.

Chris Stahl

Chris Stahl, Coordinator
Florida State Clearinghouse
Florida Department of Environmental Protection
3900 Commonwealth Blvd., M.S. 47
Tallahassee, FL 32399-2400
[redacted]
State.Clearinghouse@floridadep.gov

Natural Resources Conservation Service

USDA
United States Department of Agriculture

June 15, 2023

Molly Thrash
Environmental Program Manager
AFCEC/CZN
2261 Hughes Avenue, Suite 155
JBSA Lackland, Texas 78236
[redacted]

Dear Ms. Thrash,

Thank you for providing the Natural Resources Conservation Service (NRCS) the opportunity to review the Strategic Training and Readiness Command Project, Bernalillo County, New Mexico.

The Farmland Protection Policy Act (FPPA) authorizes the NRCS to provide review of proposed projects that have the potential to irreversibly convert farmlands to non-farmland or irreversibly converting hydric areas to non-hydric uses as the result of programs funded by the federal government. In review of the information provided on the project, it is determined that the entire project is the construction of on-farm structures needed for farm operations. The FPPA rules define farmland conversion to be "to the extent that it irreversibly converts farmland to other purposes", this project is not expected to have that effect. With this acknowledged, the proposed project will not cause Prime or Important Farmlands or hydric soils to be converted to non-agricultural or non-hydric uses, and is not subject to the Act.

If you have any questions concerning soils information, please contact Richard Strait, State Soil Scientist, at [redacted] or email at [redacted].

Sincerely,

ROSABETH GARCIA SAIS Digitally signed by ROSABETH GARCIA SAIS
Date: 2023.06.15 09:49:44 -06'00'

J. XAVIER MONTOYA
State Conservationist

cc:
Richard Strait, State Soil Scientist, NRCS, Albuquerque, NM
Nickolas Goodman, District Conservationist for Team 2, NRCS, Los Lunas, NM

Natural Resources Conservation Service
New Mexico State Office
100 Sun Avenue NE, Suite 602, Albuquerque, New Mexico 87109
Voice: (505) 761-4400 Fax: (855) 538-6003
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U.S. Army Corps of Engineers

From: SPA-RD-CO [redacted]
Sent: Tuesday, June 27, 2023 3:57 PM
To: THRASH, SHERRY CIV USAF AFMC AFCEC/CZN [redacted]
Subject: Request for Comments, Space Force Environmental Assessment

Dear Ms. Molly Thrash,

Thank you for requesting comments from our office regarding the proposed projects enclosed within your letter dated June 13, 2023, that may have the potential to impact aquatic resources. We appreciate that you are considering our potential regulatory role in the project, but we do not currently have the ability to provide project-specific comments. If the activity should have the potential to result in the discharge of dredged or fill material into waters of the United States, then the project proponent should work directly with our office to acquire necessary Corps permits, if applicable, as described in the following general comment:

Section 404 of the Clean Water Act requires a permit from us for the discharge of dredged or fill material into waters of the United States. Waters of the United States may include, but are not limited to, rivers, streams, lakes, ponds, wetlands, wet meadows, seeps, and some irrigation ditches. To ascertain the extent of waters on the project site, the applicant should prepare a delineation of aquatic resources, in accordance with the applicable standards, including the 1987 Wetland Delineation Manual and appropriate regional supplements. These standards can be found on our website at: https://www.spa.usace.army.mil/Missions/Regulatory-Program-and-Permits/Jurisdiction/.

An aquatic resource delineation should be evaluated prior to designing a project to ensure the project proponent avoids and minimizes impacts to waters of the United States to the greatest practicable extent. The range of alternatives considered for this project should include alternatives that avoid and minimize impacts to wetlands, streams, or other waters of the United States. Every effort should be made to avoid project features which require the discharge of dredged or fill material into waters of the United

States. In the event it can be clearly demonstrated there are no practicable alternatives to discharging dredged or fill material into waters of the United States, compensatory mitigation may be required.

For more information about our program or to locate a list of consultants that prepare aquatic resource delineations and permit application documents, please visit our website at https://www.spa.usace.army.mil/Missions/Regulatory-Program-and-Permits.

U.S. Army Corps of Engineers
Albuquerque District - Regulatory Division
4101 Jefferson Plaza, NE
Albuquerque, New Mexico 87109-3435

https://www.spa.usace.army.mil/Missions/Regulatory-Program-and-Permits/

U.S. Environmental Protection Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW
ATLANTA, GEORGIA 30303-8960

July 14, 2023

Molly Thrash
Air Force Civil Engineer Center
National Environmental Policy Act Division (AFCEC/CZN)
2261 Hughes Ave, Ste 155
JBSA Lackland TX 78236-9853

Re: EPA Comments on the Letter of Intent to Prepare an Environmental Assessment for Beddown of Space Delta Units 10, 11, and 12; Bernalillo County, New Mexico; Brevard County, Florida; El Paso County, Colorado

Dear Ms. Thrash:

The U.S. Environmental Protection Agency (EPA) has reviewed the referenced document in accordance with Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA). According to the letter, dated June 2, 2023, the U.S. Department of the Air Force (DAF) is preparing an Environmental Assessment (EA) to evaluate potential environmental impacts resulting from the beddown of components of United States Space Force units of the Strategic Readiness Command at DAF installations. DAF proposes to beddown unit Delta 10 at Patrick Space Force Base (PaSFB) Florida. DAF also proposes to beddown components of Delta 11 and Delta 12 at Kirtland Air Force Base (KAFB) New Mexico and additional components of Delta 12 at Schriever Space Force Base (SSFB) Colorado.

The letter states that the purpose of the Proposed Action is to implement DAF's Strategic Basing Process in conformance with Air Force Instruction 10-503, Strategic Basing by providing Space Delta 10 and selected squadrons within Space Delta units 11 and 12 appropriate permanent facilities to perform their missions effectively. Under the Proposed Action, DAF would construct 5 buildings at PaSFB and 4 buildings at KAFB. DAF would also construct a modular campus facility and parking area at SSFB.

Based on the EPA's review of preliminary information provided by DAF notice and associated map of the proposed facilities, as well as the DAF Integrated Natural Resources Management Plan for Schriever Air Force Base[1], the EPA's initial comments and recommendations on the scope of the Draft EA are specific to the following areas: (1) purpose and need, (2) water resources, (3) air quality, (4) environmental justice, (5) climate change, (6) wildlife habitat, (7) hazardous materials and containment, (8) energy and recycling, and (9) noxious weeds. The following comments are provided for your consideration:

(1) Purpose and need: The purpose and need statement is an important element of the project proposal because it determines the range of alternatives to be analyzed. The NEPA process ensures that federal

[1]https://www.afrl.af.mil/Portals/90/Documents/Environmental/AFRL_RomeLabs_INRMP_20230118.pdf?ver=Knk661eXJju9uKH-Q_L5iw%3D%3D

agencies evaluate environmental impacts prior to undertaking any major federal action. The EPA recommends further development of a purpose and need statement that is broad enough to make clear to the reader and decision maker why DAF selected a range of alternatives, including the Proposed Action and related facilities. The Draft EA should clearly identify the purpose and need that is the basis for the range of alternatives. The purpose of the Proposed Action is typically the underlying objective of the Proposed Action, while the need for the Proposed Action is to address a broader underlying problem. We recommended the Draft EA present a purpose and need that is a clear, objective statement of the rationale for the Proposed Action, specifically as it applies to the action alternative described in the notice, including why these facilities are needed at selected installations to support the purpose and need. The purpose and need statement should be concisely presented in the Draft EA in such a way that identifies why the project is being proposed, and focus on the desired outcomes of the proposed activities rather than prescribing a general, predetermined resolution.

(2) Water Resources: *Existing Conditions*

Existing conditions are a key frame of reference for quantifying and characterizing magnitudes of adverse and positive environmental effects from the Proposed Action. The EPA recommends evaluating the effects of the Proposed Action against existing environmental conditions and that the Draft EA identify existing data and verify whether historical data are representative of current conditions. The analysis may be improved by the following actions:

- Providing clear maps of the project area, including wetland delineation and regional water features.
- Conducting a wetland function analysis if there are any potential that an alternative will cause impacts.
- Including resources directly impacted by potential project footprints within the geographic scope of analysis, including inundation, as well as the resources indirectly (or secondarily) impacted by any of the alternatives. These indirectly impacted areas may include downstream segments, streams, any other resource areas which may be affect by changes in water management or operations.

The EPA recommends that the Draft EA include a discussion of existing aquatic resource conditions in the project area, to provide the basis for an effective analysis of potentially significant impacts from the proposed construction to hydrology, water quality, habitat, and other water resources in the project area. To describe effects to aquatic resources in the project area, we recommend the Draft EA include the following analyses or descriptions:

- A clear map and summary of project waters and downstream waters, including streams, lakes, springs, and wetlands. It would be helpful if the summary identified high resource value water bodies and their designated beneficial uses (e.g., agriculture, fisheries, drinking water, recreation);
- Watershed conditions, including vegetation cover and composition, soil conditions and areas not meeting desired future conditions;
- Surface water information, including available water quality data in relation to current state and federal water quality standards, stream functional assessments, stream channel/stream bank stability conditions, sediment loads, and aquatic life;
- Types, function, conditions and acreage of wetlands, riparian areas, and springs;
- Available groundwater information, including quality and location of aquifers; and
- A map and list of Clean Water Act (CWA) impaired or threatened water body segments within, or downstream of, the planning area, including the designated uses of the water bodies and the specific pollutants of concern potentially affected by on-going activities.

Water Quality Data

Water quality data for the streams, lakes, and wetlands within, or adjacent to, the project area provide important information for evaluating the potential influence of the Project on downstream water quality. Such an evaluation can then guide management for the Project, with the data providing a baseline for future monitoring of impacts. We recommend the Draft EA provide a summary of available information and monitoring data on water quality within the project area and for downstream water that may be affected by the Proposed Action, including parameters such as total phosphorus, total nitrogen, *Escherichia coli*, fecal coliform, total suspended solids, turbidity, total dissolved solids, and temperature. It will also be important to include water quality data for parameters listed for impaired water bodies within or downstream of the project area. Identifying any significant gaps in available data may be helpful in developing a monitoring plan. At a minimum, the EPA recommends providing a reference to publicly accessible technical document or an appendix that contains the requested relevant water quality parameters.

Potential Impacts to Impaired Waterbodies

Based upon the most recent EPA-approved CWA Section 303(d) list for Colorado (August 14, 2021) there are impaired streams (e.g., Chico Creek) located within the project area at SSFB. Additionally, the Section 303(d) list for Florida (July 11, 2022) identifies impaired waterbodies (e.g. Banana River) that receive waters from PaSFB. These resources are important to evaluate as the proposed activities may further impact systems or portions of systems downstream. We recommend the Draft EA include an analysis of water quality that, at a minimum, evaluates the following areas:

- Water quality impairments per State CWA Section 303(d) lists, draft or established TMDLs, and potentially affected dischargers
- Source Water Protection areas and explanation of how the project will be consistent with Source Water Protection planning measures.

Wetlands

We recommend the Draft EA include a description of the impacts to wetlands that may result from the Proposed Action. Such impacts may include: changes to supporting wetland hydrology (e.g., snow melt patterns or groundwater hydrology and wetland disturbance. If impacts are anticipated, we also recommend the Draft EA describe how DAF intends to "minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands" as described in Executive Order (EO) 11990, Protection of Wetlands, including how wetlands will be identified and avoided, and how unavoidable impacts would be mitigated.

Discharge of dredged or fill material into Waters of the United States (WOTUS), including wetlands, is regulated under CWA Section 404. This permit program is administered jointly by the U.S. Army Corps of Engineers (Corps) and the EPA. We recommend DAF consult with the Corps to determine the applicability of CWA Section 404 permit requirements to wetlands that may be impacted in the planning area and to ensure appropriate minimization measures are applied to avoid adverse impacts to wetlands. The EPA's and the Corps' Final Rule for Mitigation for Losses of Aquatic Resources [33 CFR Parts 325 and 332; 40 CFR Part 230 (73 FR 19594, April 10, 2008)] emphasizes the need to avoid and minimize impacts to these "difficult-to-replace" resources and requires that any compensation be provided by in-kind preservation, rehabilitation, or enhancement to the extent practicable. We recommend restoration plans require that soil profiles and hydrology are re-established as much as possible to the original state.

In addition, the EPA recommends DAF consider the Mitigation Rule to protect aquatic resources even when a CWA Section 404 permit is not required.

Erosion and Sediment Load Analysis

Erodible soils may represent a source of pollutants in the planning area. Increased sediment from surface disturbance may degrade water quality in receiving streams and may represent a significant source of pollutants when mobilized by natural and human-caused soil disturbances. Depending on a host of variables including soil characteristics, condition of roads and/or associated runoff from development of the project could introduce sediments as well as salts, selenium, heavy metals, nutrients, and other pollutants into surface waters. Soil disturbance in support of construction may necessitate issuance of construction stormwater permits before construction projects can begin. Coverage under a statewide National Pollutant Discharge Elimination System (NPDES) construction stormwater general permit will be needed if the project disturbs one acre or more of contiguous land. The EPA recommends that erosion and sediment control measures be implemented in accordance with the State's NPDES construction general permit requirements, and that the measures be addressed during the design and construction phases of the project.

Groundwater

Groundwater is an important resource since it provides domestic and public water supply. Construction and maintenance practices associated with roads, and heavy equipment use have the potential to impact groundwater by altering surface run-off, infiltration, evapotranspiration, sedimentation, and soil compaction. Additionally, construction and maintenance actions such as equipment fueling and waste practices in temporary work areas have the potential to introduce contaminants to groundwater and shallow aquifers. Shallow aquifers are more susceptible to contamination because a contaminant introduced at the surface may more rapidly enter the system, and there is less intervening soil to adsorb the contaminants before they reach the groundwater. Shallow aquifers also commonly exchange flows with surface-water features, such as streams and lakes, and may supply groundwater to support wetlands and wildlife. In addition, there is the potential that future projects may include oil and gas wells that pass-through aquifers.

It appears that the area adjacent to SSFB includes water resources, including a Sole Source Aquifer approximately one mile to the west of the proposed convoy parking. The EPA recommends the Draft EA include a generalized map depicting the location of sensitive groundwater resources, including sole source aquifers[2], municipal watershed, source water protection zones, sensitive aquifers, and recharge areas.

Designated by the EPA under the Safe Drinking Water Act (42 U.S.C. 300 et. seq.), a sole source aquifer is one which supplies at least fifty percent of the drinking water consumed in the area overlying the aquifer with no reasonably available alternative drinking water sources. By this designation, the EPA has determined that if the sole source drinking water aquifer is contaminated, it would create a significant hazard to public health. The EPA encourages DAF to determine if additional data collection and source water protection zones are warranted for the Proposed Action.

Best Management Practices (BMPs) and Monitoring

The EPA recommends that the Draft EA analyze options for avoiding environmental impacts, including

[2] EPA Sole Source Aquifer website: http://www.epa.gov/dwssa

impacts to nearby wetland and other water features. BMPs include, but are not limited to, alternative site locations and low-impact site preparation and construction techniques should be considered in the context of landscape features, including emergent wetlands and ephemeral streams. Use of protective buffer areas around essential resources help to control flooding, protect water flows, conserve native vegetation and wildlife, and support climate resiliency to land use and development.
The inspection, maintenance, and adjustment of BMPs will ensure their effectiveness; therefore, we recommend the Draft EA include a clearly defined monitoring plan for aquatic resources, including an operational plan for finding and solving runoff problems. The EPA recommends DAF consider information collected as a part of monitoring efforts to inform considerations around avoidance, minimization, and mitigation of unavoidable impacts from the Proposed Action. We recommend that the Draft EA describe the mechanism by which information from monitoring efforts for beddown facilities at other DAF site could be used to inform the design, construction, and operation of the Proposed Action, and whether there would be a mechanism for sharing monitoring results with the public for the Proposed Action.

(3) Air Quality: Protection of air quality is important to address in the Draft EA. We recommend establishing existing environmental conditions of the Proposed Action based on the most current air quality monitoring data. Monitoring data presented as design values is available from the EPA's design values webpage[3]. To disclose potential impacts from the implementation of the proposed alternative, we recommend the Draft EA identify the activities necessary to construct and operate the facilities. Based on the construction activity, we recommend identifying equipment that is anticipated to be needed as well as an operating schedule for the equipment. Based on the duration of construction and magnitude of emitting equipment and activities that are anticipated, it may be appropriate to quantify emissions associated with construction. We recommend that the Draft EA disclose operational activities that have the potential to effect air quality, such as commuter trips to and from the site, stationary sources (such as generators), and exposed areas that may be susceptible to wind erosion. If substantial vehicle traffic or other emission sources are anticipated, it may be appropriate to quantify operation emissions in the Draft EA. The EPA is available to assist DAF as it plans the appropriate level of analysis. Additionally, we recommend DAF consider opportunities to reduce vehicle emissions as well as road and construction-related dust emissions through application of BMPs such as dust suppression and limited vehicle idling.

(4) Environmental Justice: The EPA recommends that DAF complete an Environmental Justice (EJ) analysis of the Proposed Action. EJ analysis should extend to all areas that will potentially experience impacts from the Proposed Action. Consistent with Executive Order 12898, Federal Actions to Address EJ in Minority Populations and Low-Income Populations[4], please ensure protected populations are not disproportionately or adversely impacted by the Proposed Action. The Environmental Justice Interagency Working Group *Promising Practices for EJ Methodologies in NEPA Reviews*, dated March 2016, provides guiding principles agencies can consider in identifying disproportionately high and adverse impacts on minority and low-income populations and appropriately engage in meaningful, targeted community outreach, analyze and minimize community impacts, and advance EJ through NEPA implementation. EJ analysis of the Proposed Action should also be completed in accordance with Executive Order 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All*, published April 21, 2023.

[3] Design Values https://www.epa.gov/air-trends/air-quality-design-values
[4] EO 12898 https://www.epa.gov/laws-regulations/summary-executive-order-12898-federal-actions-address-environmental-justice

The EPA strongly encourages the use of EJScreen[5], the EPA's nationally consistent EJ screening and mapping tool, when conducting EJ scoping efforts. The tool provides information on environmental and socioeconomic indicators as well as pollution sources, health disparities, critical service gaps, and climate change data. The tool can help identify potential community vulnerabilities by calculating EJ Indexes and displaying other environmental and socioeconomic information in color-coded maps and standard data reports.

(5) Climate change: On January 9, 2023, the Council on Environmental Quality (CEQ) published interim guidance to assist federal agencies in assessing and disclosing climate change impacts during environmental reviews. CEQ developed this guidance in response to EO 13990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis.* This interim guidance is effective immediately. CEQ indicated that agencies should use this interim guidance to inform NEPA review for all new proposed actions and may use it for evaluations in process, as agencies deem appropriate, such as informing the considerations of alternatives or helping address comments raised through the public comment process. The EPA recommends the Draft EA apply the interim guidance as appropriate, to ensure robust consideration of potential climate impacts, mitigation, and adaptation issues.

Greenhouse Gas Emissions

The EPA recommends including an estimate of the greenhouse gas (GHG) emissions associated with construction and operation of the Proposed Action. Example tools for estimating and quantifying GHG emissions can be found at CEQ's NEPA.gov website.[6] Recognizing that climate impacts are not attributable to any single action, but are exacerbated by a series of smaller decisions, we do not recommend comparing the GHG emissions from a proposed action to global, national, or state emissions, as this approach is limited by the cumulative nature of GHG concentration and the impacts of climate change. Because of these limitations, these comparisons inappropriately minimize the significance of emissions and do not provide meaningful information for a project level analysis.

Adaptive Management

The EPA also recommends that the Draft EA describe how the Proposed Action would be affected by ongoing and foreseeable changes and trends in the affected environment, for instance, under a scenario of continued decreasing precipitation days, changing frequency of intense storms and related flood events, and increasing drought intensity in the Project area. Full consideration of influences from the Proposed Action on selected beddown installations may inform necessary design modifications to enhance project resiliency and changes to operational assumptions for determining resource supplies, system demands, system performance requirements, and operational constraints. The US Climate Resilience Toolkit[7] serves as a repository of information related to climate resilience in the U.S., including steps to build resilience, case studies, expertise, and special topic areas, including renewable energy technology development. The EPA's Climate Change Indicators[8] presents a key set of indicators related to the causes and effects of climate change. The EPA partners with various government agencies, academic institutions, and other organizations to compile these indicators that are used to understand and track the science and impacts of climate change.

[5] EJ Screen https://www.epa.gov/ejscreen
[6] CEQ GHG guidance https://ceq.doe.gov/docs/ceq-regulations-and-guidance/nepa_final_ghg_guidance.pdf#xml=
[7] U.S. Climate Resilience Toolkit, https://toolkit.climate.gov/
[8] U.S. Climate Change Indicators, https://www.epa.gov/climate-indicators

Mitigating Climate Change Effects

Finally, consistent with the goals of EO 14008, *Tackling the Climate Crisis at Home and Abroad,* the EPA encourages identifying measures to provide for diverse, healthy ecosystems that are resilient to climate stressors; requiring effective mitigation and encouraging voluntary mitigation to offset the adverse impacts of projects or actions; reduction of greenhouse gas emissions from authorized activities to the lowest practical levels; identify and protect areas of potential climate refugia; reduce barriers to plant migration; use pollinator-friendly plant species in restoration and revegetation projects; and project design to mitigate potential structural impacts associated with extreme weather events.

(6) Wildlife Habitat: Based on the EPA's preliminary assessment of the project area, land cover near SSFB (particularly in the area proposed for construction and operation of the parking facility) is comprised of short-grass prairie. The prairie dog is an integral component of the shortgrass prairie biotic community, and the ecosystem that is maintained by the prairie dog is valuable to many other species, with over 100 species of vertebrate wildlife reportedly using prairie dog colonies as habitat.[9] While few of these species are critically dependent on prairie dogs for all their life requisites, the increased biodiversity associated with prairie dog colonies regardless of size indicates the importance of this habitat. Further, prairie dog burrows act as aquifers that prevent water from eroding land while helping to cool it and can affect ecosystem processes such as disturbance and nutrient cycling rates. Prairie dogs are crucial to the structure and function of native prairie systems.[10] Considering the keystone species role of prairie dogs and severe population declines, the EPA recommends the Draft EA analyzes actions to avoid and minimize potential loss of prairie dog populations, biological diversity, and degradation of short-grass prairie ecosystem integrity within the project area. The EPA also notes that critical habitat for loggerhead sea turtles and West Indian manatees exists in the waters adjacent to PaSFB. We encourage DAF to coordinate with the U.S. Fish and Wildlife Service and Colorado Parks and Wildlife officials during evaluation of all existing wildlife resources and impacts from facility siting decisions and avoidance measures in developing the Draft EA.

(7) Hazardous Materials and Containment: For the protection of WOTUS, critical habitats, and as required by the Clean Water Act, the EPA recommends the use of secondary containment where storage and handling of Petroleum, Oils, and Lubricants (POL) will take place, including storage sites of single wall POL tanks. Where secondary containment is not directly practicable, spill ponds and oil water separators should be constructed downstream of POL related activities. Operations in support of the Proposed Action should ensure that Resource Conservation and Recovery Act regulated solid wastes are disposed of in accordance with federal regulations. As part of this analysis, the EPA also recommends that the Draft EA identity possible waste types and their expected storage, disposal, and management. BMPs include identifying areas and procedures for fueling and providing a protected vehicle washout. We recommend that any references to standard operating protocols be clearly identified and referenced in the Draft EA.

(8) 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 for energy conservation requirements. Efforts should be made to divert any recyclable

[9] The prairie dog ecosystem supports at least 170 species, including the endangered black-footed ferret (whose diet is almost 100% prairie dog), hawks, eagles, mountain plovers, burrowing owls, other owls, coyotes, badgers, bobcats, foxes, and a host of reptiles. (www.nps.gov).

[10] Kotlier, N.B., B.W. Baker, A. D. Whicker, and G. Plumb, "A Critical Review of Assumptions About the Prairie Dog as a Keystone Species," *Environmental Management,* 1999 Sep;24(2):177-192.

materials such as concrete, steel and asphalt away from landfills and repurpose materials instead.[11] The Draft EA should also address potential environmental and health impacts to construction workers.

(9) Noxious Weeds: Management of noxious weeds is an important issue to address in the Draft EA since these species tend to gain a foothold where there are disturbances to the landscape. We recommend the Draft EA provide information on the current state of invasive species in the Project area and how alternatives may impact distribution and prevalence of invasive species. We further recommend that the Draft EA disclose specific management actions that will address invasive species through prevention, early detection and rapid response, and restoration and rehabilitation. If any herbicides will be used to treat noxious weeds, we recommend disclosing any potential hazards related to the application of the chemicals and describing what actions will be taken to minimize impacts of toxic substances released into the environment.

Thank you for the opportunity to provide comments on the Proposed Action. Upon completion of the Draft EA, please submit an electronic version to the EPA for review. If you have any questions regarding the EPA's comments, please contact me at White.Douglas@epa.gov or 404-562-8586.

Sincerely,

Kajumba, Ntale Digitally signed by Kajumba, Ntale Date: 2023.07.14 12:43:47 -04'00'

Ntale Kajumba
NEPA Section Manager

[11] Guiding Principles for Sustainable Federal Buildings https://www.energy.gov/eere/femp/sustainable-federal-buildings

New Mexico Environment Department

MICHELLE LUJAN GRISHAM
GOVERNOR

JAMES C. KENNEY
CABINET SECRETARY

July 17, 2023

Molly Thrash
Air Force Civil Engineer Center
NEPA Division
2261 Hughes Ave., Ste. 155
JBSA Lackland, TX 78236-9853

Submitted electronically to: sherry.thrash@us.af.mil

RE: Environmental Assessment Scope for Delta 11 and Delta 12 Beddowns at Kirtland Air Force Base

Dear Ms. Thrash,

On behalf of the New Mexico Environment Department (NMED), attached please find our comments on potential environmental impacts of the Department of the Air Force's decision to locate of Delta 11 and Delta 12 of the Strategic Training and Readiness Command (STARCOM) at Kirtland Air Force Base.

Strong intergovernmental coordination is essential to ensure protection of human health and the environment. NMED offers a few areas of potential environmental impacts in the attachment for you to evaluate.

Thank you for providing the opportunity to review provide input at this stage of the process. Please don't hesitate to reach out to us with any further questions or concerns you may have. In the future, please send all comment requests to env.review@env.nm.gov. This will help expedite a timely review of your request.

Sincerely,

Jonas Armstrong

Digitally signed by Jonas Armstrong
Date: 2023.07.17 23:04:49 -06'00'

Jonas Armstrong, Director
Office of Strategic Initiatives

Attachment (1)

Attachment

Introduction

The Department of the Air Force invited comment potential environmental impacts of the Department of the Air Force's decision to locate of Delta 11 and Delta 12 of the Strategic Training and Readiness Command (STARCOM) at Kirtland Air Force Base in Albuquerque, New Mexico. The New Mexico Environment Department's (NMED) comments are below.

Petroleum Storage Tanks

This request contains a proposal to install one (1) emergency generator system with a diesel tank. Please note, if the tank falls under the regulatory requirements of 20.5 NMAC, 1,320-gallons and greater for an aboveground tank (AST) and greater than 110-gallons for an underground storage tank (UST), the installation requirements in 20.5.106 or 20.5.109 NMAC must be followed with a 30-day notification given to the Bureau. In addition, there are currently two (2) active UST facilities within ½-mile of the proposed construction site.

The facilities are:

Facility ID	Facility Name	Facility Address
29536	NASA GSCF WSC Bldg. T-1	12600 NASA Road WSC BLDG T-1, Las Cruces, NM 88012
31721	WSTF Bldg. 113, Tank M4 & M5	WSTF Bldg. 113 NASA Rd., Las Cruces, NM 88012

There are no confirmed release sites that are active or have a "no further action" status within the area of the proposed construction site. However, there are two (2) facilities located within ½ mile identified as sites where a petroleum storage tank release (leak or spill) and one (1) facility located within ½ mile identified where a release (leak or spill) has been confirmed. These facilities are:

Facility ID	Release Name	Release ID	Facility Address	Status
29536	NASA GSCF WSC Bldg. T-1	2551	12600 NASA Road WSC BLDG T-1, Las Cruces, NM 88012	No Further Action as of July 11, 1995
54798	NASA GSFC WSC Bldg T-3	4810	12600 NASA Road WSC BLDG T-3, Las Cruces, NM 88012	No Further Action as of March 14, 2022
28500	HELSTF WSMR	904	Environmental Office B 26145, White Sands Missile Range, NM 88002	Site referred to the Hazardous Waste Bureau in May of 2001

Facilities where NMED's petroleum storage tank database shows all petroleum storage tanks have been removed or closed and does not show a release and facilities and releases unknown to the Petroleum Storage Tank Bureau are not included in this comment.

If an abandoned storage tank system or petroleum impacted soil and/or water is discovered during construction, the Petroleum Storage Tank Bureau must be notified (20.5.118 NMAC, etc.). In the event that an abandoned storage tank system or petroleum impacted soil and/or water is discovered during any construction activity, please notify the Petroleum Storage Tank Bureau during business hours via the "Leak of the Week" at: https://www.env.nm.gov/petroleum_storage_tank/ (see box to the right, Report a Leak or Spill) or call 505-476-4397. During non-business hours, please call 505-827-9329. Owners, operators, and others dealing with petroleum storage tank systems must comply with all regulations in 20.5 NMAC, New Mexico's

Petroleum Storage Tank regulations.

Surface Water Quality

Surface Water Quality Bureau (SWQB) staff reviewed the proposed U.S. Space Force Delta 11 and Delta 12 beddowns at Kirtland Air Force Base in Albuquerque, New Mexico, focusing specifically on the potential effect to surface water resources in the area of the proposed project.

Clean Water Act, Section 402 NPDES Industrial Storm Water Construction General Permit (CGP)

The U.S. Environmental Protection Agency (EPA) may require National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) coverage for storm water discharges from construction activities (such as clearing, grading, excavating, and stockpiling) that disturb (or re-disturb) one or more acres, including expansions, of total land area. Prior to discharging storm water, construction operators may need to obtain coverage under an NPDES CGP permit.

Among other things, the CGP requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for the project, including support and staging areas, and that appropriate best management practices (BMPs) be installed and maintained both during and after construction to prevent pollutants in stormwater runoff (primarily sediment, oil & grease, and construction materials from construction sites) from entering surface waters. This permit also requires that permanent stabilization measures (re-vegetation, paving, etc.), and permanent stormwater management measures (stormwater detention/retention structures, velocity dissipation devices, etc.) be implemented post construction to minimize, in the long term, pollutants in stormwater runoff from entering surface waters.
Part 9 of the 2022 CGP includes permit conditions applicable to specific states, Indian country lands, or territories. In the State of New Mexico, except on tribal land, permittees must ensure that there is no increase in sediment yield and flow velocity from the construction site (both during and after construction) compared to pre-construction, undisturbed conditions (see Subpart 9.6.1 of the 2022 CGP).

The EPA requires that all “operators” obtain NPDES permit coverage for construction projects. Generally, this means at least two parties will require permit coverage. The owner/developer of this construction project who has operational control over project specifications; the general contractor who has day-to-day operational control of those activities at the site, which are necessary to ensure compliance with the SWPPP and other permit conditions; and possibly other "operators" will require appropriate NPDES permit coverage for this project.

The Construction General Permit, Notice of Intent, submittal requirements, Federal Register notice, and other information is available at: https://www.epa.gov/npdes/stormwater-discharges-construction-activities.

Clean Water Act, Section 402 NPDES Industrial Storm Water Multi-Sector General Permit (MSGP)

NPDES Multi-Sector General Permit (MSGP) coverage is required for stormwater discharges to Waters of the U.S. associated with specific categories of industrial activity or sectors (e.g., Sector M automobile salvage yards, Sector N Scrap Recycling and Waste Recycling Facilities, Sector E Concrete Manufacturing) unless excluded or eligible for an exemption. The proposed Space Force activities may be covered under one (1) or more MSGP Sectors. Information on EPA’s reissued MSGP authorizing stormwater and certain non-

stormwater discharges from industrial facilities is available at https://www.epa.gov/npdes/stormwater-discharges-industrial-activities. EPA's web site, among other things, includes information on eligibility, submitting a notice of intent (NOI), MSGP stormwater water pollution prevention plans (SWPPP), monitoring, inspections, record-keeping, electronic reporting, and sector fact sheets with guidance on best management practices to control pollutants.

Clean Water Act, Middle Rio Grande Municipal Separate Storm Sewer Systems (MS4) Permit

The proposed project is within the Albuquerque urbanized area and is under the permit coverage of the Middle Rio Grande Municipal Separate Storm Sewer Systems (sMS4) NPDES permit NMR04A000 (https://www.epa.gov/sites/default/files/2018-10/documents/r6-npdes-middle-rio-grande-ms4-nmr04a000-final-permit-2014.pdf). Construction and operational activities should follow the stormwater management requirement laid out in the permit.

Clean Water Act, Section 404 Dredge and Fill Permits and NMED 401 Certifications

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into waters of the United States, including wetlands, under Section 404 of the federal Clean Water Act (CWA). The USACE issues or authorizes Standard Individual Permits (IPs), Nationwide Permits (NWPs), and the Emergency Regional General Permit (RGP) for activities such as earth-moving work within wetlands, lakes, and streams (including ephemeral streams or arroyos) that are waters of the United States. If you have questions about activities within watercourses or wetlands that may require coverage under a CWA Section 404 permit, more information is available on-line from the USACE, Albuquerque District, Regulatory Division at http://www.spa.usace.army.mil/Missions/Regulatory-Program-and-Permits/.

A water quality certification is required under Section 401 of the federal CWA for activities regulated under Section 404. More information on the permitting and certification requirements is available on-line from NMED at https://www.env.nm.gov/surface-water-quality/dredgeandfillactivities/. If you have questions related to dredge and fill activities, then contact Abe Franklin, Program Manager, Watershed Protection Section, NMED Surface Water Quality Bureau at 505-827-0187.

Brevard County Natural Resources Management Department

BOARD OF COUNTY COMMISSIONERS

Natural Resources Management Department
2725 Judge Fran Jamieson Way
Building A, Room 219
Viera, Florida 32940

July 28, 2023

Ms. Molly Thrash
Air Force Civil Engineer Center
National Environmental Policy Act Division (AFCEC/CZN)
2261 Hughes Avenue, Suite 155
JBSA Lackland TX 78236-9853

RE: HQ STARTCOM Beddown, Environmental Impact Analysis Request

Dear Ms. Thrash:

This letter serves to provide Brevard County Natural Resource Management Department (NRM) comments on the Environmental Assessment for a proposed HQ Strategic Training and Readiness Command (STARTCOM) Headquarters Beddown at Patrick Space Force Base (PaSFB), located between unincorporated Cocoa Beach and Satellite Beach, Brevard County, Florida.

NRM is aware that extensive assessment, remediation, and closure efforts regarding a variety of regulated materials are underway at PaSFB. NRM's concerns are related to existing per- and polyfluoroalkyl substances (PFAS), an emerging contaminant, and other contaminant plumes (e.g., PCBs, petroleum), and potential discharge to surface waters. PFAS is particularly concerning. While other contaminants might break down quickly in the lagoon, PFAS bioaccumulates up the food chain, and the Indian River Lagoon levels already exceed the human health criteria adopted in other states for fish consumption. The Environmental Protection Agency (EPA) and Florida Department of Environmental Protection (FDEP) are in the process of adopting more stringent PFAS standards than the current EPA Health Advisory Limit.

The latest information available to NRM indicates that there have been no PFAS Release Areas identified in the Beddown project location. However, continued construction means and methods should consider impacts to existing PFAS plumes at PaSFB.

Thank you for the opportunity to provide comments. Please contact me at (321) 633-2016 if you should have any questions.

Sincerely,

Mcgee, Darcie Digitally signed by Mcgee, Darcie DN: cn=Mcgee, Darcie, email=Darcie.Mcgee@brevardfl.gov Date: 2023.07.28 12:52:25 -04'00'

Darcie McGee
Assistant Director, Natural Resources Management Department

Phone (321) 633-2016
Website: BrevardFL.gov

A.2 Native American Consultation

Consistent with the NHPA of 1966 implementing regulations (36 CFR Part 800), DoD Instruction 4710.02, *Interactions with Federally Recognized Tribes*, AFI 90-2002, *Air Force Interaction with Federally Recognized Tribes,* and AFMAN 32- 7003, *Environmental Conservation*, the DAF offered consultation 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. A sample consultation letter is presented in Exhibit 2. Section A.2.1 contains a list of stakeholders DAF sent the early notification letters and Section A.2.2 contains responses received.

Table A.2-1 provides a summary of responses from Tribes who responded to this initial inquiry. Appendix A contains additional details, including copies of communications.

Table A.2-1. Summary of Native American Tribal Consultation

Tribe Affiliation by Installation	Status of Response
PaSFB	
Miccosukee Tribe of Indians of Florida	No response received to date.
Seminole Nation of Oklahoma	No response received to date.
Seminole Tribe of Florida	No response received to date.
KAFB	
Hopi Tribal Council	No response received to date.
Ohkay Owingeh Pueblo	No response received to date.
Pueblo of Acoma	No response received to date.
Pueblo of Cochiti	No response received to date.
Pueblo of Isleta	No response received to date.
Pueblo of Jemez	No response received to date.
Pueblo of Laguna	No response received to date.
Pueblo of Nambe	No response received to date.
Pueblo of Picuris	No response received to date.
Pueblo of Pojoaque	No response received to date.
Pueblo of San Felipe	No response received to date.
Pueblo of San Ildefonso	No response received to date.
Pueblo of Sandia	No response received to date.
Pueblo of Santa Ana	No response received to date.
Pueblo of Santa Clara	No response received to date.
Pueblo of Santo Domingo	No response received to date.
Pueblo of Tesuque	No response received to date.
Pueblo of Zia	Phone conversation with Molly Thrash on June 14, 2023. Pueblo of Zia understands that the area of proposed impact is entirely on Kirtland AFB property and that it is largely disturbed through long-term military development. They requested if additional cultural resources surveys are identified, the Pueblo of Zia be notified of any findings. They also requested a cultural resources monitor be present during any ground disturbance within the area of development, and that if there are any isolated finds encountered of cultural material, they be notified, and the isolate replaced in the ground and not collected.
San Carlos Apache Tribe	No response received to date.
White Mountain Apache Tribe	E-mailed response letter on June 14, 2023 stating the proposed strategic basing project will have a “No Adverse Effect” on the tribe traditional cultural properties and/or historic properties (See Appendix A).
Wichita & Affiliated Tribes	No response received to date.
Ysleta del Sur Pueblo	No response received to date.

Tribe Affiliation by Installation	Status of Response
SSFB	
Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation	No response received to date.
Apache Tribe of Oklahoma	No response received to date.
Blackfeet Nation	No response received to date.
Cheyenne and Arapaho Tribes of Oklahoma	No response received to date.
Cheyenne River Sioux Tribe	No response received to date.
Crow Creek Sioux Tribe	No response received to date.
Crow Tribe	No response received to date.
Fort Belknap Indian Community	No response received to date.
Fort Sill Apache Tribe	No response received to date.
Eastern Shoshone Tribe	No response received to date.
Flandreau Santee Sioux Tribe	E-mailed response on June 19, 2023 stating the tribe has history through the project area; however, they have no issues with the project as proposed. They request to be contacted immediately if the project inadvertently disturbs any human remains and/or cultural material.
Fort Peck Assiniboine and Sioux Tribes	No response received to date.
Little Shell Tribe of Chippewa Indians	No response received to date.
Lower Brule Sioux Tribe of the Lower Brule Reservation, SD	No response received to date.
Northern Arapaho Tribe	No response received to date.
Northern Cheyenne Tribe	No response received to date.
Oglala Sioux Tribe	No response received to date.
Rosebud Sioux Tribe	No response received to date.
Santee Sioux Nation	No response received to date.
Spirit Lake Nation	No response received to date.
Standing Rock Sioux Tribe	No response received to date.
Three Affiliated Tribes of the Mandan, Hidatsa & Arikara Nation	No response received to date.
Upper Sioux Community Pezihutazizi Oyate	No response received to date.
Ute Indian Tribe of the Uintah & Ouray Reservation	No response received to date.
Yankton Sioux Tribe	No response received to date.
KAFB and SSFB	
Comanche Nation of Oklahoma	No response received to date.
Fort Sill Apache Tribe of Oklahoma	No response received to date.
Jicarilla Apache Nation	No response received to date.
Kiowa Tribe of Oklahoma	No response received to date.
Mescalero Apache Tribe	No response received to date.
Navajo Nation	No response received to date.
Pawnee Nation of Oklahoma	No response received to date.
Pueblo of Taos	No response received to date.
Pueblo of Zuni	No response received to date.
Southern Ute Indian Tribe	No response received to date.
Ute Mountain Ute Tribe	No response received to date.

A.2.1 List of Tribal Contacts

Apache Tribe of Oklahoma
Bobby Komardley
Chairman
PO Box 1330
Anadarko, OK 73005

Blackfeet Nation
John Murray
THPO
P.O. Box 850
Browning, MT 59417

Cheyenne and Arapaho Tribes of Oklahoma
Max Bear
THPO
700 Black Kettle Blvd PO Box 145
Concho, OK 73022

Cheyenne River Sioux Tribe
Steve Vance
THPO
PO Box 590
Eagle Butte, SD 57625

Comanche Nation of Oklahoma
Martina Minthorn
THPO
PO Box 908
Lawton, OK 73502

Crow Creek Sioux Tribe
Merle Marks
THPO
PO Box 50

Crow Tribe
Aaron Brien
THPO
PO Box 159
43 Heritage Road
Crow Agency, MT 59022

Eastern Shoshone Tribe
Joshua Mann
THPO
Building 17A North Fork Rd.
Fort Washakie, WY 82514

Flandreau Santee Sioux Tribe
Garrie Kills a Hundred
THPO
PO Box 283
Flandreau, SD 57028

Fort Peck Assiniboine and Sioux Tribes
Dyan Youpee
THPO
PO Box 1027
Poplar, MT 59255

Fort Sill Apache Tribe of Oklahoma
Brent Buckner
Cultural Coordinator
43187 US Highway 281
Apache, OK 73006

Hopi Tribal Council
Stewart Koyiyumptewa
THPO
PO Box 123
Kykotsmovi, AZ 86039

Jicarilla Apache Nation
Jeff Blythe
THPO
PO Box 507
Dulce, NM 87026

Kiowa Tribe of Oklahoma
Matthew Komalty
Chairman
PO Box 369
Carnegie, OK 73015

Little Shell Tribe of Chippewa Indians
Duane Reid
THPO
511 Central Ave W
Great Falls, MT 59404

Mescalero Apache Tribe
Holly Houghten
THPO
PO Box 227
Mescalera, NM 88340

Miccosukee Tribe of Indians of Florida
Kevin Donaldson
Environmental Specialist
Tamiami Station
PO Box 440021
Miami, FL 33144

Navajo Nation
Richard Begay
THPO
PO Box 4850
Window Rock, AZ 86515

Northern Arapaho Tribe
Ben Ridgely
THPO
PO Box 67
Stevens, WY 82524

Northern Cheyenne Tribe
Teanna Limpy
THPO
PO Box 1128
Lame Deer, MT 59043

Oglala Sioux Tribe
Thomas Brings
THPO

PO Box 2070
Pine Ridge, SD 57770

Ohkay Owingeh Pueblo
Patrick Aguino
Governor
PO Box 1099
Ohkay Owingeh, NM 87566

Pawnee Nation of Oklahoma
Joseph Reed
THPO
PO Box 470
Pawnee, OK 74058

Pueblo of Acoma
Steven Concho
THPO
PO Box 489
Acoma, NM 87034

Pueblo of Cochiti
Jayson Romero
NAGPRA Representative
PO Box 255
Cochiti, NM 87072

Pueblo of Isleta
Henry Walt, PhD
THPO
PO Box 1270
Isleta, NM 87022

Pueblo of Jemez
Christopher Toya
THPO
PO Box 100
Jemez Pueblo, NM 87024

Pueblo of Laguna
Martin Kowemy, Jr.
THPO
PO Box 194
Laguna, NM 87026

Pueblo of Nambe
Nathaniel Porter
THPO
15A NP 102 West
Santa Fe, NM 87506

Pueblo of Picuris
Richard Smith, Sr.
THPO
PO Box 194
Laguna, NM 87026

Pueblo of Pojoaque
Bruce Bernstein, PhD
THPO
38 Camino Del Rincon
Pueblo of Pojoaque, Santa Fe, NM, 87506

Pueblo of San Felipe
Ricardo Ortiz
THPO
PO Box 4339
San Felipe Pueblo, NM 87001

Pueblo of San Ildefonso
Randy Teboe
THPO
02 Tunyo Po
Santa Fe, NM 87506

Pueblo of Sandia
Greg Kaufman
Environment Director
481 Sandia Loop
Bernalillo, NM 87004

Pueblo of Santa Ana
Monica Murrell
THPO
2 Dove Road
Santa Ana Pueblo, NM 87004

Pueblo of Santa Clara
Ben Chavarria
THPO
PO Box 580
Espanola, NM 87532

Pueblo of Santo Domingo
Christopher Chavez
THPO
PO Box 99
Santo Domingo Pueblo, NM 87052

Pueblo of Taos
Clyde Romero, Sr.
Governor
PO Box 1846
Taos, NM 87571

Pueblo of Tesuque
Larry Samuel
THPO
Route 42 Box 360-T
Santa Fe, NM 87506

Pueblo of Zia
Francisco Toribio
THPO
135 Capitol Square Drive
Zia Pueblo, NM 87053

Pueblo of Zuni
Kurt Dongoske, RPA, MA
THPO
PO Box 339
Zuni, NM 87327

Rosebud Sioux Tribe
Ione Quigley
THPO
PO Box 750
Rosebud, SD 57570

San Carlos Apache Tribe
Vernelda Grant
THPO
PO Box 0
San Carlos, AZ 85550

Santee Sioux Nation
Larry Thomas
Acting THPO
425 Frazier Ave. N. Suite 2
Niobrara, NE 68760

Seminole Nation of Oklahoma
Ben Yahola
THPO
PO Box 1498
Wewoka, OK 74884

Seminole Tribe of Florida
Juan Cancel
THPO Assistant Director
30290 Josie Billie Highway, PMB 1004
Clewiston, FL 33440

Danielle Simon
Compliance Review Supervisor
30290 Josie Billie Highway, PMB 1004
Clewiston, FL 33440

Tina Osceola
THPO Director
30290 Josie Billie Hwy
PMB 1004
Clewiston, FL 33440

Paul Backhouse, PhD
HERO Senior Director
30290 Josie Billie Highway, PMB 1004
Clewiston, FL 33440

Southern Ute Indian Tribe
Xavier Watts
NAGPRA Technician
PO Box 737
Ignacio, CO 81137

Spirit Lake Nation
Kenneth Graywater
THPO
PO Box 198
Fort Totten, ND 58335

Standing Rock Sioux Tribe
Jon Eagle
THPO
PO Box D
Fort Yates, ND 58538

Three Affiliated Tribes of the Mandan, Hidatsa & Arikara Nation
Allan Demaray
THPO
404 Frontage Road
New Town, ND 58763

Upper Sioux Community Pezihutazizi Oyate
Samantha Odegard
THPO
PO Box 147
5722 Travers Lane
Granite Falls, MN 56241

Ute Indian Tribe of the Uintah & Ouray Reservation
Betsy Chapoose
THPO
PO Box 190
Fort Duchesne, UT 84026

Ute Mountain Ute Tribe
Terry Knight
THPO
PO Box 468
Towaoc, CO 81334

White Mountain Apache Tribe
Mark Altaha
THPO
PO Box 1032
Fort Apache, AZ 85926

Wichita & Affiliated Tribes
Gary McAdams
THPO
PO Box 729
Anadarko, OK 73005

Yankton Sioux Tribe
Colten Archambeau
THPO
PO Box 1153
Wagner, SD 57380

Ysleta del Sur Pueblo

Rene Lopez
THPO
PO Box 17579
El Paso, TX 79907

Consultation Letter Sample

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE INSTALLATION AND MISSION SUPPORT CENTER
JOINT BASE SAN ANTONIO LACKLAND TEXAS

02 June 23

Molly Thrash
Air Force Civil Engineer Center
National Environmental Policy Act Division (AFCEC/CZN)
2261 Hughes Ave, Ste 155
JBSA Lackland TX 78236-9853

Jon Eagle
THPO
Standing Rock Sioux Tribe
PO Box D
Fort Yates, ND 58538

Dear Jon Eagle,

The U.S. Department of the Air Force (DAF) is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to evaluate potential environmental impacts associated with the United States Space Force (USSF) decision to locate components of three Space Delta units (Delta 10, Delta 11, and Delta 12) of the Strategic Training and Readiness Command (STARCOM) at DAF installations in the U.S. (see Attachment 1). The Delta 10 beddown is constrained by mission requirements to Patrick Space Force Base (PaSFB) in Florida (see Attachment 2). The Delta 11 and Delta 12 beddowns are proposed for Kirtland Air Force Base (KAFB) in New Mexico (see Attachment 3) and Schriever Space Force Base (SSFB) in Colorado (see Attachment 4). Per Section 106 of the National Historic Preservation Act (NHPA) of 1966 (54 United States Code [USC] § 306108), as amended, and 36 Code of Federal Regulations (CFR) Part 800, *Protection of Historic Properties*, the USAF is engaging early with tribal governments as it formulates the undertaking.

The purpose of the Proposed Action is to beddown Delta 10 and selected Squadrons within Deltas 11 and 12 in conformance with Air Force Instruction (AFI) 10-503, *Strategic Basing*. The Proposed Action is needed to implement the DAF's Strategic Basing Process and to provide Delta 10 and selected Squadrons within Deltas 11 and 12 appropriate permanent facilities to perform their missions effectively.

The NHPA requires that Federal agencies consult with tribes when an agency action may affect historic properties of religious and cultural significance to the tribes. In order to help us fulfill that obligation, we ask for your assistance in identifying any such properties on the respective AFBs and within the area of the Proposed Action that are of significance to your Tribe. Historic properties include Traditional Cultural Properties and landscapes, archeological

sites, burial grounds, sacred landscapes or features, ceremonial areas, plant and animal communities, and buildings and structures with significant tribal association.

Please indicate in any response, within 30 days of receiving this letter, whether you will be providing information or would like to formally consult on this undertaking. Your choice now applies only to providing information and consultations under the NHPA. It will not affect the handling or disposition of human remains, funerary objects, sacred objects, or objects of cultural patrimony under the Native American Graves Protection and Repatriation Act. In the event such items are discovered, we will contact you regarding their handling and disposition.

For any questions, comments, or requests for more information, please contact Ms. Molly Thrash preferably by email at sherry.thrash@us.af.mil, or by mail at AFCEC/CZN, 2261 Hughes Ave, Ste 155, JBSA Lackland, TX 78236, or by phone at (480) 740-1234. Thank you for your assistance.

MOLLY THRASH, GS-13, DAF
Environmental Program Manager,
AFCEC NEPA Division

4 Attachments:
1. Deltas 10, 11, and 12 Beddown Locations Under Consideration
2. Proposed Delta Beddown 10 Permanent Siting Locations at PaSFB
3. Proposed Delta 11 and Delta 12 Beddown Permanent Siting Locations at KSF
4. Proposed Delta 11 and Delta 12 Beddown Permanent Siting Locations at SSFB

Attachment 1:
Deltas 10, 11, and 12 Beddown Locations Under Consideration

Attachment 2: Proposed Delta Beddown 10 Permanent Siting Locations at PaSFB

Attachment 3: Proposed Delta 11 and Delta 12 Beddown Permanent Siting Locations at KSFB

Attachment 4: Proposed Delta 12 Beddown Permanent and Modular Facility Siting Locations at SSFB

A.2.2 Tribal Responses

White Mountain Apache Tribe
Office of Historic Preservation
PO Box 1032
Fort Apache, AZ 85926
Ph: (928) 338-3033 Fax: (928) 338-6055

-

To: Molly Thrash, GS-13, DAF Environmental Program Manager, AFCEC NEPA Division

Date: June 13, 2023

Re: *Strategic Basing for the Space Delta Units 10, 11, 12 a the DAF installations*

The White Mountain Apache Tribe Historic Preservation Office appreciates receiving information on the project dated; June 02, 2023. In regards to this, please refer to the following statement(s) below.

Thank you for allowing the White Mountain Apache tribe the opportunity to review and respond to the prep of the Environmental Assessment for the strategic basing to beddown Delta 10 and Squadrons within Delta 11 and 12 in conformance with Air Force Instruction, at DAF installations in the United States.

Please be advised, we have reviewed the consultation letter and the information provided, we have reviewed the information provided and determined that the proposed strategic basing project will have a ***"No Adverse Effect"*** on the tribe traditional cultural properties and/or historic properties.

Thank you for early tribal engagement and consultation, and continued collaborations in protecting and preserving places of cultural and historical importance.

Sincerely,

Mark Altaha

White Mountain Apache Tribe – THPO
Historic Preservation Office

From: THRASH, SHERRY CIV USAF AFMC AFCEC/CZN <[redacted]>
Sent: Wednesday, June 14, 2023 3:49 PM
To: Brandon Faustini <[redacted]>; SISNEROS, BRIANNE L CIV USAF AFGSC 377 MSG/CEIEC <[redacted]>
Cc: Teresa Brown <[redacted]>
Subject: Memo to File: Communication with Pueblo of Zia, 14 June 2023, 1640 hrs (central time)

Brandon, Brianne, and Teresa,

I just returned a phone call from Ulysses Reid of the Pueblo of Zia who wanted to discuss the project, but was in the field so we talked by phone instead of by email. Mr. Reid is the Cultural Resources Preservation Coordinator for the Pueblo.

Pueblo of Zia understands that the area of proposed impact is entirely on Kirtland AFB property and that it is largely disturbed through long term military development. He did note, however, that there are "scatters everywhere" and he asked that if additional cultural resources surveys under S.106 are conducted either for this EA or for further development upon implementation of the project, the Pueblo of Zia be notified of any findings. He also requested a cultural resources monitor be present during any ground disturbance within the area of development, and that if there are any isolated finds encountered of cultural material, the Pueblo be notified, and the isolate replaced in the ground and not collected.

Mr. Reid's phone number is [redacted].

Respectfully,
Molly

Molly Thrash, DAF
AFCEC/CZN
NEPA Program Manager, US Space Force
[redacted]
Usually Available on Teams
[redacted]
(she/hers/Ms)

From: Sara Childers [redacted]
Sent: Monday, June 19, 2023 3:19 PM
To: THRASH, SHERRY CIV USAF AFMC AFCEC/CZN <[redacted]>
Subject: [URL Verdict: Unknown][Non-DoD Source] Project Proposed Delta 12 Modular Facility Schriever Space Force Base CO

Hello,
The Flandreau Santee Sioux Tribe has history through the project area. We do not have an issue with your project as designed.
We ask that in the event your project inadvertently disturbs any human remains and or cultural material, that you contact us ASAP.
Thank you,
Sara Childers – THPO Assistant

Sara Childers
Tribal Historic Preservation Assistant
Flandreau Santee Sioux Tribe
603 W Broad Ave | Flandreau, SD 57028
p. [redacted] | www.fsst-nsn.gov

Appendix B. Definition of Resources Retained for Detailed Analysis and Regulatory Setting

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B.1 Air Quality and Greenhouse Gas/Climate Change

B.1.1 Definition of the Resource/Regulatory Setting

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 region of influence (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 USEPA's attainment list and the relationship to air quality standards.

B.1.1.1 Criteria Pollutants

National and State Ambient Air Quality Standards (AAQS) are provided for six criteria pollutants as listed under Section 108 of the CAA of 1970: carbon monoxide (CO); lead (Pb); nitrogen dioxide (NO_2); ozone (O_3); particulate matter, divided into two size classes of aerodynamic size less than or equal to 2.5 micrometers ($PM_{2.5}$), and aerodynamic size less than or equal to 10 micrometers (PM_{10}); and sulfur dioxide (SO_2). Table B.1-1 lists the AAQS for each criteria pollutant.

Table B.1-1. National and State Ambient Air Quality Standards

Pollutant	Primary/ Secondary	Averaging Time	Federal Standard[1]	New Mexico Standard	Colorado Standard	Form
Carbon Monoxide (CO)	Primary	1 hour	35 ppm	13.1 ppm	--	Not to be exceeded more than once per year
		8 hours	9 ppm	8.7 ppm	--	
Nitrogen Dioxide (NO_2)	Primary	1 hour	100 ppb	0.10 ppm	--	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Primary and secondary	1 year	0.053 ppm	0.05 ppm	--	Annual mean
Ozone (O_3)	Primary and secondary	8 hours	0.070 ppm	--	--	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Sulfur Dioxide (SO_2)	Primary	1 hour	0.075 ppm	0.10 ppm		99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		1 year	--	0.02 ppm	0.267 ppm	Annual arithmetic mean
	Secondary	3 hours	0.5 ppm	--	700 µg/m^3	Not to be exceeded more than once per year
Particulate Matter of diameter 2.5 microns or less ($PM_{2.5}$)	Primary	1 year	12 µg/m^3	--	--	Annual mean, averaged over 3 years
	Secondary	1 year	15 µg/m^3	--	--	Annual mean, averaged over 3 years
	Primary and secondary	24 hours	35 µg/m^3	--	--	98th percentile, averaged over 3 years

Pollutant	Primary/ Secondary	Averaging Time	Federal Standard[1]	New Mexico Standard	Colorado Standard	Form
Particulate Matter of diameter 10 microns or less (PM_{10})	Primary and secondary	24 hours	150 µg/m^3	--	--	Not to be exceeded more than once per year on average over 3 years
Lead (Pb)	Primary and secondary	Quarterly average	1.5 µg/m^3	--	--	Not to be exceeded

Source: USEPA 2023a, NMAC 2012, CCR 2010.
[1] New Mexico and Colorado have state-specific AAQS, but Florida has fully adopted the NAAQS. Federal standards apply where no state standards exist.
µg = micrograms; CO = carbon monoxide; m3 = cubic meter; NAAQS = National Ambient Air Quality Standards; NO2 = nitrogen dioxide; O3 = ozone; Pb = lead; PM2.5 = particulate matter of diameter 2.5 microns or less; PM10 = particulate matter of diameter 10 microns or less; ppb = parts per billion; SO2 = sulfur dioxide

Areas where monitored outdoor air concentrations are within an applicable National AAQS (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 classified 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 Clean Air Act (CAA) mandates that the federal government abides 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 DAF comply with federal, state, and local environmental laws and standards. In accordance with AFPD 32-70, Air Force Manual (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 provides further and more specific instructions on the requirements of the DAF's EIAP for air quality promulgated at 32 CFR. 989.30, which mandates that EIAP documents address General Conformity.

B.1.1.2 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 188 HAPs that are known or suspected to cause health effects in small concentrations. HAPs are emitted by a wide range of anthropogenic and naturally occurring sources, including combustion mobile and stationary sources. Unlike the NAAQS for criteria pollutants, federal ambient air quality standards do not exist for non-criteria pollutants. Therefore, HAPs are regulated through specific air emission permit provisions for stationary sources and HAP emission limits for mobile sources.

The CAA also designates visibility goals in Class I Federal areas, such as national parks or wilderness areas. Visibility-impairing pollutants can be transported over state lines, so states are encouraged to work together to develop regional visibility plans. Visibility-impairing pollutants are emitted by a range of sources, including mobile source fuel combustion, agriculture, and manufacturing. Emissions of said pollutants are regulated by NAAQS, through state programs, and through specific air emission permit provisions.

The National Emissions Inventory, updated every 3 years by the USEPA, contains estimates of annual air emissions by county within the U.S. The most recent publicly available inventory data is for calendar year 2020 (USEPA 2020).

B.1.1.3 Greenhouse Gas Emissions

Greenhouse gas (GHG) emissions released into the atmosphere from human-induced fossil fuel combustion are widely believed to be contributing to changes in global climate. GHGs, which include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), water vapor, and several trace gases, trap radiant heat reflected from the Earth in the atmosphere, causing the Earth's average surface temperature to rise. The predominant GHGs are CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. In the U.S., anthropogenic (human-related) GHG emissions are emitted primarily from burning fossil fuels. Although GHG levels have varied for millennia (along with corresponding variations in climate conditions), increases driven by human activity have contributed significantly to recent climatic changes.

CO_2e is a metric commonly used to express the total emissions of different GHGs using a single number. It is equal to the number of metric tons of CO_2 emissions that would cause the same global warming effect as one metric ton of the greenhouse gas being considered. It is calculated by multiplying the emissions of each GHG with their respective global warming potentials (GWP); these CO_2e values can then be summed to get a single, total CO_2e value.

Several Executive Orders (EOs) require federal agencies to estimate and report their GHG emissions and set goals to reducing these emissions. These EOs include:

- EO 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis
- EO 14008, Tackling the Climate Crisis at Home and Abroad
- EO 14030, Climate-Related Financial Risk

In 2023, the CEQ issued interim National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change. The guidance includes recommendations for agencies on how to analyze and present information related to GHGs and climate change within NEPA documents. At the time the interim guidance was issued, CEQ also announced a public comment period and may revise the guidance in response to comments received.

B.2 Water Resources

B.2.1 Definition of the Resource/Regulatory Setting

Water resources analyzed in this EA include surface water, wetlands, floodplains, and groundwater. Additionally, this EA analyzes the consistency of the Proposed Action with the Coastal Zone Management Act (CZMA) for the site at PaSFB. This is the only site under consideration that is located within the coastal zone.

The ROI for water resources includes surface waters, wetlands, and floodplains within the boundaries of each analyzed site, down-gradient streams receiving stormwater runoff within 0.5 mile of each analyzed site, and the portion of the groundwater basin that underlies each analyzed site.

The Clean Water Act (CWA) (33 USC 1251-1387), as amended, provides for the restoration and maintenance of the physical, chemical, and biological integrity of the nation's waters. The CWA and implementing U.S. Environmental Protection Agency (USEPA) regulations provide the authority and framework for state laws and regulations. Section 303(d) of the CWA requires states to develop lists of waterbodies failing to meet water quality standards and to submit updated lists to the EPA every two years, along with the Integrated Report (IR) on water quality conditions that is required in Section 305(b) of the CWA. The 303(d) list is used to establish a list of water-quality-limited segments that require Total Maximum Daily Loads (TMDLs), which are a calculation of the

maximum amount of a pollutant that a waterbody can receive and still meet water quality standards (USEPA 2022). Section 402 of the CWA mandates the NPDES Program, which requires a permit for the discharge of any pollutant to Waters of the U.S. from point and non-point sources. Non-point sources include stormwater runoff from industrial, municipal, and construction sites. The NPDES Municipal General Permit prohibits discharges of material other than stormwater to Waters of the U.S. and requires implementation of BMPs to reduce pollutants in stormwater. The following summarizes regulatory requirements by state:

- The Florida Water Resources Act (FWRA; Chapter 373 of F.S.) mandates the state agency to implement a surface water regulatory program. Part IV of this statute implements the Environmental Resource Permit Program (62-330, FAC), which regulates activities involving the alteration of water resources and is jointly administered by the FDEP and Florida's Water Management Districts. The St. Johns River Water Management District (SJRWMD) is the regulatory agency responsible for implementing the Environmental Resource Permit Program at PaSFB. SJRWMD encompasses Brevard County, in which PaSFB is located, and 17 additional counties in north-central Florida (DAF 2020). FDEP is additionally responsible for preparing the Section 303(d) list and administering the NPDES Program in the State of Florida.
- The New Mexico Environment Department (NMED) regulates groundwater discharges and is responsible for preparing the Section 303(d) list and associated IR. The USEPA administers the NPDES Program; however, the process has begun for the change in primacy from the USEPA to NMED.
- The CDPHE is responsible for producing Colorado's Section 303(d) list and associated IR, as well as Colorado's Monitoring and Evaluation list, which is used alongside the 303(d) list to establish a list of water-quality-limited segments requiring TMDLs. The Colorado Department of Natural Resources (DNR) Division of Water Resources regulates groundwater withdrawals in the state. The USEPA administers the relevant NPDES Program.

Floodplains, as designated by the Federal Emergency Management Agency (FEMA), are protected under EO 11988 – Floodplain Management, which aims to reduce the risk of flood loss, minimize the impacts of flooding, and restore and preserve the natural and beneficial values of floodplains.

The Coastal Zone Management Act (CZMA) (16 USC 1451-1464) was enacted in 1972 to assist coastal states, Great Lakes states, and U.S. territories with the development of coastal management programs to comprehensively manage and balance competing uses of coastal resources. The CZMA dictates that any federal action with the potential to affect coastal resources is reviewed for consistency with the local coastal management plan. The proposed Delta 10 beddown site at PaSFB is located in the coastal zone and is therefore subject to the Florida Coastal Management Program (FCMP), which consists of a network of 24 Florida statutes administered by eight state agencies and five Water Management Districts. Consistency reviews of federal actions with the potential to affect Florida's coastal resources are administered by FDEP.

B.3 Cultural Resources

Historic properties covered by the National Historic Preservation Act (NHPA) include any prehistoric or historic district, site, building, structure, or object with known or potential significance associated with pre- or post-American history, architecture, archaeology, engineering, or culture.

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 alternative carried forward for this analysis as described in Section 2.4 for each installation alternative. 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).

B.3.1 Definition of the Resource/Regulatory Setting

In addition to considerations under NEPA, Section 106 of the NHPA requires federal agencies to consider the effect an undertaking may have on historic properties, as defined under 36 CFR 800 (*Protection of Historic Properties*). AFMAN 32-7003 (*Environmental Conservation*) defines cultural resources to include historic properties (defined in the NHPA, 54 U.S.C. § 300101 et seq. and 36 CFR Part 800, *Protection of Historic Properties*); cultural items (defined in the Native American Graves Protection and Repatriation Act [NAGPRA], 25 U.S.C. §§3001-3013 and 43 CFR Part 10); archaeological resources (defined in the Archaeological Resources Protection Act [ARPA], 16 CFR §§470aa-470mm and 32 CFR Part 229, *Protection of Archaeological Resources*); sacred sites (defined in EO 13007, *Indian Sacred Sites* to which access is provided under the American Indian Religious Freedom Act, 42 USC § 1996); and collections (defined in 36 CFR Part 79, *Curation of Federally Owned and Administered Archaeological Collections*). Native American consultation is required in compliance with AFI 90-2002, *Air Force Interactions with Federally-Recognized Tribes*, and the American Indian Religious Freedom Act.

The Proposed Action is considered an undertaking and is required to comply with Section 106, including consultation with applicable SHPO and Tribal Historic Preservation Office (THPO).

All Section 106 correspondence with SHPOs and THPOs for this Proposed Action is provided in Appendix A. Consistent with Section 106 of the NHPA, DoD Instruction 4710.02, AFI 90-2002, and AFMAN 32-7003, the DAF is also consulting with 60 federally recognized Tribes (see Table 1-3) 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. In addition, DAF consulted with the following SHPOs:

- Florida Division of Historical Resources (PaSFB)
- New Mexico Historic Preservation Division (KAFB)
- Colorado State Historic Preservation Office (SSFB)

The DAF sent letters to Tribes on June 2, 2023, inquiring their interest in initiating consultation (see Appendix A). Table 1-3 of the EA provides a summary of responses from Tribes who responded to this initial inquiry. To date, no Tribes have expressed interest in formal consultation regarding the Proposed Action and have not identified any properties of cultural, historical, or religious significance on the alternative sites.

B.4 Biological Resources

Biological resources analyzed in this EA include vegetation, wildlife, special-status species listed as threatened or endangered under the Endangered Species Act (ESA), and migratory birds.

B.4.1 Definition of the Resource/Regulatory Setting

Federal agencies, in consultation with the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS), are required by Section 7(a)(4) of the ESA (19 U.S.C. 1536(c)), as amended, to ensure that any actions authorized, funded, or carried out by the agency do not jeopardize the continued existence of a federally listed threatened or endangered species, or result in the destruction or modification of designated critical habitat of a federally listed species. The USFWS and the NMFS are responsible for managing federally listed species.

Section 3 of the ESA contains the following definitions for species and habitat projected under Section 7:

- Endangered species are in danger of extinction throughout all or a significant portion of its range.
- Threatened species are likely to become an endangered species within the near future throughout all or a significant portion of its range.
- Proposed species are found to warrant listing as either threatened or endangered, and for which listing has been officially proposed in the *Federal Register*.
- Candidate species are those that have been announced in the *Federal Register* as undergoing a status review but has not yet been listed. Candidate species do not receive federal protection under the ESA until officially listed as a threatened or endangered species.
- Critical habitat is a specific geographic area (or areas) that contain physical or biological features essential to the conservation of the threatened or endangered species and may require management or protection.

State agencies also designate special-status species. This section also discusses species designated as threatened or endangered at the state level within Colorado, Florida, and New Mexico.

Migratory birds are protected under the MBTA (16 U.S.C. 703-711); bald and golden eagles are additionally protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d). EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, (66 FR 3853) directs federal agencies to identify where unintentional take is likely to have a measurable negative effect on migratory bird populations and to avoid or minimize adverse impacts on migratory birds through enhanced collaboration with the USFWS. EO 13186 was issued in part to ensure that environmental analyses of federal actions assess the impacts of these actions on migratory birds. It also states that emphasis should be placed on species of concern, priority habitats, and key risk factors, and it prohibits the take of any migratory bird without authorization from the USFWS.

B.5 Noise

B.5.1 Definition of the Resource/Regulatory Setting

Noise is generally defined as unwanted sound. Excessive noise can lead to annoyance and disrupt simple day-to-day activities, especially in areas where occupants are more susceptible to the adverse effects of noise pollution. These areas are referred to as noise-sensitive receptors and include, but are not limited to, residences, schools, daycare facilities, libraries, hospitals, elderly housing, and public recreational areas. The ROI for the noise analysis includes areas within 0.5 mile (2,640 feet) of the project site(s).

Noise levels are measured in terms of decibels (dB) and are typically adjusted to the “A-weighted” scale (i.e., dBA) to account for the varying sensitivity of the human ear to different frequencies of sound. Table B.5-1 presents typical sound levels and the corresponding human response.

Table B.5-1. Sound Levels and Human Response

Sound Level (dBA)	Effect	Outdoor	Indoor
30	Very quiet	Rustling leaves	Soft whisper (15 feet)
40	Quiet	Quiet residential area	Library
55	Ambient	Rainfall or light auto traffic (100 feet)	Refrigerator
60	Intrusive	Normal Conversation	Air conditioning unit (20 feet)
70	Telephone use difficult	Freeway traffic	Noisy restaurant or TV audio

80	Annoying	Downtown (large city)	Alarm clock (2 feet) or ringing telephone
90	Very annoying; hearing damage (8 hours)	Tractor, bulldozer, excavator	Garbage disposal
100	Very annoying	Garbage truck, motorcycle	Subway train
110	Strained vocal effort	Pile drivers	Power saw at 3 feet
120	Maximum vocal effort	Jet takeoff (200 feet) or auto horn (3 feet)	Rock concert
140	Painfully loud	Carrier deck jet operation	--

Source: USEPA 1981
dBA = A-weighted decibel

The standard reduction for point source noise is 6 dB per doubling of distance from the source. Barriers, both manmade (e.g., sound walls) and natural (e.g., forested areas, hills, etc.), as well as other natural factors, such as temperature and climate, may reduce noise levels. Standard buildings typically provide approximately 15 dB of noise reduction between exterior and interior noise levels for buildings with windows open and 25 dB with windows closed (USEPA 1978).

The day-night average sound level (DNL) is another common metric which was developed by the USEPA to define the level of noise exposure on a community. The DNL presents the average sound energy at a given location over a 24-hour period (i.e., the DNL does not represent the sound level for a specific event but instead describes the average noise level over a 24-hour period). The DNL also adds an additional 10 dB to events occurring between 10:00 p.m. and 7:00 a.m. This 10-dB "night-time adjustment" represents the added intrusiveness of sounds due to the increased sensitivity to noise when ambient sound levels are low. The DNL has become the standard metric used by many government agencies and organizations, including the USEPA and the Federal Aviation Administration for addressing aircraft noise.

The Noise Control Act of 1972 (42 USC4901) directs federal agencies to comply with applicable federal, state, interstate, and local noise control regulations. In 1982, the USEPA transferred the primary responsibility of regulating noise to state and local governments. Additionally, under the Noise Control Act, the Occupational Health and Safety Act (OSHA) noise standard (29 CFR 1910.95) establishes workplace standards for noise. The minimum requirement states that constant noise exposure must not exceed 90 dBA over an 8-hour period. The highest allowable sound level to which workers can be constantly exposed is 115 dBA; exposure to this level must not exceed 15 minutes within an 8-hour period. The standards limit instantaneous exposure, such as impact noise, to 140 dBA. If noise levels exceed these standards, employers are required to provide hearing protection equipment that reduces sound levels to acceptable limits (OSHA 2008).

Because military noise is a by-product of weapons used to train for national defense, Congress exempted military weapons being regulated as a product as defined by the Noise Control Act. Despite the exemption, in practice, all services have had a long-standing policy to work to minimize the public's exposure to high noise levels (AFCEC 2023). In response to increased urban development around military airfields, the DoD established the Air Installation Compatible Use Zone (AICUZ) program as a planning tool to help avoid incompatible urban development and land use conflicts around military airfields. Studies under this program are used in coordination efforts with local, state, and federal governments for their consideration in land use planning. Under the AICUZ program, aircraft operational data from an installation is collected and is used to develop noise exposure contours. These noise zones are plotted in increments of 5 dB, ranging from a DNL of 65 dB up to 80+ dB. For land use planning purposes, an area less than 65-dB DNL is considered an area of low or no impact and does not normally require land use controls (DAF 2020b).

B.6 Transportation

B.6.1 Definition of the Resource/Regulatory Setting

The Department of Transportation (DOT) agency for each state is responsible for planning, designing, constructing, operating, and maintaining all state-owned roadways, which include interstate highways, U.S. highways, and state highways.

Annual average daily traffic (AADT) is a measure of the average daily number of vehicles that pass through a given segment of roadway and is indicative of traffic conditions (i.e., higher AADT volumes lead to increases in traffic congestion and delays). Available AADT data from the state's DOT database are presented in the subsections below for nearby roadway segments near the respective installation.

The ROI for transportation consists of the principal public roadways providing access to an installation and the main roadways within an installation providing access to the project site(s).

B.7 Hazardous Materials and Waste

B.7-1 Definition of the Resource/Regulatory Setting

This section describes the use and presence of hazardous materials and the generation of hazardous waste at the three alternative sites. The ROI for hazardous and toxic materials and waste (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 CFR 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 CFR 261.3, are considered hazardous substances. Generally, hazardous wastes are discarded materials (solids or liquids) not otherwise excluded by 40 CFR 261.4 that exhibit a hazardous characteristic (i.e., ignitable, corrosive, reactive, or toxic), or are specifically identified within 40 CFR Part 261. Petroleum products are specifically exempted from 40 CFR 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*. Hazardous wastes generated on DoD installations are managed and disposed of in accordance with Hazardous Waste Management Plans (HWMPs) prepared by each installation.

The Department of Defense (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.

USSF has established procedures for the handling, storage, and disposal of hazardous materials. Similarly, procedures have also been established for the handling, storage, and disposal of hazardous waste (Management Plan 19-14). These programs are designed to prevent adverse impacts to the environment resulting from the use of hazardous materials and handling of hazardous waste. All personnel involved in the handling of hazardous materials and hazardous

waste receive safety and environmental awareness training concerning the proper handling techniques and spill response activities for these hazardous materials.

B.8 Socioeconomics

B.8.1 Definition of the Resource/Regulatory Setting

Socioeconomics refer to the attributes of the human environment, and include factors associated with population, housing, income, and economic activity. Economic activity is typically described in terms of employment, personal income, and regional industries. Changes to these fundamental components can influence other community resources, such as housing availability, utility capabilities, and public services.

The ROI for socioeconomics is generally defined as the geographical area in which the principal direct and secondary socioeconomic effects of actions associated with the Proposed Action would likely occur and where most consequences for local jurisdictions would be expected.

The socioeconomic conditions of the ROI could be affected by changes in the rate of population growth, changes in the demographic characteristics of the ROI, or changes in employment within the ROI caused by the implementation of the Proposed Action. Therefore, socioeconomic analyses consider economic and social elements such as population levels, workforce, and consumer activities. Indicators of economic conditions for a geographic area can include demographics, median household income, employment, and housing data. Data on employment identifies employment by industry and unemployment trends. Data on personal income in a region is used to compare the effects of any jobs created or lost as a result of the Proposed Action. Data on industrial, commercial, and other sectors of the economy provide baseline information about the economic health of a region. This section also discusses any changes in community elements such as public services that can be accompanied by shifts in demographic and economic conditions.

B.9 Environmental Justice

B.9.1 Definition of the Resource/Regulatory Setting

Environmental Justice

USEPA defines Environmental Justice as "the fair treatment and meaningful involvement of all people regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect humans and the environment." EO 12898, *Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations*, and EO 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All,* direct federal agencies to consider whether impacts from a Proposed Action on human health or the environment (including social and economic aspects) would be disproportionately high and adverse for minority, low-income, Tribal, and disabled populations, and would outweigh impacts on the general population or other comparison group. The Air Force Guide for Environmental Justice Analysis under the EIAP (DAF 1997) also provides guidance on how to fulfill the requirement for environmental justice analysis.

The definitions of minority, low-income, and minority or low-income populations are presented below.

- **Minority –** Individual(s) who are members of the following population groups as designated in the U.S. Census: Black or African American, American Indian, and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, as well as Hispanic or Latino of any race.

- **Low-income –** The U.S. Census Bureau uses a set of income thresholds that vary by family size and composition to determine who is in poverty (i.e., classified as 'low-income'). If a family's total income is less than the family's threshold, then that family and every individual in it is considered in poverty. The official poverty thresholds do not vary geographically but are updated for inflation using the Consumer Price Index. The official poverty definition uses income before taxes and does not include capital gains or noncash benefits (such as public housing, Medicaid, and food stamps) (USCB 2023b).
- **Minority or low-income population –** Populations where either: (a) the total number of minority or low-income individuals of the affected area exceeds 50 percent of the overall population in the same area, or (b) the total number of minority or low-income individuals within the affected area is meaningfully greater (e.g., 120 percent greater) than the minority or low-income population percentage in an appropriate comparison unit of geographic analysis (CEQ 1998). A minority population also exists if there is more than one minority group present and the minority percentage, as calculated by aggregating all minority persons, meets one of the above-stated thresholds. In identifying minority or low-income populations, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a geographically dispersed/transient set of individuals (such as migrant workers or Indigenous people), where either type of group experiences common conditions of environmental exposure or effect. The selection of the appropriate unit of geographic analysis may be a governing body's jurisdiction, a neighborhood, census tract, or other similar unit that is to be chosen so as not to artificially dilute or inflate the affected minority population.
- **Meaningfully Greater –** A meaningfully greater minority or low-income population within a geographic unit affected by a federal action is determined by comparing the minority or low-income composition of the geographic unit to the minority or low-income composition of the general population. As with selecting the appropriate unit of geographic analysis, a comparison population should be selected so as not to artificially dilute or inflate the affected minority populations. For this analysis, the comparison population is the total population of the respective county of each installation considered.
- **Tribal Nation (Tribal) -** means an American Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges as a federally recognized Tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. 5130, 5131.

The analysis of minority and low-income populations focuses on U.S. Census Bureau data for geographic units (i.e., census tracts and block groups) that represent, as closely as possible, the potentially affected areas. A census tract is a geographic area for which the U.S. Census Bureau provides consistent sample data and is comprised of smaller census block groups. Census tracts generally contain a population between 1,200 and 8,000 people. A census block group is the smallest geographic area for which the U.S. Census Bureau provides consistent sample data, and generally contains a population between 600 and 3,000 individuals (USCB 2023c).

The analysis also considers information from the USEPA's EJSCREEN model. The EJSCREEN model serves as a screening-level tool to identify areas that may have a higher susceptibility to environmental justice impacts because of their demographic composition and existing exposure to contaminants or proximity to certain facilities that generate pollution. The model uses environmental indicators to quantify susceptibility to exposure, including data related to proximity to air pollution, water pollution, traffic, as well as potentially contaminated sites associated with historic use of lead paint, leaking underground storage tanks (USTs), or facilities that handle hazardous materials and waste. USEPA typically considers a project to be in an area of potential

environmental justice concern when an EJSCREEN analysis for the impacted area shows 1 or more of the 13 indices at or above the 80th percentile in the nation and/or state. Therefore, this analysis considers EJSCREEN information for the block groups that meet or exceed the 80th percentile in the nation and/or state.

EJSCREEN does not contain information considering Tribes or disabled populations. Coordination with Tribal Nations was conducted in June 2023. Three Tribes responded with one having no concerns and two requesting to be notified of any cultural findings. Because work associated with the proposed Alternatives would occur primarily on existing bases, no direct impacts to Tribal Nations are anticipated. Some impacts due to increased traffic, as discussed in the transportation section, could occur, but these impacts would not be disproportionate or adverse in nature. Identification of disabled populations is sensitive and this type of information is protected under privacy laws. No known populations of disabled persons would be impacted by the project as work would primarily occur within an existing base. Temporary traffic disruptions could impact these sensitive populations; however, no adverse or disproportionate impact would be anticipated.

Additionally, more recent federal direction on Environmental Justice includes EO 13990, *Protecting Public Health and the Environment and Restoring Science to Address the Climate Crisis* and EO 14030, *Climate-Related Financial Risk*. EO 13990 directs federal agencies to prioritize both environmental justice and employment and supports the national goal of improving public health and the environment by ensuring access to clean air and water, limiting exposure to dangerous chemicals and pesticides, and holding polluters accountable, including those who disproportionately harm people of color and low-income people. EO 14030 outlines the government approach to mitigating climate-related financial risks and ensuring financial security for workers, families, and businesses who may be disproportionately affected by climate change. The EO advises federal agencies to assess their government programs, assets, and liabilities, and to identify causes of, and address disparate impacts on, disadvantaged communities and communities of color.

Regarding environmental justice populations in Colorado, USEPA Region 8 and the CDPHE entered into a *Memorandum of Understanding (MOU) on Advancing Environmental Justice through Enforcement and Compliance Assurance in Disproportionately Impacted Communities*. The agreement commits to collaborating on enforcement and compliance to reduce pollution in communities overburdened by environmental and public health impacts, sets a strategic direction, and formalizes a state and federal agency partnership. Under this agreement, three areas are emphasized: (1) strategic targeting of inspections, (2) coordinated enforcement and compliance assurance actions to address impacts on communities, and (3) enhanced community engagement (CDPHE 2023b). CDPHE has also developed the EnviroScreen tool, which is similar to EJSCREEN and also serves as a screening-level tool to identify areas that may have a higher susceptibility to environmental justice impacts because of their demographic composition and environmental burden (CDPHE 2023a).

Protection of Children's Health and Safety and Elderly Populations

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, places a high priority on the identification and assessment of environmental health and safety risks that may disproportionately affect children. The EO requires that each agency "shall ensure that its policies, programs, activities, and standards address disproportionate risks to children." It considers that physiological and social development of children makes them more sensitive than adults to adverse health and safety risks, and it recognizes that children in minority and low-

income populations are more likely to be exposed to and have increased health and safety risks from environmental contamination than the general population.

Children have increased vulnerabilities from age-related physiological differences in types and levels of exposure. Children are more likely to be susceptible to certain environmental impacts from air pollution or noise. Specifically, children are especially vulnerable due to higher relative doses of air pollution, smaller diameter airways, and more active time spent outdoors and closer to ground-level sources of vehicle exhaust. Increased level of noise can affect children's learning, especially near homes, schools, and recreational areas.

In addition to children, elderly individuals are also considered vulnerable populations as they are more likely to face specific challenges such as health care, social isolation, limited mobility, and fixed incomes.

The ROI for environmental justice focuses on the project area and the immediate surrounding area. Potential impacts with the greatest intensity and longest duration (e.g., air quality, noise, transportation, changes in socioeconomic conditions) would occur near the project area. Therefore, environmental justice considerations are analyzed within a respective 1-mile radius of the project area.

Appendix C. Projects Identified for Cumulative Impacts

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The DAF identified past, present, and reasonably foreseeable future projects (listed in Table C-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. In general, identified cumulative projects include improvements to existing facilities and infrastructure, demolition of underutilized or obsolete facilities, consolidation of tenant users for operational efficiency, and construction of new facilities in support of mission requirements. Environmental trends associated with these types of projects 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 C-1: Actions with Potential Cumulative Impacts

Alternative Location	Name of Action	Location	Project Description	Timeframe
Alternative 1 – Delta 10 Beddown, PaSFB	Construct DEOMI Building Expansion	NAA	Construct expansion on the north side of the existing DEOMI building to handle future curriculum and additional throughput.	6–10 Years
	Airfield Repaving	AOA	Implement all airfield repaving planned projects.	0–5 Years
	Demolish Facilities within the Airfield Operation CZ	AOA	Implement efforts to demolish facilities 533 and 556 within the CZ by 2030.	6–10 Years
	Construct New General C- 130J Hangar	AOA	Construct new C-130J hangar.	0–5 Years
	Construct New AGE Shop	AOA	Construct new AGE shop enclosure for equipment that is currently exposed to the elements.	6–10 Years
	Construct New 920 RQW Training Facility	NMSA	Construct new 920 RQW Training facility.	0–5 Years
	Construct Boresight Tower and Equipment	CRA	Construct the Radar Open System Architecture (ROSA) radar/telemetry test bed boresight tower and building replacement.	0–5 Years
	Construct New Primitive Cottages at FAMCAMP	CRA	Construct primitive recreational cottages along the Banana River near FAMCAMP.	6-10 Years
	Construct Department of State Campus	SAMSA	Consolidate DoS campus at PaSFB to include hangars, administrative and storage facilities, and parking; possible site location west of South Patrick Drive.	6-10 Years
	Construct New Vehicle Maintenance Facility	SAMSA	Construct vehicle maintenance facility.	6–10 Years
	Relocate STARCOM HQ	SAMSA	Relocate STARCOM HQ to PaSFB, possible site location within the proposed SLD 45 headquarters complex site on West Tech Road.	6–10 Years
	Construct New Beach Cottages	Oceanfront	Construct six duplex beach cottages.	6–10 Years
	Resurface SR A1A	SR A1A adjacent to	Resurface SR A1A from SR 404 to the northern boundary of PaSFB.	0–5 Years

Alternative Location	Name of Action	Location	Project Description	Timeframe
		PaSFB		
	Renourish Brevard County Beaches	PaSFB beaches/ Brevard County beaches	Hydraulic beach fill from an offshore sand source in Brevard County from Cape Canaveral to Sebastian Inlet State Park. Sand fencing and native dune planting also contribute to shoreline stabilization. Partnership between the USSF, USACE, Brevard County and local municipalities.	Ongoing
	State Route (SR) 518 / Eau Gallie Beachside Corridor Planning Study	Approximate 1.4-mile section of SR 518 (Eau Gallie Boulevard) between the Eau Gallie Causeway Bridge and SR. A1A	Address the safety and mobility needs of the community (for vehicle, transit, bicycle, and pedestrian transportation modes), and advance the long-term vision for the corridor, based on the input received by the public as well as the local agency partners.	Ongoing
	SR 528 from east of SR 3 to Port Canaveral Interchange	North Courtenay Parkway to Port Canaveral interchange	Widening SR 528 from four to six lanes from east of SR 3 (North Courtenay Parkway) to SR. 401 (Port Canaveral interchange) by adding a lane in each direction in the median. The project also plans to reconstruct the interchanges at Banana River Drive, SR 401 and George King Boulevard and reconstruct the bridge over the Banana River	Ongoing

Alternative Location	Name of Action	Location	Project Description	Timeframe
Alternative 1a – Delta 11 Beddown, KAFB **Alternative 2b – Delta 12 Beddown KAFB**	The 210 RED HORSE Squadron monthly training activities	Base Exercise Evaluation and Skills Training Area	Monthly training activities involve the disturbance of up to 40 acres of ground and include the use of the abandoned dirt airstrip to practice demolishing, denying access to, and reconstructing airstrips; construction of forward operating bases to allow other units to train with the 210 RHS tearing them down; and dirt movement for heavy- equipment training. This recurring training could last up to 5 days and involve approximately 120 personnel.	0-5 years
	The Pararescue/Combat Rescue Officer (PJ/CRO) School Urban Training Compound (UTC)	Coyote Canyon Training Area	The UTC would consist of the placement of connexes on a gravel base to simulate a mock village similar to those found in the Middle East and would occupy 25 acres. Training activities would include helicopter pararescue and insertion/extraction operations. Other training activities would include small team tactics, climbing, and emergency medical. During training activities at the UTC, personnel would use smokes, ground burst simulators, trip flares, flash-bang pyrotechnics, booby trap simulators, and blanks/simunitions. When the UTC is not scheduled for use by PJ/CRO, it would be open for use by other groups. Therefore, it is anticipated that the UTC could be used on a monthly basis.	0-5 years
	Air Force Training Involving the Firing .50-Caliber M107 Barrett Sniper Rifles and M2 Machine Guns	Small Arms Range East	An existing building south of Forest Road 44 would be demolished in order to provide line of sight from the firing point to the target array. Approximately 240 acres would be cleared by tree removal and thinning to create firebreaks along FRs 40, 40B, 530B, and 53. Small Arms Range East would continue to be available for training operations and deployment qualification 24 hours a day, 7 days a week.	0-5 years
	The 377th Security Forces Group M583A1 Parachute Illumination Round	M203 Range	This round has a burst height of 500 to 700 feet above ground surface when fired vertically, a candle burn rate of approximately 40 seconds, and an average candlepower of 90,000. The average class using the illumination round would consist of 15 to 30 students, once per month. It is anticipated that an average of 250 to 500 rounds would be dispensed per year. Training would occur during early morning hours, approximately 0300 to 0500, dependent upon	0-5 years

Alternative Location	Name of Action	Location	Project Description	Timeframe
			coordination with the Federal Aviation Administration and air traffic scheduling. Prior to initial use of this round, firebreaks consisting of cleared paths totaling approximately 8 acres would need to be created. The cleared paths would also be used for emergency vehicle access in case of an accidental fire.	
	New Mexico Army National Guard (NMArmyNG) 515th Regional Training Institute	KAFB, near the Tijeras Arroyo Golf Course	The NMArmyNG proposes to relocate their 515th RTI from the Onate Training Complex in Santa Fe to KAFB. Construction includes a 40-acre maneuver and driver's training course with motor pool and classrooms.	6-10 years
	Demolition and Construction of Military Support Facilities	KAFB, northwestern locations including Visiting Officer Quarters, the Main Enlisted Dormitory Campus, the Noncommissioned Officer Academy, and Dormitory Campus 2	The Air Force proposes to demolish and construct, operate, and maintain several military personnel support facilities. This project would include the demolition of facilities totaling approximately 498,000 square feet and construction of facilities totaling approximately 389,000 square feet, resulting in a net decrease of approximately 109,000 square feet of building space on the installation. Approximately 36 acres would be impacted by construction and demolition activities.	0-5 years; 6-10 years
	Building Demolition at Kirtland AFB	KAFB	The Air Force is in the process of demolishing 23 buildings totaling approximately 105,000 square feet to make space available for future construction and to fulfill its mission as installation host through better site utilization. None of the buildings proposed for demolition are currently occupied or used by installation personnel.	0-10 years
	Security Forces Complex	KAFB	The Air Force proposes to construct, operate, and maintain a 42,500-square-foot security forces complex to provide adequate space and modern facilities to house all 377 SFG administrative and support functions in a consolidated location. The 377 SFG functions that would be transferred to the new security forces complex include a base operations center with command and control facility, administration and office space, training rooms, auditorium or assembly room, guard mount, hardened armory for weapons and ammunition storage, confinement facilities, law enforcement, logistics warehouse, general storage, vehicle garage with maintenance area, and	6-10 years

Alternative Location	Name of Action	Location	Project Description	Timeframe
			associated communications functions. One existing building (879 square feet) within the footprint of the proposed security forces complex would be demolished. This project would result in an increase of 41,621 square feet of building space on the installation.	
	Construct New Military Working Dog Facility	KAFB	The Air Force proposes to construct, operate, and maintain a new military working dog facility that consists of 14 indoor/outdoor kennels, four isolation kennels, storage and staff space, restrooms, food storage room, a covered walkway, and a veterinarian examining room, totaling 8,000 square feet. A parking area with 25 spaces and new access roads would also be constructed as part of the project. Demolition of facilities totaling 2,520 square feet would also be included in this project, resulting in a net increase of 5,480 square feet of building space on the installation.	0-5
	21st Explosive Ordnance Division Expansion	KAFB, Weapons of Mass Destruction Company Complex	The 21st Explosive Ordnance Division proposes facility expansion and site improvements. This unit currently operates from a 90-acre property leased by the US Army within KAFB. The current site has seven structures, six of which are substandard and do not have adequate fire protection. The 21st Explosive Ordnance Division proposes to expand this site to a total of 280 acres, add three permanent structures totaling 40,000 square feet, demolish five of the six substandard structures (75,000 square feet), add two temporary storage containers, tie into nearby utilities, construct water tanks for fire suppression, and construct several concrete pads for training activities. This project would result in a decrease of 35,000 square feet of building space on the installation.	6-10
	New Deployable Structures Laboratory	KAFB, southeast corner of Building 472	AFRL is proposing to construct a new 4,125-square-foot high-bay addition. Proposed new construction would include structural pads on columns and trusses for anchoring active gravity off-load support frame; high precision environmental controls (temperature and humidity with low air currents); Gantry crane; and optically-diffuse wall coatings for high precision optical motion metrology system (videogrammetry).	0-10

Alternative Location	Name of Action	Location	Project Description	Timeframe
	Enhanced Use Lease	KAFB, along Gibson Boulevard	KAFB has leased approximately 70 acres of Air Force property to Thunderbird Kirtland Development Partners (TKD) to develop the area into a mixed-use development that could include office, retail/commercial, corporate apartments, hotel, gasoline station, and restaurant space uses. Roadways for access and vehicular movement through the development, parking, and landscape areas would be constructed as well as utility infrastructure to support activities at the EIAP Study Area. TKD would demolish the existing recreation facilities including a concession stand/storage building (Building 2555).	0-5 years
	Renewable Energy Projects	KAFB	The Air Force proposes to develop renewable energy projects at KAFB. The proposed project would include the installation of various renewable energy technologies installation-wide, up to a 20-megawatt solar photovoltaic array, and rooftop/carport solar photovoltaic systems.	6-10 years
	Upgrade, Stormwater Drainage System and Arroyo Repair Activities	KAFB	The Air Force proposes to develop, upgrade, and maintain storm drainage systems and conduct arroyo erosion repair and damage avoiding measures across the installation. Storm drainage system activities could include constructing stormwater system upgrades and components including cleaning, regrading, ditching, trenching, trench lining, backfilling, bedding, reinforced concrete pipe, culverts, vegetation, rip-rap, drop inlets, and retention and outlet structures. Arroyo repair could include excavating, filling, and lining arroyo banks and constructing and repairing box culverts, bank protection, and grade control structures to assist in stabilizing the arroyo bed towards a stable slope.	6-10 years
	Additional Development, Testing, Use, and Training at the Technical Evaluation Assessment Monitor Site (TEAMS)	KAFB	The Defense Threat Reduction Agency and Air Force proposes to enhance the testing and training capabilities and use, as well as the functionality, of the TEAMS. Specifically, the proposed facilities and activities include: a new radiological source storage facility, a mock train station, in-kind replacement of current TEAMS temporary buildings with permanent buildings, and potential increase in testing and training event personnel	0-5 years

Alternative Location	Name of Action	Location	Project Description	Timeframe
			levels by up to 50 percent. Approximately 2.7 acres would be affected during construction activities.	
	AC-130 FTU Relocation	KAFB	The USAF is proposing to relocate the AFSOC AC-130J FTU from Hurlburt Field, Florida to KAFB and organizationally realign the unit under the 58 SOW (AETC). The Proposed Action also includes personnel needed to operate and maintain the AFSOC AC-130J, and construction of new and/or modification of existing facilities on the installation to support the relocation. Students operating the AC-130J aircraft would conduct training from the installation and in existing Special Use Airspace (SUA) (both military operations area [MOAs] and Restricted Areas) and would conduct live fire training at Melrose Air Force Range (AFR), New Mexico. No new SUA or reconfiguration of existing SUA is proposed or would be required to support the relocation of the AC-130J FTU.	0-5 years
	Zia Park Area Development	KAFB, Zia Park	Development of a former housing area, called Zia Park, which encompasses approximately 300 acres of land central to the primary cantonment area of the installation. Construction would include administrative buildings, infrastructure improvements, medical facilities, community services, residential lodging, outdoor recreation space, demolition of several facilities that would be redundant with new construction (e.g., gyms, child development center, dormitory, etc.). Construction projects would be either short- term (1–7 years), mid-term (8–16 years), or long-term (17+ years).	0-11+ years
	DOD SATCOM GT Facility	KAFB, west side of Pennsylvania Street adjacent to the southern end of Wyoming Boulevard	The Proposed Action is to develop and operate a satellite communications ground terminal (GT) facility on approximately 15 acres of previously disturbed land. The GT facility would consist of three 44.3-foot (13-meter)-diameter dish antennas, enclosed within approximately 72-foot-high (22-meters-high) radome enclosures, an associated equipment shelter, two emergency generators, perimeter fencing, a sensor equipment tower, and utilities. It would be used to communicate with satellites. The facility would include multiple concrete pads to accommodate all the structures. An	0-5 years

Alternative Location	Name of Action	Location	Project Description	Timeframe
			additional pad would be constructed for a temporary, small, transportable antenna and emergency generator.	
	Bernalillo County Comprehensive Mater Plan Update	Bernalillo County	Update to 2017 Albuquerque/Bernalillo County Comprehensive Plan which addresses the need to accommodate sustainable population growth, economic development, water, environmental justice, housing affordability and issues and connectivity.	Ongoing
	I-25 Mesa del Sol/Bobby Foster Interchange Study	I-25 between the Rio Grande Bridges and Sunport Boulevard	The New Mexico Department of Transportation (NMDOT) is conducting a Phase 1-A/B Study for I-25 between the Rio Grande Bridges and Sunport Boulevard on the south side of Albuquerque. The goal of the study is to identify, evaluate, and determine overall future improvements needed for the I-25 corridor in the study area to address current congestion and enhance the capacity, safety, and access along this segment of the interstate highway. The study will develop and evaluate alternatives and preliminary design for transportation network improvements including, but not limited to, new interchanges at Bobby Foster Rd. and Mesa del Sol Blvd. to accommodate current and future development in the area.	Ongoing
	S-Curve Phase B Study,	Bernalillo Count, Avenida Cesar Chavez (Exit 223) and Lomas Blvd (Exit 225)	The NMDOT is conducting a Phase 1-B Study for I-25 between Avenida Cesar Chavez (Exit 223) and Lomas Blvd (Exit 225) in the City of Albuquerque. The goal of the study is to identify, evaluate, and determine overall future improvements needed for the I-25 corridor in the study area to address current congestion issues and enhance safety and access along this segment of the interstate. The study will develop and evaluate alternatives and a preliminary design for transportation network improvements.	Ongoing
SSFB Alternative 1b – Delta 11 Beddown, SSFB **Alternative 2a – Delta 12 Beddown SSFB**	Relocate STARCOM HQ	SSFB (same location as the Delta 12 beddown site)	Relocate STARCOM HQ to SSFB.	6–10 Years
	Military Access, Mobility & Safety Improvement Project	El Paso County	Military Access, Mobility & Safety Improvement Project (MAMSIP) will deliver more efficient and safer mobility along I-25, Colorado Highway 94, South Academy Boulevard, and Charter Oak Ranch Road, enabling economic stability and development. The delivery of MAMSIP will	Ongoing

Alternative Location	Name of Action	Location	Project Description	Timeframe
			strengthen and enhance the redundancy of strategic movement between the nationally significant El Paso County military installations of Fort Carson, Peterson Space Force Base, Cheyenne Mountain Space Force Station, and SSFB. The four improvement components are: • CO 94 Improvements • South Academy Boulevard Widening and Resiliency • I-25 Safety Improvements • Charter Oak Ranch Road Project benefits to SSFB include Safety and efficiency improvements in the addition of passing lanes, turn lanes, road widening and the installation of fiber on Colorado Highway 94 (CO 94), which connects Schriever Space Force Base with Peterson Space Force Base and central Colorado Springs; Benefits also include capacity upgrades and resiliency improvements to South Academy Boulevard, a major commuter arterial which also links PeSFB and SSFB with I-25 and Fort Carson. The MAMSIP is partially funded by the $18.350 million BUILD grant award from the US Department of Transportation.	

Alternative Location	Name of Action	Location	Project Description	Timeframe
	El Paso County Strategic Plan	El Paso County	El Paso County is working on their strategic plan which includes infrastructure as one of their objectives. As part of this effort the County aims to assess the condition of roadway, stormwater, facility, fleet, and park assets and to implement strategies to sustainable fund, manage, and improve public infrastructure. The current timeframe includes: 1. Complete a comprehensive inventory and condition assessment of public infrastructure in each of the five major asset classes by December 2023; 2. Implement a Comprehensive Asset Management Program by March 2024; 3. Develop Infrastructure Asset Management Plans for the five major asset classes by March 2024; 4. Define a multi-year financial strategy to determine how multi-year capital plans and operations/maintenance costs drive annual budget appropriation schedules to meet stated service levels by June 2024. 5. Publish a public-facing asset scorecard that baselines and racks the condition of the infrastructure in each of the five major asset classes by December 2023.	Ongoing

Source: FDOT 2023b and 2023c; Bernalillo County 2023; El Paso County, 2023; NMDOT 2023b
CRA: Central Recreation Area; KAFB = Kirtland Air Force Base; NAA: North Administration Area; AOA: Airfield Operations Area; MAMSIP = Military Access, Mobility & Safety Improvement Project; NMDOT = New Mexico Department of Transportation; NMSA: North Mission Support Area; PaSFB = Patrick Space Force Base; SAMSA: South Administration and Mission Support Area; SR = State Road

Appendix D. Air Conformity Applicability Model Report Summary

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AIR CONFORMITY APPLICABILITY MODEL REPORT SUMMARY RECORD OF AIR ANALYSIS (ROAA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform a net change in emissions analysis to assess the potential air quality impact/s associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*; the *Environmental Impact Analysis Process* (EIAP, 32 CFR 989); the *General Conformity Rule* (GCR, 40 CFR 93 Subpart B); and the *USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide*. This report provides a summary of the ACAM analysis.

a. Action Location:

Base: PATRICK AFB
State: Florida
County(s): Brevard
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: STARCOM Deltas 10, 11, and 12, Patrick Space Force Base, Florida, Kirtland Air Force Base, New Mexico, and Schriever Space Force Base, Colorado

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2025

e. Action Description:

The Proposed Action includes beddown of Delta 10 at PaSFB in Florida and beddown of selected Squadrons within Deltas 11 and 12 at KAFB in New Mexico and SSFB in Colorado. Alternatives carried forward for analysis include Delta 10 beddown at PaSFB (Delta 10 Beddown Alternative 1), Deltas 11 and 12 beddown at KAFB (Deltas 11 and 12 Beddown Alternative 1) or at SSFB (Deltas 11 and 12 Beddown Alternative 2), and the No Action Alternative.

f. Point of Contact:

Name: Katelyn Kopp
Title: Environmental Analyst
Organization: Potomac-Hudson Engineering, Inc.
Email: katelyn.kopp@phe.com
Phone Number: (301) 907-9078

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

_____ applicable
__X__ not applicable

Total reasonably foreseeable 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" (hsba.e., no net gain/loss in emission stabilized and the action is fully implemented) emissions. The ACAM analysis uses 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 the proposed Action's potential impacts to local air quality. The insignificance indicators are trivial (de minimis) rate thresholds

that have been demonstrated to have little to no impact to air quality. These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold and 25 ton/yr for lead for actions occurring in areas that are "Attainment" (hsba.e., not exceeding any National Ambient Air Quality Standard (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 pollutants is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQS. For further detail on insignificance indicators, refer to *Level II, Air Quality Quantitative Assessment, Insignificance Indicators*.

The action's net emissions for every year through achieving steady state were compared against the Insignificance Indicators 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	0.281	250	No
NOx	0.805	250	No
CO	1.033	250	No
SOx	0.002	250	No
PM 10	0.650	250	No
PM 2.5	0.028	250	No
Pb	0.000	25	No
NH3	0.001	250	No

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.201	250	No
NOx	1.398	250	No
CO	2.958	250	No
SOx	0.004	250	No
PM 10	0.056	250	No
PM 2.5	0.056	250	No
Pb	0.000	25	No
NH3	0.015	250	No

2027 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.201	250	No
NOx	1.398	250	No
CO	2.958	250	No
SOx	0.004	250	No
PM 10	0.056	250	No
PM 2.5	0.056	250	No
Pb	0.000	25	No
NH3	0.015	250	No

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

Katelyn Kopp, Environmental Analyst	Nov 09, 2023
Name, Title	**Date**

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform a net change in emissions analysis to assess the potential air quality impact/s associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*; the *Environmental Impact Analysis Process* (EIAP, 32 CFR 989); the *General Conformity Rule* (GCR, 40 CFR 93 Subpart B); and the *USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide*. 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: STARCOM Deltas 10, 11, and 12, Patrick Space Force Base, Florida, Kirtland Air Force Base, New Mexico, and Schriever Space Force Base, Colorado

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2025

e. Action Description:

The Proposed Action includes beddown of Delta 10 at PaSFB in Florida and beddown of selected Squadrons within Deltas 11 and 12 at KAFB in New Mexico and SSFB in Colorado. Alternatives carried forward for analysis include Delta 10 beddown at PaSFB (Delta 10 Beddown Alternative 1), Deltas 11 and 12 beddown at KAFB (Deltas 11 and 12 Beddown Alternative 1) or at SSFB (Deltas 11 and 12 Beddown Alternative 2), and the No Action Alternative.

f. Point of Contact:

Name: Katelyn Kopp
Title: Environmental Analyst
Organization: Potomac-Hudson Engineering, Inc.
Email: katelyn.kopp@phe.com
Phone Number: (301) 907-9078

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

_____ applicable
__X__ not applicable

Total reasonably foreseeable 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" (hsba.e., no net gain/loss in emission stabilized and the action is fully implemented) emissions. The ACAM analysis uses 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 the proposed Action's potential impacts to local air quality. The insignificance indicators are trivial (de minimis) rate thresholds that have been demonstrated to have little to no impact to air quality. These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold and 25 ton/yr for lead for actions occurring in areas that are "Attainment" (hsba.e., not exceeding any National Ambient Air Quality Standard (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

pollutants is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQS. For further detail on insignificance indicators, refer to *Level II, Air Quality Quantitative Assessment, Insignificance Indicators*.

The action's net emissions for every year through achieving steady state were compared against the Insignificance Indicators 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	0.457	250	No
NOx	0.566	250	No
CO	6.187	250	No
SOx	0.019	250	No
PM 10	0.040	250	No
PM 2.5	0.039	250	No
Pb	0.000	25	No
NH3	0.042	250	No

2026 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.457	250	No
NOx	0.566	250	No
CO	6.187	250	No
SOx	0.019	250	No
PM 10	0.040	250	No
PM 2.5	0.039	250	No
Pb	0.000	25	No
NH3	0.042	250	No

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

Katelyn Kopp, Environmental Analyst — Nov 09, 2023

Name, Title — **Date**

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform a net change in emissions analysis to assess the potential air quality impact/s associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*; the *Environmental Impact Analysis Process* (EIAP, 32 CFR 989); the *General Conformity Rule* (GCR, 40 CFR 93 Subpart B); and the *USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide*. 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: STARCOM Deltas 10, 11, and 12, Patrick Space Force Base, Florida, Kirtland Air Force Base, New Mexico, and Schriever Space Force Base, Colorado

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2025

e. Action Description:

The Proposed Action includes beddown of Delta 10 at PaSFB in Florida and beddown of selected Squadrons within Deltas 11 and 12 at KAFB in New Mexico and SSFB in Colorado. Alternatives carried forward for analysis include Delta 10 beddown at PaSFB (Delta 10 Beddown Alternative 1), Deltas 11 and 12 beddown at KAFB (Deltas 11 and 12 Beddown Alternative 1) or at SSFB (Deltas 11 and 12 Beddown Alternative 2), and the No Action Alternative.

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Phone Number: (301) 907-9078

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

_____ applicable
__X__ not applicable

Total reasonably foreseeable 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" (hsba.e., no net gain/loss in emission stabilized and the action is fully implemented) emissions. The ACAM analysis uses 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 the proposed Action's potential impacts to local air quality. The insignificance indicators are trivial (de minimis) rate thresholds that have been demonstrated to have little to no impact to air quality. These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold and 25 ton/yr for lead for actions occurring in areas that are "Attainment" (hsba.e., not exceeding any National Ambient Air Quality Standard (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 pollutants is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQS. For further detail on insignificance indicators, refer to *Level II, Air Quality Quantitative Assessment, Insignificance Indicators*.

The action's net emissions for every year through achieving steady state were compared against the Insignificance Indicators 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	0.098	250	No
NOx	0.122	250	No
CO	1.307	250	No
SOx	0.005	250	No
PM 10	0.010	250	No
PM 2.5	0.009	250	No
Pb	0.000	25	No
NH3	0.009	250	No

2026 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.098	250	No
NOx	0.122	250	No
CO	1.307	250	No
SOx	0.005	250	No
PM 10	0.010	250	No
PM 2.5	0.009	250	No
Pb	0.000	25	No
NH3	0.009	250	No

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

Katelyn Kopp, Environmental Analyst — Nov 09, 2023

Name, Title — **Date**

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform a net change in emissions analysis to assess the potential air quality impact/s associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*; the *Environmental Impact Analysis Process* (EIAP, 32 CFR 989); the *General Conformity Rule* (GCR, 40 CFR 93 Subpart B); and the *USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide*. This report provides a summary of the ACAM analysis.

a. Action Location:

Base: SCHRIEVER AFB
State: Colorado
County(s): El Paso
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: STARCOM Deltas 10, 11, and 12, Patrick Space Force Base, Florida, Kirtland Air Force Base, New Mexico, and Schriever Space Force Base, Colorado

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2025

e. Action Description:

The Proposed Action includes beddown of Delta 10 at PaSFB in Florida and beddown of selected Squadrons within Deltas 11 and 12 at KAFB in New Mexico and SSFB in Colorado. Alternatives carried forward for analysis include Delta 10 beddown at PaSFB (Delta 10 Beddown Alternative 1), Deltas 11 and 12 beddown at KAFB (Deltas 11 and 12 Beddown Alternative 1) or at SSFB (Deltas 11 and 12 Beddown Alternative 2), and the No Action Alternative.

f. Point of Contact:

Name: Katelyn Kopp
Title: Environmental Analyst
Organization: Potomac-Hudson Engineering, Inc.
Email: katelyn.kopp@phe.com
Phone Number: (301) 907-9078

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

_____ applicable
__X__ not applicable

Total reasonably foreseeable 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" (hsba.e., no net gain/loss in emission stabilized and the action is fully implemented) emissions. The ACAM analysis uses 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 the proposed Action's potential impacts to local air quality. The insignificance indicators are trivial (de minimis) rate thresholds that have been demonstrated to have little to no impact to air quality. These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold and 25 ton/yr for lead for actions occurring in areas that are "Attainment" (hsba.e., not exceeding any National Ambient Air Quality Standard (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

pollutants is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQS. For further detail on insignificance indicators, refer to *Level II, Air Quality Quantitative Assessment, Insignificance Indicators*.

The action's net emissions for every year through achieving steady state were compared against the Insignificance Indicators 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	0.265	250	No
NOx	0.802	250	No
CO	0.998	250	No
SOx	0.002	250	No
PM 10	0.605	250	No
PM 2.5	0.028	250	No
Pb	0.000	25	No
NH3	0.001	250	No

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.422	250	No
NOx	0.509	250	No
CO	5.464	250	No
SOx	0.018	250	No
PM 10	0.040	250	No
PM 2.5	0.039	250	No
Pb	0.000	25	No
NH3	0.041	250	No

2027 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.422	250	No
NOx	0.509	250	No
CO	5.464	250	No
SOx	0.018	250	No
PM 10	0.040	250	No
PM 2.5	0.039	250	No
Pb	0.000	25	No
NH3	0.041	250	No

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

Katelyn Kopp, Environmental Analyst — Nov 09, 2023

Name, Title — **Date**

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a. Action Location:

Base: SCHRIEVER AFB
State: Colorado
County(s): El Paso
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: STARCOM Deltas 10, 11, and 12, Patrick Space Force Base, Florida, Kirtland Air Force Base, New Mexico, and Schriever Space Force Base, Colorado

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2025

e. Action Description:

The Proposed Action includes beddown of Delta 10 at PaSFB in Florida and beddown of selected Squadrons within Deltas 11 and 12 at KAFB in New Mexico and SSFB in Colorado. Alternatives carried forward for analysis include Delta 10 beddown at PaSFB (Delta 10 Beddown Alternative 1), Deltas 11 and 12 beddown at KAFB (Deltas 11 and 12 Beddown Alternative 1) or at SSFB (Deltas 11 and 12 Beddown Alternative 2), and the No Action Alternative.

f. Point of Contact:

Name: Katelyn Kopp
Title: Environmental Analyst
Organization: Potomac-Hudson Engineering, Inc.
Email: katelyn.kopp@phe.com
Phone Number: (301) 907-9078

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

_____ applicable
__X__ not applicable

Total reasonably foreseeable 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" (hsba.e., no net gain/loss in emission stabilized and the action is fully implemented) emissions. The ACAM analysis uses 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*.

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NAAQS. For further detail on insignificance indicators, refer to *Level II, Air Quality Quantitative Assessment, Insignificance Indicators*.

The action's net emissions for every year through achieving steady state were compared against the Insignificance Indicators 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	0.113	250	No
NOx	0.365	250	No
CO	0.492	250	No
SOx	0.001	250	No
PM 10	0.164	250	No
PM 2.5	0.015	250	No
Pb	0.000	25	No
NH3	0.001	250	No

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.091	250	No
NOx	0.114	250	No
CO	1.153	250	No
SOx	0.006	250	No
PM 10	0.010	250	No
PM 2.5	0.010	250	No
Pb	0.000	25	No
NH3	0.009	250	No

2027 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.091	250	No
NOx	0.114	250	No
CO	1.153	250	No
SOx	0.006	250	No
PM 10	0.010	250	No
PM 2.5	0.010	250	No
Pb	0.000	25	No
NH3	0.009	250	No

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

Katelyn Kopp, Environmental Analyst — Nov 09, 2023

Name, Title — **Date**

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Appendix E. Coastal Zone Management Consistency Determination

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COASTAL ZONE MANAGEMENT CONSISTENCY DETERMINATION

Section 307 of the Coastal Zone Management Act (CZMA) requires federal projects that affect land uses, water uses, or coastal resources in a state's coastal zone to be consistent with the enforceable policies of that state's federally approved coastal management plan. The Florida Coastal Management Program (FCMP) consists of 24 enforceable policies (Florida statutes) that protect and enhance Florida's natural, cultural, and economic coastal resources, and are administered by eight state agencies and five Water Management Districts. The Florida Department of Environmental Protection (FDEP) implements the FCMP and makes the state's final consistency determination, which will either agree or disagree with the applicant's own consistency determination.

DAF anticipates that the Proposed Action would be consistent with the CZMA and FCMP. Table C-1 provides a summary of the 24 Florida statutes and the Proposed Action's consistency with each. The FDEP's determination is pending review of this Draft Environmental Assessment (EA).

Table C-1. Coastal Zone Management Consistency Determination

Florida Statute	Legal Scope	Consistency Evaluation
Chapter 161 *Beach and Shore Preservation*	Authorizes the Bureau of Beaches and Coastal Systems within FDEP jurisdiction to regulate construction on or seaward of the state's beaches.	The Proposed Action would not adversely affect beach and shore management, specifically as it pertains to the Coastal Construction Permit Program, the Coastal Construction Control Line (CCCL) Program, and the Coastal Zone Protection Program. The Proposed Action would occur entirely within PaSFB and would not occur seaward of the CCCL.
Chapter 163, Part II *Growth Policy; County and Municipal Planning; Land Development Regulation*	Requires local governments to prepare, adopt, and implement comprehensive plans that encourage the most appropriate use of land and natural resources in a manner consistent with the public interest.	The Proposed Action would occur entirely within PaSFB and, therefore, would not affect municipal or county government comprehensive plans.
Chapter 186 *State and Regional Planning*	Details state level planning requirements. Requires the development of special statewide plans governing water use, land development, and transportation.	As part of the National Environmental Policy Act (NEPA) process, the Proposed Action has been coordinated with Federal, state, and local governments and agencies, including the FDEP State Clearinghouse, for compatibility with state and regional planning. During the 30-day scoping period, none of these agencies identified any issues related to state and regional planning (see Appendix A of this EA).
Chapter 252 *Emergency Management*	Provides for planning and implementation of the state's response to, efforts to recover from, and the mitigation of natural and man-made disasters.	The Proposed Action would occur entirely within PaSFB and would not have an effect on the ability of the state to respond to or recover from natural or manmade disasters.
Chapter 253 *State Lands*	Addresses the state's administration of public lands and property of this state and provides direction regarding the acquisition, disposal, and management of all state lands.	The Proposed Action would occur entirely within PaSFB. No state lands would be disturbed during the proposed construction of new facilities and the renovation to Building 991, and, therefore, would not be affected.
Chapter 258 *State Parks and Preserves*	Addresses administration and management of state parks and preserves.	The Proposed Action would not directly impact state parks, recreational areas or preserves. Secondary or indirect impacts to environmental or social resources related to the Proposed Action are not anticipated. Opportunity for recreation on state lands would not be affected.

Florida Statute	Legal Scope	Consistency Evaluation
Chapter 259 *Land Acquisition for Conservation or Recreation*	Authorizes acquisition of environmentally endangered lands and outdoor recreation lands.	The Proposed Action would occur entirely within PaSFB and would not have an effect on the acquisition of environmentally endangered or outdoor recreation lands.
Chapter 260 *Recreational Trails System*	Authorizes acquisition of land to create a recreational trails system and to facilitate management of the system.	The Proposed Action would occur entirely within PaSFB and would impact the acquisition of land to create a recreational trails system.
Chapter 267 *Historical Resources*	Addresses management and preservation of the state's archaeological and historical resources.	The Proposed Action is not anticipated to adversely affect historical or cultural resources of the State of Florida. Section 106 of the National Historic Preservation Act (NHPA) consultation with the Florida SHPO is ongoing. Any mitigation measures identified during the consultation would be included in the Final EA.
Chapter 288 *Commercial Development and Capital Improvements*	Provides the framework for promoting and developing the general business, trade, and tourism components of the state economy.	The Proposed Action would occur entirely on an active military installation with limited access to the public and limited or no implications for or effect on general business, trade, and tourism components of the state economy. The addition of 108 personnel and their dependents from the proposed Delta 10 beddown action would benefit the local economy.
Chapter 334 *Transportation Administration*	Addresses the state's policy concerning transportation administration.	The Proposed Action would not have an impact on the state's transportation administration policies (also see Appendix A of this EA).
Chapter 339 *Transportation Finance and Planning*	Addresses the finance and planning needs of the state's transportation system.	The Proposed Action would not have an effect on the finance and planning needs of the state's transportation system (also see Appendix A of this EA).
Chapter 373 *Water Resources*	Addresses the state's policy concerning water resources.	The Proposed Action could have negligible impacts on surface waters and groundwater. Short-term, indirect, negligible impacts from soil disturbance could create non-point source water pollution; however, best management practices (BMPs) would be utilized to reduce the chance of impacts on surface water resources. Long-term, indirect, negligible impacts from the conversion of vegetated areas and permeable soils to impervious surfaces and an increase in personnel operations could likewise create non-point source water pollution; however, BMPs would be utilized to minimize this possibility.
Chapter 375 *Outdoor Recreation and Conservation Lands*	Develops comprehensive multipurpose outdoor recreation plans to document recreational supply and demand, describes current recreational opportunities, estimates need for additional recreational opportunities, and proposes means to meet the identified needs.	The Proposed Action occurs entirely within PaSFB and would not impact the state's development or evaluation of multipurpose outdoor recreation plans.
Chapter 376 *Pollutant Discharge Prevention and Removal*	Regulates transfer, storage, and transportation of pollutants, and cleanup of pollutant discharges.	PaSFB currently maintains a stormwater discharge permit from FDEP. The Proposed Action would implement project specific BMPs in accordance with existing or modified permit conditions. Additionally, a comprehensive spill plan and program is maintained at PaSFB to address spills and minimize potential impacts that could result from a spill or leak of a contaminant.

Florida Statute	Legal Scope	Consistency Evaluation
		The Proposed Action would not alter the types of hazardous and other regulated materials used at PaSFB (e.g., cleaning solvents, lubricants). No involvement with or impact to hazardous materials or wastes is anticipated. The Proposed Action would not involve the transfer of pollutants between vessels; between onshore facilities and vessels; between offshore facilities and vessels; or between terminal facilities within jurisdiction of the state and state waters.
Chapter 377 *Energy Resources*	Addresses regulation, planning, and development of energy resources of the state.	Implementation of the Proposed Action would not cause unsupportable demands on available natural resources or energy supplies, and the construction and operation of the Proposed Action would not require nonrenewable resources.
Chapter 379 *Fish and Wildlife Conservation*	Addresses management and protection of fish and wildlife in the state.	The Proposed Action would have minimal impacts on vegetation potentially utilized by wildlife. The majority of PaSFB is developed; however, undeveloped uplands and wetlands/other surface waters potentially provide habitat to wildlife species. However, the small number of individuals that may be impacted from the implementation of the Proposed Action would not appreciably reduce the overall population of wildlife species known to occur within the region. It is anticipated that the Proposed Action will have "no effect" or "may affect, but not likely to adversely affect" protected species. Coordination with the 45th Civil Engineer Squadron Environmental Office (45 CES/CEIE) would be required during the design and permitting phase to ensure compliance with the Installation Natural Resources Management Plan (INRMP) and federal and state agency guidelines. Lighting systems would be designed to avoid or reduce illumination effects on sea turtles in accordance with USFWS guidelines and coordination with 45 CES/CEIE would be required prior to any ground disturbing activities. If any gopher tortoise burrows cannot be avoided by 25 feet, the tortoises would be relocated in accordance with the current INRMP. If gopher tortoises are in close proximity to the construction site, silt fencing or some other type of barrier would be erected to keep tortoises from moving into the construction area after surveys have been completed.
Chapter 380 *Land and Water Management*	Establishes land and water management policies to guide and coordinate local decisions relating to growth and development.	The Proposed Action would be consistent with local land and water management plans. The Proposed Action is subject to federal and state permits, stormwater, and environmental regulations and will require coordination with and authorization from the USACE, FDEP and SJRWMD.
Chapter 381 *Public Health, General Provision*	Establishes public policy concerning the state's public health system.	The Proposed Action does not involve the construction of an onsite sewage treatment and disposal system. Construction activities associated with the Proposed Action are governed by regulations established by the Air Force Occupational Safety and Health (AFOSH) Program and the Occupational Safety and Health

Florida Statute	Legal Scope	Consistency Evaluation
		Administration (OSHA). No appreciable change in the type, quantity, or disposal of solid wastes is expected. The Proposed Action would not impact public policy or management of sanitation, communicable diseases, or public health.
Chapter 388 *Mosquito Control*	Addresses mosquito control efforts in the state.	The Proposed Action would not affect local mosquito control efforts or contribute to increased propagation of mosquitos.
Chapter 403 *Environmental Control*	Establishes public policy concerning environmental control in the state.	The Proposed Action would include project specific BMPs and pollution prevention measures for construction and operation. The Proposed Action is not expected to exceed applicable state water quality standards or have substantial and long-term water quality impacts. Air pollutant emissions associated with the construction of the Proposed Action would not exceed federal or state significance thresholds or cause exceedances of air quality standards. Changes to the long-term air emissions resulting from the Proposed Action are expected to be negligible. Construction and operational wastes would be collected, transported, recycled, and disposed of in compliance with applicable federal, state, and local regulations. The USSF would obtain and comply with all applicable permits as required by law.
Chapter 553 *Building Construction Standard*	Provides a mechanism for the uniform adoption, updating, amendment, interpretation, and enforcement of a single, unified state building code, to be called the Florida Building Code. Obtain a permit from the appropriate enforcing agency.	The Proposed Action would not affect the Building Construction Standards of the State of Florida. USSF would obtain and comply with all applicable permits as required by law.
Chapter 582 *Soil and Water Conservation*	Provides for the control and prevention of soil erosion.	Prior to construction of the Proposed Action, a project specific Stormwater pollution prevention plan (SWPPP) would be developed and followed, and project specific BMPs addressing erosion and sediment controls would be implemented to minimize impact to soils and water quality. The Proposed Action would be consistent with the current characteristic features of the area and landscape and would not result in any changes to land use. The Proposed Action would not affect soils or farmland within a Soil and Water Conservation District and would not convert prime farmland.
Chapter 597 *Aquaculture*	Establishes public policy concerning the cultivation of aquatic organisms.	The Proposed Action has no activities related to the cultivation of marine species. The Proposed Action activities would not affect aquaculture.

45 CES/CEIE= 45th Civil Engineer Squadron Environmental Office; AFOSH=Air Force Occupational Safety and Health; BMP=best management practice; CCCL=Coastal Construction Permit Program, the Coastal Construction Control Line; EA=Environmental Assessment; INRMP= Installation Natural Resources Management Plan; NEPA=National Environmental Policy Act; NHPA=National Historic Preservation Act; OSHA=Occupational Safety and Health Administration; PaSFB=Patrick Space Force Base; SWPPP=Stormwater pollution prevention plan; USSF=United States Space Force

Appendix F. List of Acronyms

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List of Acronyms and Abbreviations

Acronym	Definition
1 TES	1st Test and Evaluation Squadron
3 TES	3rd Test and Evaluation Squadron
4 TES	4th Test and Evaluation Squadron
10 DOS	Delta 10 Operations Squadron
11 DOS	Delta 11 Operations Squadron
12 DOS	Delta 12 Operations Squadron
17 TES	17th Test and Evaluation Squadron
57 SAS	57th Space Aggressor Squadron
98 SRS	98th Space Range Squadron
AADT	annual average daily traffic
AAQS	Ambient Air Quality Standards
ACAM	Air Conformity Applicability Model
ACM	asbestos-containing material
AFCEC	Air Force Civil Engineering Center
AFFF	Aqueous Film Forming Foam
AFI	Air Force Instruction
AFMAN	Air Force Manual
AFPD	Air Force Policy Directive
AICUZ	Air Installation Compatible Use Zone
APE	area of potential effect
AQCR	Air Quality Control Region
ARPA	Archaeological Resources Protection Act
AT/FP	antiterrorism/force protection
bls	below land surface
BMP	Best Management Practices
CAA	Clean Air Act
CAP	central accumulation point
CCSFS	Cape Canaveral Space Force Station
CDC	Census county divisions
CDPHE	Colorado Department of Public Health and Environment
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_{2e}	carbon dioxide equivalent
CDPHE	Colorado Department of Public Health and Environment

Acronym	Definition
CWA	Clean Water Act
CMD	Cherokee Metropolitan Water District
CZ	Environmental Directorate
CZMA	Coastal Zone Management Act
DAF	U.S. Department of Air Force
dB	decibel
dBA	A-weighted decibel
DNL	day-night average sound level
DOE	U.S. Department of Energy
DOT	Department of Transportation
Delta 10 HQ	Delta 10 Headquarters
Delta 10/OL-A	Delta 10 Operating Location A, Doctrine and Tactics
Delta 10/OL-B	Delta 10 Operating Location B, Wargaming
Delta 10/OL-C	Delta 10 Operating Location C, Lessons Learned
Delta 11 HQ	Delta 11 Headquarters
Delta 12 HQ	Delta 12 Headquarters
DNR	Colorado Department of Natural Resources
DoD	Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EISA	Energy Independence and Security Act
EO	Executive Order
ERP	Environmental Restoration Program
ESA	Endangered Species Act
FCMP	Florida Coastal Management Program
FDEP	Florida Department of Environmental Protection
FEMA	Federal Emergency Management Agency
FFPA	Farmland Protection Policy Act
FIRM	Flood Insurance Rate Map
FWC	Florida Fish and Wildlife Conservation Commission
FY	Fiscal Year
GHG	greenhouse gas
HAP	hazardous air pollutant
HTMW	hazardous and toxic materials and waste
HUC	Hydrologic Unit Code
HVAC	heating, ventilation, and air conditioning
HWAS	Hazardous Waste Accumulation Site
HWMP	Hazardous Waste Management Plan

Acronym	Definition
INRMP	Integrated National Resources Management Plan
IPaC	Information for Planning and Consultation
IR	Integrated Report
IRP	Installation Restoration Plan
KAFB	Kirtland Air Force Base
MAMSIP	Military Access, Mobility & Safety Improvement Project
LID	low-impact development
MBTA	Migratory Bird Treaty Act
MILCON	military construction
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
msl	mean sea level
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NH_3	ammonia
NMAC	New Mexico Administrative Code
NMArmyNG	New Mexico Army National Guard
NMED	New Mexico Environment Department
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
N_2O	nitrous oxides
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NMDOT	New Mexico Department of Transportation
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
OSHA	Occupational Health and Safety Administration
PaSFB	Patrick Space Force Base
PAH	polycyclic aromatic hydrocarbons
Pb	lead
PCB	polychlorinated biphenyls
pCi/L	picocuries per liter
PeSFB	Peterson Space Force Base

Acronym	Definition
PFAS	perfluoroalkyl and polyfluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
PSD	Prevention of Significant Deterioration
$PM_{2.5}$	particulate matter, less than or equal to 2.5 micrometers
PM_{10}	particulate matter, less than or equal to 10 micrometers
RCRA	Resource Conservation and Recovery Act
RI	remedial investigation
RLF	relocatable facility
ROI	Region of Influence
ROTF	Range of the Future
RSL	Regional Screening Levels
SAPF	Special Access Program Facilities
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SJRWMD	St. Johns River Water Management District
SLD	Space Launch Delta
SO_2	Sulfur dioxide
SO_x	Sulfur oxides
SPCC	Spill Prevention Control and Countermeasures
SSFB	Schriever Space Force Base
STARCOM	Strategic Training and Readiness Command
SR	State Road
SWI	Space Wing Instruction
SWMP	Stormwater Management Plan
SWP	Space Wing Plan
SWPPP	Storm Water Pollution Prevention Plan
SVOC	semi-volatile organic compounds
THPO	Tribal Historic Preservation Officer
TMDL	total maximum daily load
TMP	transportation management plan
UFC	Unified Facilities Criteria
U.S.C.	United States Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
USSF	United States Space Force

Acronym	Definition
USSPACECOM	United States Space Command
VOC	volatile organic compound
WBID	water boundary identification number

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Appendix G. References

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References

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