ENVIRONMENTAL ASSESSMENT

FOR

Construction and Operation of Installation Improvements at Homestead Air Reserve Base

Draft

PREPARED BY:

U.S. Air Force

August 2024

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COVER SHEET

ENVIRONMENTAL ASSESSMENT

CONSTRUCTION AND OPERATION OF INSTALLATION IMPROVEMENTS

a. Lead Agency: U.S. Air Force Reserve Command (AFRC)

b. Proposed Action: Construct and operate installation improvements at Homestead Air Reserve Base (ARB)

c. Written comments and inquiries regarding this document should be directed to:

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d. Designation: Draft Environmental Assessment (EA)

Abstract: The United States (U.S.) Air Force Reserve Command (AFRC) proposes to construct and operate installation improvements at two locations within Homestead ARB. These improvements would create a dedicated space for required munitions activities and improve and expand existing recreational vehicle (RV) storage infrastructure within the installation. This EA evaluates the potential environmental impacts associated with two alternatives for this Proposed Action: the Preferred Alternative and the No Action Alternative.

Under the Preferred Alternative, the AFRC would implement two installation improvements at Homestead ARB: (1) construct and operate a new Bomb Assembly Facility (BAF), and (2) improve and expand the existing paved RV storage area. Construction of the BAF would involve demolishing the existing degrading Munitions Assembly Conveyor Pad and constructing an approximately 8,000-square-foot BAF in its place. Outside the BAF, approximately 0.23 acres of concrete pavement would be installed for facility access and parking. The new BAF would require various utilities, including sewer, exterior electrical service, exterior communications, and water. Electrical, sewer and water utility lines would be extended from Homestead ARB's existing utility infrastructure to the new BAF. During operation, the 482nd Maintenance Squadron Munitions Flight would complete required trainings, including assembling, disassembling, and performing maintenance, testing, and repair of munitions, to support operational requirements. The RV storage improvement and expansion would involve re-paving the existing, paved 2.2-acre RV storage area with asphalt, as well as grading and installing new asphalt on an adjacent approximately 2.3-acre grassy area that is currently being used for spillover storage of RVs and trailered boats. Once constructed, the RV storage area would be incorporated into Homestead ARB's public works operations, which would include clearing paved areas of debris and maintaining pavement markings. The Preferred Alternative does not include any changes to personnel stationed or trained at Homestead ARB. Under the No Action Alternative, the proposed installation improvements would not be constructed.

The following environmental resources were analyzed in the EA: air quality, climate, earth resources, water resources, biological resources, cultural resources, utilities, socioeconomics & environmental justice, safety and occupational health, and hazardous and toxic materials and waste. Resources that would not be meaningfully or measurably affected by the Proposed Action, including airspace, land use and zoning, visual resources, noise, and transportation, were dismissed from detailed analysis. Based on the analysis presented in this EA, the AFRC has determined that with incorporation of best management practices and minimization measures, the Proposed Action would have no significant impacts on the human or natural environment.

This Draft EA and a Draft Finding of No Significant Impact are available on the Homestead ARB Environmental website at https://www.homestead.afrc.af.mil/About-Us/Environmental-Information/.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

ABBREVIATIONS AND ACRONYMS

°F	Fahrenheit
µg/m^3	micrograms per cubic meter
ACAM	Air Conformity Applicability Model
AFCEC	Air Force Civil Engineer Center
AFI	Air Force Instruction
AFMAN	Air Force Manual
AFRC	Air Force Reserve Command
APE	Area of Potential Effects
AQCR	Air Quality Control Region
ARB	Air Reserve Base
BAF	Bomb Assembly Facility
BASH	Bird/Wildlife Air Strike Hazard
BCC	Birds of Conservation Concern
BMP	Best Management Practice
BO	Biological Opinion
CAA	Clean Air Act
CEJST	Climate and Economic Justice Screening Tool
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	CO_2-equivalent
CWA	Clean Water Act
CY	Calendar Year
DERP	Department of Defense Environmental Restoration Program
DESR	Defense Explosives Safety Regulations
DoD	Department of Defense
DODI	Department of Defense Instruction
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EISA	Energy Independence and Security Act
EO	Executive Order
ESA	Endangered Species Act
FDACS	Florida Department of Agriculture and Consumer Services
FDEP	Florida Department of Environmental Protection
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FW	Fighter Wing
FWC	Florida Fish and Wildlife Commission
GHG	Greenhouse Gas
GWP	Global Warming Potential
HTMW	Hazardous and Toxic Materials and Wastes
HWMP	Hazardous Waste Management Plan
INRMP	Integrated Natural Resources Management Plan
IPaC	Information for Planning and Consultation
IRP	Installation Restoration Program
JP	Jet Propulsion
LID	Low Impact Development
MAC	Munitions Assembly Conveyor
MBTA	Migratory Bird Treaty Act
MMRP	Military Munitions Response Program

MXS/MXMW	Maintenance Squadron Munitions Flight
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO_2	Nitrogen Dioxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	Ozone
OU	Operable Unit
Pb	Lead
PCB	Polychlorinated Biphenyls
PFAS	Per- and Polyfluoroalkyl Substances
PFOS	Perfluoro-octane Sulfonic Acid
PM_{10}	Particulate Matter less than or equal to 10 micrometers in diameter
$PM_{2.5}$	Particulate Matter less than or equal to 2.5 micrometers in diameter
POL	Petroleum, Oils, and Lubricants
ppb	parts per billion
ppm	parts per million
ROI	Region of Influence
RV	Recreational Vehicle
SC-GHG	Social Cost of GHGs
SHPO	State Historic Preservation Office
SO_2	Sulfur Dioxide
SQG	Small Quantity Generator
SWPPP	Stormwater Pollution Prevention Plan
U.S.	United States
USC	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VOC	Volatile Organic Compound

1.0 PURPOSE AND NEED

1.1 INTRODUCTION

This Environmental Assessment (EA) evaluates the potential environmental impacts associated with the United States (U.S.) Air Force Reserve Command's (AFRC) proposal to construct and operate two installation improvements at Homestead Air Reserve Base (ARB), including a new bomb assembly facility (BAF) and an improved and expanded recreational vehicle (RV) storage area (Proposed Action). Homestead ARB is located in Miami-Dade County, Florida (**Figure 1**).

The AFRC prepared this EA in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code [USC] 4321, et seq.); the Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508); and the Air Force Environmental Impact Analysis Process (EIAP) (32 CFR Part 989).

To facilitate public review of this EA, the AFRC published this Draft EA and a Draft Finding of No Significant Impact (FONSI) on the Homestead ARB Environmental website at https://www.homestead.afrc.af.mil/About-Us/Environmental-Information/.

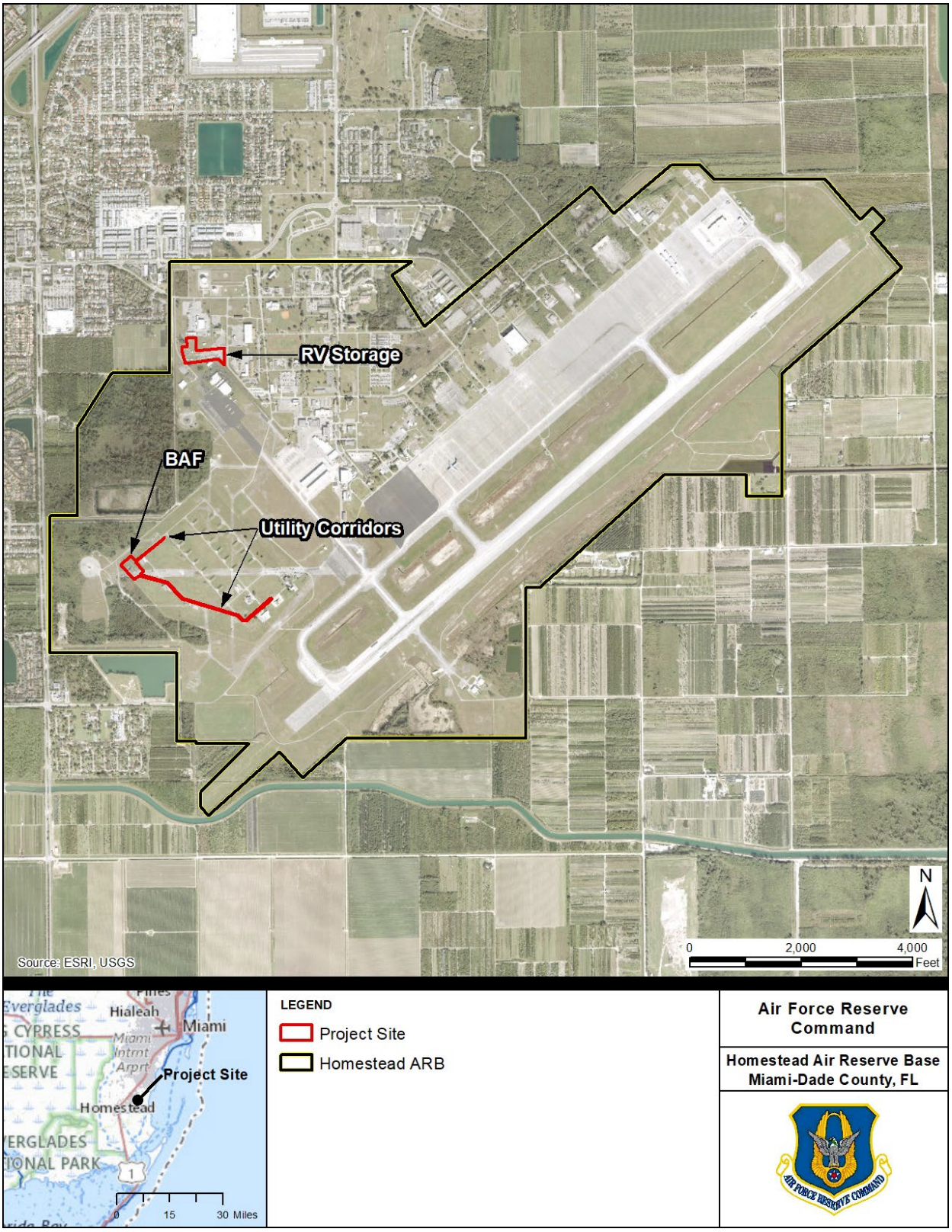
1.2 PURPOSE AND NEED

Homestead ARB is home to the 482nd Fighter Wing (FW), a fully combat-ready unit capable of providing F-16C multi-purpose fighter aircraft, mission-ready pilots, and support personnel for short-notice worldwide deployment. The 482nd Maintenance Group, a unit of the 482nd FW, is responsible for all organizational-level maintenance and logistics support for all assigned aircraft. The 482nd Maintenance Squadron Munitions Flight (MXS/MXMW), is responsible for assembling, disassembling, and performing maintenance and testing of munitions, as well as conducting monthly training drills to support operational requirements.

The 482nd FW does not have an adequate indoor facility for munitions activities, including bomb assembly training, equipment storage, and administrative functions. Bomb assembly training is currently accomplished in outdoor spaces and "space available" classrooms, which requires training equipment to be staged away from supporting facilities and then set up when space becomes available, greatly reducing the efficiency of the training time. Constant setup and breakdown in non-dedicated spaces for munitions training not only negatively impacts the overall training effectiveness and efficiency for munitions personnel, but also that of other squadrons being displaced by munitions training activities. The 482nd FW requires a dedicated, on-site BAF at Homestead ARB that is capable of supporting required munitions activities. Therefore, the purpose of this component of the Proposed Action is to provide personnel at Homestead ARB with a dedicated, on-site, indoor area for munitions activities, including training, operational, and administrative functions. This component of the Proposed Action is needed because there is currently no single, dedicated, indoor space to conduct required munitions activities.

Additionally, Homestead ARB provides storage space for RVs and trailered boats for AFRC personnel. The existing RV storage area is insufficient in capacity and the pavement is in poor condition, resulting in RV storage occurring on adjacent unpaved areas. These unpaved areas create unfavorable storage conditions. Homestead ARB requires improved and expanded paved storage areas to accommodate RVs and trailered boats. The purpose of this component of the Proposed Action is to improve and expand the existing RV storage area. This component of the Proposed Action is needed because the existing RV storage area is insufficient.

Figure 1: Homestead ARB Site Vicinity



1.3 INTERAGENCY AND INTERGOVERNMENTAL COORDINATION/CONSULTATION

The AFRC coordinated with 19 federal, state, and local agencies with jurisdiction by law or special expertise over the Proposed Action to inform the range of issues to be addressed in the EA. The list of agencies consulted can be found in the stakeholder list in **Appendix A.** Coordination letters, and responses received, are consolidated in **Appendix A** and discussed in **Section 3.0**, as appropriate. Homestead ARB's consultation with the Florida State Historic Preservation Office (SHPO) under Section 106 of the National Historic Preservation Act of 1966 (NHPA) is included in **Appendix B**.

Consistent with NHPA implementing regulations (36 CFR Part 800), Department of Defense Instruction (DoDI) 4710.02, *Interactions with Federally-Recognized Tribes*, AFI 90-2002, *Air Force Interaction with Federally-Recognized Tribes*, and Air Force Manual (AFMAN) 32-7003, *Environmental Conservation*, Homestead ARB is also consulting with federally recognized tribes that are historically affiliated with the geographic region of Homestead ARB regarding the potential for the Proposed Action to affect properties of cultural, historical, or religious significance to the tribes. A record of this consultation is included in **Appendix C**.

1.4 PUBLIC AND AGENCY REVIEW OF THE EA

In accordance with CEQ and Air Force NEPA regulations, this Draft EA and Draft FONSI have been made available for a 30-day public review and comment period between August 30, 2024, and September 29, 2024. A Notice of Availability for the Draft EA and Draft FONSI was published in the *Miami Herald* and *South Dade News Leader* on August 30, 2024. These documents have also been published digitally on the Homestead ARB Environmental website at https://www.homestead.afrc.af.mil/About-Us/Environmental-Information/. Printed copies of the Draft EA and Draft FONSI are available for public review at Naranja Branch Library, 14850 SW 280th St, Homestead, FL 33032.

During the Draft EA public review period, written comments may be mailed to Mr. Josh Friers, Cultural and Natural Resources Manager, 29350 Westover Street, Bldg 232, Homestead ARB, FL 33039; or emailed to joshua.friers.2@us.af.mil. AFRC will only respond to public comments during specified, formal public comment and review periods.

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2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

The Proposed Action is to construct and operate installation improvements at two locations within Homestead ARB. These improvements would create a dedicated space for required munitions activities and improve and expand existing RV storage infrastructure. The Proposed Action does not include any changes to personnel stationed or trained at Homestead ARB.

2.2 SCREENING OF ALTERNATIVES

The AFRC developed selection standards to evaluate specific reasonable alternatives by which to implement the Proposed Action. “Reasonable alternatives” are those that could be utilized to meet the purpose of and need for the Proposed Action. The AFRC’s selection standards used to evaluate reasonable alternatives include the following:

1. **Standard 1 – Mission Effectiveness:** This standard measures how well each alternative would meet current mission needs as well as expected future mission needs. The AFRC evaluated each alternative based on its ability to accomplish the day-to-day mission, specifically in terms of providing adequate infrastructure for training and installation operations.

2. **Standard 2 – Mission Readiness:** This standard measures how well each alternative meets current mission readiness for the 482nd FW to support deployments. The AFRC evaluated each alternative’s ability to support actual deployment taskings, specifically calling for fully qualified munitions personnel.

3. **Standard 3 – Health and Safety:** This standard measures how well each alternative would impact health and safety of AFRC personnel, with particular consideration for explosive safety setbacks for the BAF. The AFRC evaluated each alternative’s ability to provide for the health and safety of AFRC personnel and to comply with AFMAN 91-201 *Explosives Safety Standards* and Defense Explosives Safety Regulations (DESR) 6055.09 Edition 1.

4. **Standard 4 – Environmental Impact:** This standard measures the potential environmental impact of each alternative in terms of vegetation clearing and habitat loss. The AFRC evaluated each alternative’s potential impact to the environment on Homestead ARB.

5. **Standard 5** – **Adequate Size:** Installation improvements must be of adequate size to accommodate training and installation operations. The AFRC evaluated each alternative on its ability to provide ample space/acreage.

2.3 EVALUATED ALTERNATIVES

2.3.1 Preferred Alternative

The AFRC proposes to implement two installation improvements at Homestead ARB: (1) construct and operate a new BAF, and (2) improve and expand the existing paved RV storage area. This is the AFRC’s Preferred Alternative because it best meets the training requirements of the 482nd FW, as well as selection standards identified in **Section 2.2**. The two components of the Preferred Alternative are not dependent on each other and AFRC may choose to implement one without the other. These projects are AFRC directive

actions that are analyzed together in this EA for efficiency and due to the similarities in their potential environmental impacts. Both projects are fully analyzed as part of the Preferred Alternative in this EA.

2.3.1.1 Bomb Assembly Facility Construction and Operation

This component of the Preferred Alternative would occur within an approximately 2-acre site in the southwestern portion of Homestead ARB (**Figure 1**). This site is currently composed of an existing Munitions Assembly Conveyor (MAC) Pad, paved surfaces, and adjacent grassy areas. The MAC Pad consists of a concrete canopy on concrete columns, and is in poor condition with cracked and delaminated concrete and exposed reinforcements (**Figure 2**) (AFRC, 2023). The proposed BAF area is within the existing Munitions District of Homestead ARB, which has an established explosives safety setback.

Figure 2: Existing MAC Pad

(AFRC, 2023)

Construction of the BAF would involve demolishing the existing MAC Pad and constructing an approximately 8,000-square-foot BAF in its place. The BAF would be comprised of a reinforced concrete foundation and floor slab, steel frame, sloped metal roof, reinforced masonry walls, electrical and communications systems, and fire detection/protection systems. The BAF would have four contiguous munitions bays with overhead doors at either end for pull-through access and munition assembly lines. An overhead crane and track would be installed within the BAF to support munitions assembly within the four bays. An adjacent one-story section within the BAF would include a tool storage area, administrative area, and utility rooms. The administrative area would include four workstations, a break room, and restrooms. The structure would be able to accommodate up to 46 personnel during training activities (AFRC, 2023). Much of the proposed BAF area is currently paved, although an additional approximately 0.23 acres of adjacent grassy area would be paved with concrete to accommodate operation of the BAF, including munition bay access and parking (AFRC, 2023). The facility would comply with all applicable Unified Facilities Criterium (UFC), architectural standards, and the High Velocity Hurricane Zone and Miami-Dade County building codes. Two existing security light poles would be relocated to accommodate bomb assembly vehicles. New perimeter lighting would also be attached to the BAF (AFRC, 2023).

The new BAF would require various utilities, including sewer, exterior electrical service, exterior communications, and water. Electrical, sewer and water utility lines would be extended from Homestead ARB's existing utility infrastructure to the new BAF along corridors depicted on **Figure 3**. These utility lines would be installed belowground in trenches. Additionally, approximately 1.5 miles of existing fiber optic cable would be upgraded within the existing duct bank, although no ground disturbance is anticipated to result from the fiber optic cable replacement. The proposed BAF area is currently serviced by the existing electrical grid, which would be upgraded with new transformers and some new duct bank to accommodate the BAF.

The existing stormwater drainage on and around the proposed BAF area slopes to drainage swales that flow to an off-site detention pond. Minor surface grading would occur to prepare the subgrade for the new paved areas and to redirect stormwater to the existing drainage system. Removed topsoil would also be used to aid in the redirecting of stormwater and culverts would be installed beneath the driveways to maintain the existing stormwater drainage system (AFRC, 2023).

Construction activities would be conducted in accordance with the applicable requirements of the U.S. Environmental Protection Agency (USEPA) National Pollutant Discharge Elimination System (NPDES) and associated permits to manage the quantity and quality of stormwater discharged from the proposed site and minimize the potential for pollution and sedimentation. The project would also comply with applicable requirements of Section 438 of the Energy Independence and Security Act (EISA), which requires federal projects to incorporate, to the maximum extent technically feasible, low impact development (LID) measures to maintain the pre-development hydrology of a site. Construction access and staging areas would occur entirely on existing paved areas adjacent to the proposed BAF area. Construction is anticipated to start in calendar year (CY) 2025 and take approximately 13 months to complete.

During operation, the 482nd MXS/MXMW would complete required trainings, including assembling, disassembling, and performing maintenance, testing, and repair of munitions, to support operational requirements. Munitions personnel would no longer use temporary or outdoor spaces to complete training. Furthermore, the BAF would increase efficiency and quality of munitions training as training equipment would not need to be relocated for each training session. The BAF would be used as needed to fulfill training and readiness requirements, which is anticipated to include monthly training sessions for 482nd MXS/MXMW reservists. There would be no change to the type of munitions training activities or the number of personnel conducting munitions assembly training at Homestead ARB.

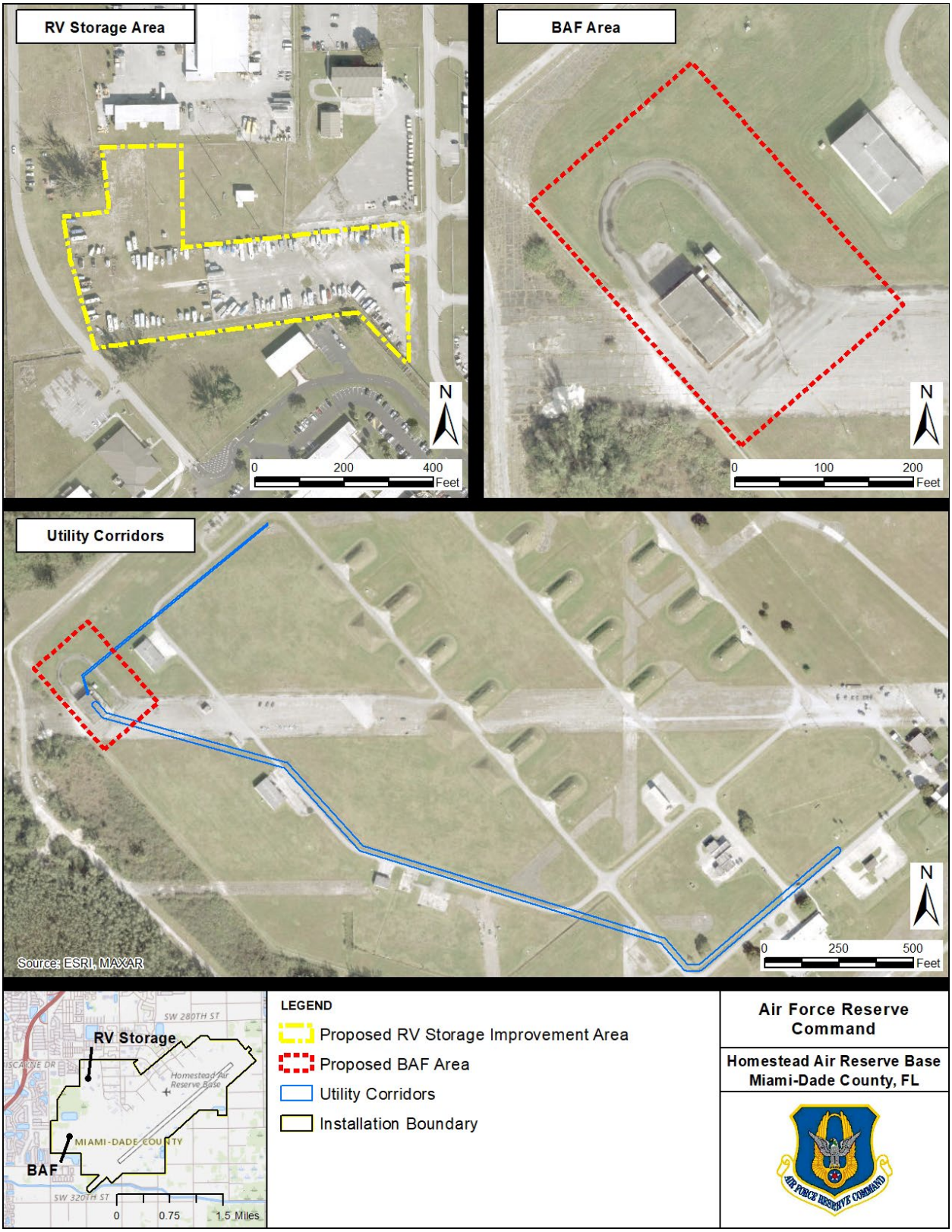
2.3.1.2 Recreational Vehicle Storage Improvement and Expansion

This component of the Preferred Alternative would occur within an approximately 4.5-acre site in the northwest section of the installation (**Figure 1**). The proposed site is accessible via Bikini Boulevard. The Preferred Alternative would involve re-paving the existing, 2.2-acre RV storage area with asphalt, as well as grading and installing new asphalt on an adjacent approximately 2.3-acre grassy area that is currently being used for spillover storage of RVs and trailered boats (**Figure 3**). This component does not include installation of new lighting or access points to the RV storage area. The new asphalt would be installed in a manner that would allow precipitation to drain into adjacent grassy areas around the perimeter of the RV storage area. Construction access and staging areas would occur entirely on existing paved areas adjacent to the RV storage area.

Construction activities would be conducted in accordance with the applicable NPDES requirements and associated permits to manage the quantity and quality of stormwater discharged from the proposed site and minimize the potential for pollution and sedimentation. Construction is anticipated to start in CY 2025 and take approximately 4 months to complete.

Once constructed, the RV storage area would be incorporated into Homestead ARB's public works operations, which would include clearing paved areas of debris and maintaining pavement markings. There would be no change in the way RVs are stored at Homestead ARB.

Figure 3: Proposed Installation Improvements



2.3.2 No Action Alternative

Under the No Action Alternative, 482nd FW would not have a dedicated facility for bomb assembly training and training would continue to be accomplished in a "space available" manner, negatively impacting the duration and quality of training. Personnel qualifications and certifications may lapse and negatively impact the unit's mission availability. Homestead ARB would also continue to utilize their existing RV storage area, including the paved and unpaved portions. The No Action Alternative would not meet the training requirements of the 482nd FW, nor the selection standards identified in **Section 2.2.** While the No Action Alternative would not meet the Proposed Action's purpose and need, it is analyzed in this EA to provide a comparative baseline with the Preferred Alternative.

2.4 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

The AFRC initially considered additional alternatives to achieve the purpose of and need for the Proposed Action. The AFRC eliminated these alternatives from further consideration because they did not meet one or more of the selection standards (**Section 2.2**), as described below.

2.4.1 Alternative Location for the BAF

AFRC considered constructing and operating the BAF within an undeveloped wooded area approximately 0.5 miles northeast of the existing MAC Pad. This location would offer a blank slate for development and no demolition activities would be required. An explosives safety siting buffer could be obtained for this site. Constructing the BAF at this location would involve extensive utility extensions and construction of roads and/or bridges to provide access to the site. Construction at this location would also involve extensive clearing of both herbaceous and woody vegetation, including mature trees and state protected species such as satin leaf (*Chrysophyllum oliviforme*) and wedgelet fern (*Sphenomeris clavate*) (Homestead ARB, 2015). AFRC determined constructing the BAF within this undeveloped area would result in unwarranted environmental impacts. Therefore, this alternative did not meet Selection Standard #4 and thus was eliminated from further consideration.

2.4.2 Alternative Location for the RV Storage Area

AFRC considered constructing a new RV storage location at one of the grassy plots near the center of the installation. This location would provide a central location for RV storage; however, AFRC determined these areas lacked the size required to meet current and projected demand for RV storage. Therefore, this alternative did not meet Selection Standard #5 and was eliminated from further consideration.

2.4.3 Alternative Construction Materials

AFRC considered expanding the RV storage area by installing gravel instead of asphalt. This alternative would reduce costs and would minimize impervious surfaces. However, AFRC determined that utilizing gravel would not be a sufficient material for adequate RV storage and would require additional maintenance and upkeep, putting additional strain on day-to-day operations. Therefore, this alternative did not meet Selection Standard #1 and was eliminated from further consideration.

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3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 INTRODUCTION

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

Table 1: Resources Dismissed from Detailed Analysis in the EA

Environmental Resource	Justification
Airspace	The Proposed Action would have no potential to interfere with airspace operations nor would it result in additional aircraft, aircraft operations, or require changes in airspace use. Additionally, the Proposed Action would not occur within, nor interfere with, the airfield's imaginary surfaces. The Proposed Action would not create any substantial bird/wildlife air strike hazard (BASH) risks. Therefore, there would be no impact on airspace.
Land Use and Zoning	No encroachment issues would be created from the Proposed Action. The Proposed Action would occur entirely on-base and has no potential to affect off-base land. The Proposed Action is compatible with existing and future land uses on and in the vicinity of Homestead ARB outlined in the Homestead ARB's Air Installations Compatible Use Zones Study (AFRC, 2020a). Therefore, there would be no impact on land use.
Visual Resources	The RV storage area is adjacent to off-base areas. However, due to the nature of the project (i.e., paving), it would not result in any obvious modifications to the existing aesthetic and visual landscape. The BAF area is shielded from off-base residences by mature trees and existing structures. While the Proposed Action includes vertical construction, it would replace an existing structure that is in poor condition, thereby improving the visual landscape on-base. Therefore, there would be no impact on aesthetics and visual resources.
Noise	Noise generated by demolition and construction activities associated with the Proposed Action would be considered an insignificant contributor to the overall noise environment at Homestead ARB, given existing ground and air operations. The Proposed Action would not result in any significant change to the existing Day-Night Average Sound Level noise zones around the installation (AFRC, 2020a). Additionally, the nearest sensitive receptor to the proposed BAF site is located 1,500 feet away; distance, mature trees, and existing structures would further attenuate noise. The nearest sensitive receptor to the proposed RV storage area is located 500 feet away, however, the nature of the construction activities (i.e., paving) at this site would produce a minimal amount of noise over a short-term construction period. Therefore, there would be no impact on the noise environment.
Transportation	The Proposed Action would not require new transportation facilities or modification of existing roadways. The Proposed Action could result in a temporary increase in vehicle traffic associated with construction vehicles and the transportation of construction equipment and materials to the Proposed Action Area; however, the Proposed Action would not noticeably increase vehicle traffic or affect the existing level of service on any public roadways. Therefore, there would be no impact on the transportation network on or near the Proposed Action Area.

3.2 AIR QUALITY

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 Southeast Florida Intrastate air quality control region (AQCR). Air quality conditions within the ROI are described in terms of the Air Force's Installation Attainment Status spreadsheet maintained by the Air Force Civil Engineer Center (AFCEC) dated February 2023 and the relationship to air quality standards described in **Section 3.2.1.1** (AFCEC, 2023a).

3.2.1 Affected Environment

3.2.1.1 National Ambient Air Quality

Under the Clean Air Act (CAA) and its amendments, the USEPA identifies air pollutants that cause or contribute to the endangerment of human health and/or environmental welfare and establishes air quality "criteria" that guide the establishment of air quality standards to regulate these pollutants (42 U.S.C. Sections 7408 – 7409). To date, the USEPA has established such criteria for six air pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter less than or equal to 2.5 micrometers in diameter ($PM_{2.5}$), particulate matter less than or equal to 10 micrometers in diameter (PM_{10}), and sulfur dioxide (SO_2). As a result, the USEPA created National Ambient Air Quality Standards (NAAQS) meant to safeguard public health (i.e., primary NAAQS) and environmental welfare (i.e., secondary NAAQS). Current NAAQS are presented in **Table 2**.

Table 2: National Ambient Air Quality Standards

Pollutant	Averaging Time	Level	Form
CO	8-hour	9 ppm	Not to be exceeded more than once per year
	1-hour	35 ppm	
Pb	Rolling 3-month average	0.15 µg/m3	Not to be exceeded
NO_2	1-hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, 3-year average
	Annual	53 ppb	Annual mean
O_3	8-hour	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, 3-year average
PM	$PM_{2.5}$ Annual (primary)	9.0 µg/m3	Annual mean, 3-year average
	$PM_{2.5}$ Annual (secondary)	15.0 µg/m3	Annual mean, 3-year average
	$PM_{2.5}$ 24-hour	35 µg/m3	98th percentile, 3-year average
	PM_{10} 24-hour	150 µg/m3	Not to be exceeded more than once per year, 3-year average
SO_2	1-hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, 3-year average
	3-hour	0.5 ppm	Not to be exceeded more than once per year

Notes: ppb = parts per billion; ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter of air.
Source: (USEPA, 2024a)

USEPA and state/local air quality control agencies monitor and evaluate outdoor air quality for compliance with the NAAQS. Areas where monitored outdoor air concentrations are below the NAAQS are considered in attainment of that NAAQS. If sufficient ambient air monitoring data are not available to decide, the area is instead deemed attainment/unclassifiable. Areas where monitored outdoor air concentrations exceed the NAAQS are designated by the USEPA as nonattainment areas. 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.

3.2.1.2 Clean Air Act Conformity

The General Conformity Rule of the federal CAA mandates that the federal government does not engage, support, provide financial assistance for licensing or permitting, or approve any activity not conforming to the most recent USEPA-approved State Implementation Plan. This rule applies to all federal actions, except highway and transit actions, which are instead regulated by the Transportation Conformity Rule. This rule ensures that such emissions do not cause or contribute to air quality degradation, thus preventing the achievement of state and federal air quality goals. The Air Force's EIAP for air quality promulgated at 32 CFR 989.30 requires that NEPA documents such as this EA address General Conformity applicability.

For federal actions located in areas that are in nonattainment of a NAAQS or designated as maintenance, annual net emissions for a Proposed Action are compared against General Conformity *de minimis* thresholds, representing numerical thresholds under which a project is not considered to cause or contribute to continued violation of the NAAQS in nonattainment/maintenance areas, and therefore General Conformity is not further applicable. Unlike nonattainment or maintenance criteria pollutants, General Conformity *de minimis* levels have not been established for attainment criteria pollutant emissions. According to AFCEC's Air Force's Installation Attainment Status spreadsheet, Homestead ARB is considered in attainment of all current NAAQS (AFCEC, 2023a). Additionally, according to the USEPA Greenbook of nonattainment and maintenance areas, Miami-Dade County, in which Homestead ARB is located, is in attainment of all current NAAQS (USEPA, 2024b). Therefore, no General Conformity *de minimis* thresholds apply to the Proposed Action.

3.2.2 Environmental Consequences

Air quality is affected by stationary sources (e.g., boilers, emergency generators, and industrial processes), mobile sources (e.g., motor vehicles, construction equipment, and aircraft), and area sources (e.g., vehicle and aircraft fuel transfer, storage, and dispensing). The Proposed Action would primarily involve mobile sources of emissions related to construction activities, including fuel combustion in construction vehicles and equipment (e.g., backhoes, bulldozers), material delivery and debris hauling vehicles, and construction employee commute vehicles, as well as fugitive emissions of volatile organic compounds (VOCs) from asphalt paving and PM from windblown dust on construction sites. The nature and magnitude of this Proposed Action are expected to create only localized air quality impacts to the area surrounding the construction sites within the ROI.

Current Air Force 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, 2023). An air quality impact is considered insignificant if the action does not cause or contribute to exceedance of one or more of the NAAQS. The Air Force defines "insignificance indicators" for each criteria pollutant according to current air quality conditions to determine whether potential impacts would be significant. In accordance with the EIAP, the greatest annual (calendar year) emissions for each pollutant of concern form the basis of the analysis. In areas the Air Force considers as clearly 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 threshold), except for Pb, which is 25 tons per year.

3.2.2.1 Preferred Alternative

Construction emissions were estimated using the Air Force's Air Conformity Applicability Model (ACAM) (Version 5.0.23a). The Record of Air Analysis for the Preferred Alternative is located in **Appendix D**. These emissions are "netted" on an annual basis. For air quality analysis purposes, construction activities for the proposed BAF are expected to occur in CY 2025 and CY 2026, while those associated with the proposed RV storage improvement and expansion are expected to occur in CY 2025. To be conservative, 12 of the 13 months anticipated for construction of the BAF were modeled as occurring in CY 2025 to estimate a maximum emissions ("worst-case") scenario in that year. Minimal construction emissions are expected to occur in CY 2026. **Table 3** shows estimated net emissions from construction of the Preferred Alternative in CY 2025 and CY 2026.

Table 3: Annual Construction Criteria Pollutant Emissions Summary

Pollutant	Action Emissions (ton/year)		Insignificance Indicator		
	2025	2026	Indicator (ton/year)	2025 Exceedance (Yes or No)	2026 Exceedance (Yes or No)
VOC	0.095	0.101	250	No	No
NO_x	0.838	0.068	250	No	No
CO	1.179	0.092	250	No	No
SO_x	0.002	0.000	250	No	No
PM_{10}	9.814	0.123	250	No	No
$PM_{2.5}$	0.030	0.003	250	No	No
Pb	0.000	0.000	25	No	No
NH_3	0.004	0.000	250	No	No

Source: ACAM Version 5.0.23a

As shown in **Table 3**, construction of the Preferred Alternative would cause minor short-term, direct, adverse impacts on overall air quality. The majority of construction would occur in CY 2025, making it the maximum construction emissions year for all pollutants except VOC. Maximum VOC emissions would be slightly higher in CY 2026, due to application of architectural coatings applied to the new BAF. Emissions of construction-related criteria pollutants in each maximum emissions year would be well below applicable insignificance indicators. Therefore, these impacts would be insignificant. Because Miami-Dade County, Florida is considered in attainment of the NAAQS for all pollutants (AFCEC, 2023a; USEPA, 2024b) the General Conformity rule does not apply, and no further analysis is required. Overall, construction emissions would result in a *short-term, less-than-significant impact* on air quality in the ROI.

Best management practices (BMP) would be implemented during construction to reduce potential impacts on air quality, including having no visible emissions such as dust or wind-blown soil. These control measures could include applying water or using other stabilization measures on areas of bare soil or soil piles and covering dump trucks that transport materials that could become airborne. Additionally, contractors would be required to maintain construction equipment in accordance with manufacturers' specifications to reduce exhaust emissions.

The Preferred Alternative would result in no operational emissions, as there would be no new stationary sources of air emissions installed, or any additional personnel commuting. Therefore, there would be *no long-term or ongoing impacts* to air quality.

3.2.2.2 No Action Alternative

Under the No Action Alternative, the proposed installation improvements would not be constructed and there would be no temporary increase in criteria pollutant emissions. The No Action Alternative would have *no impact* on air quality.

3.3 CLIMATE

Greenhouse gases (GHGs) are compounds that contribute to the greenhouse effect. The greenhouse effect is a natural phenomenon where gases trap heat within the lowest portion of the earth's atmosphere, causing heating at the surface of the earth. Climate change refers to a general transformation in the average climate conditions of the earth. The heating effect of GHG emissions in the atmosphere is considered the probable cause of the global warming observed over the last 50 years (Endangerment Finding, 2010). GHGs occur in the atmosphere both naturally and because of human activities, such as the burning of fossil fuels. The primary long-lived GHGs directly emitted by human activities are carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. GHG concentrations in the atmosphere have increased substantially since 1750 as a result of human activities. Scientists have identified human activity that generates GHG emissions as a significant contributor to climate change (Intergovernmental Panal on Climate Change, 2021).

Global warming and climate change can affect many aspects of the environment, and are the result of aggregate GHG emissions globally. The USEPA has signed an endangerment finding regarding GHGs under Section 202(a) of the CAA, which finds that the current and projected concentrations of the six key well-mixed GHGs – CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride – in the atmosphere threaten the public health and welfare of current and future generations (Endangerment Finding, 2010).

GHGs are regulated under Section 202 of the CAA. CO_2, CH_4, and N_2O account for more than 97 percent of U.S. total GHG emissions (AFCEC, 2023b). CO_2 is the primary GHG emitted during fossil fuel combustion, while smaller amounts of CH_4 and N_2O are also emitted. Each GHG is assigned a global warming potential (GWP). The GWP is the ability of a gas or aerosol to trap heat in the atmosphere. The GWP rating system is standardized to CO_2, which has a value of one. The CO_2-equivalent (CO_2e) rate is calculated by multiplying the emissions of each GHG by its GWP and adding the results together to produce a single, combined emissions rate representing all GHGs. This EA considers CO_2e as the representative GHG emission.

EO 13990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*, requires an accounting of the full costs of GHG emissions from federal projects, as identified in terms of the "social cost of GHGs" (SC-GHG) for CO_2, CH_4, and N_2O. Executive Order (EO) 14008, *Tackling the Climate Crisis at Home and Abroad*, further strengthens EO 13990 by implementing objectives, including requiring federal agencies to develop and implement Climate Action Plans, to reduce GHG emissions and bolster resilience to the impacts of climate change. EO 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*, transforms how the federal government builds, buys, and manages its assets and operations, by supporting the growth of America's clean energy and clean technology industries and accelerating progress toward achieving a net-zero, carbon pollution-free electricity sector by 2035. Specifically, it sets government-wide sustainability goals, which include 100 percent carbon pollution-free electricity by 2030.

In January 2023, the CEQ published, “National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change.” This guidance instructs federal agencies to consider in their NEPA reviews: (1) the potential effects of a proposed action on climate change, including by assessing both GHG emissions and reductions from the proposed action; and (2) the effects of climate change on a proposed action and its environmental impacts. It also recommends contextualizing GHG emissions using national and state baselines, and determining the SC-GHG from a proposed action where feasible as a means of comparing the GHG impacts of the alternatives (Guidance on Climate Change Consideration, 2023). The SC-GHG is an estimate of the monetized damages associated with incremental increases in GHG emissions, such as reduced agricultural productivity, human health effects, property damage from increased flood risk, and the value of ecosystem services (Interagency Working Group on Social Cost of Greenhouse Gases, 2021).

The Air Force has adopted the Prevention of Significant Deterioration threshold for GHG of 75,000 tons per year of CO_2e (or 68,039 metric tons per year) as an indicator or "threshold of insignificance" for GHG emissions. This indicator does not define a significant impact (e.g., GHG emissions above this rate are not inherently significant); however, it provides a threshold to identify actions that are insignificant (*de minimis*, too trivial or minor to merit consideration) (AFCEC, 2023b).

With respect to GHGs, the ROI for climate is global due to the global mixing and accumulation of GHGs in the atmosphere. With respect to the effects of climate change, the ROI includes the Proposed Action Area and the immediate vicinity within 0.5 mile, which is the area in which the Proposed Action could have environmental impacts.

3.3.1 Affected Environment

Homestead, Florida, which is the closest city to Homestead ARB with recent data, has a tropical climate. The average high temperature is 87.7 degrees Fahrenheit (°F) in August, which is the hottest month, and the average low temperature is 60.9°F in January, which is the coldest month. Homestead has average annual precipitation of 45.5 inches per year. The wettest month of the year is June, with an average rainfall of 7.5 inches (U.S. Climate Data, 2024).

Most of the state of Florida’s peninsula has warmed more than 1°F in the last century. South Florida has warmed more than the rest of the state. Long-term climate areas of concern in Florida include sea-level rise and retreating shorelines, increasing rain and wind intensities during hurricanes and tropical storms, increased precipitation amounts during heavy rainstorms, increased inland flooding, and increased relative humidity leading to increasing heat indexes and associated health impacts. Of these potential impacts, increased hurricane and tropical storm intensity, increased precipitation intensity during rainfall events, and inland flooding could impact Homestead ARB. Increased hurricane and tropical storm intensity, and increased precipitation intensity during rainfall events could impact the Proposed Action.

Because climate change is the result of aggregate global GHG emissions, ACAM provides projected national and state GHG emissions as baselines by which to compare the Preferred Alternative’s projected total emissions, as a means of providing context for these emissions. **Table 4** shows projected baseline GHG emissions in Florida and the U.S., for each construction year, and in total for the Preferred Alternative’s construction period (CY 2025 and CY 2026).

Table 4: State and National Baseline Greenhouse Gas Emissions

Florida GHG Emissions (metric ton)				
YEAR	**CO_2**	**CH_4**	**N_2O**	**CO_2e**
2025	227,404,647	552,428	58,049	228,015,124
2026	227,404,647	552,428	58,049	228,015,124
Total	454,809,294	1,104,855	116,098	456,030,247
U.S. GHG Emissions (metric ton)				
YEAR	**CO_2**	**CH_4**	**N_2O**	**CO_2e**
2025	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2026	5,136,454,179	25,626,912	1,500,708	5,163,581,798
Total	10,272,908,358	51,253,823	3,001,415	10,327,163,597

Source: ACAM Version 5.0.23a (note: totals reflect rounding in ACAM)

3.3.2 Environmental Consequences

A significant adverse climate change impact would occur if the Proposed Action substantially increases the vulnerability of the ROI, or nearby properties, to the effects of climate change.

3.3.2.1 Preferred Alternative

The Preferred Alternative would result in a temporary increase in GHG emissions related to construction activities, including fuel combustion in construction vehicles and equipment (e.g., backhoes, bulldozers), material delivery and debris hauling vehicles, and construction employee commute vehicles. There would be no long-term, operational GHG emissions, such as new stationary sources or additional personnel commuting.

Construction GHG emissions were estimated for each construction year and aggregated for both construction years, using ACAM (Version 5.0.23a). The GHG Emissions Report for the Preferred Alternative is located in **Appendix D**. **Table 5** shows estimated net annual and net total GHG emissions from construction of the Preferred Alternative. A comparison of these emissions relative to state and national GHG emission baselines during the same time period (CY 2025 and CY 2026) is provided in **Table 6**.

To provide context for the impact of these emissions, the SC-GHG of the Preferred Alternative is disclosed and compared to state and national SC-GHG in **Table 7**. ACAM uses SC-GHG derived from the Interagency Working Group on Social Cost of Greenhouse Gases *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates Under Executive Order 13990*. Using a 2.5 percent discount factor, the SC-GHG per metric ton in 2020 U.S. Dollars is $83 for CO_2 in 2025 and $84 for CO_2 in 2026; $2,200 for CH_4 in 2025 and $2,300 for CH_4 in 2026; and $30,000 for N_2O in both 2025 and 2026 (Interagency Working Group on Social Cost of Greenhouse Gases, 2021).

Table 5: Construction GHG Emissions Summary (Metric Tons/Year)

YEAR	CO_2	CH_4	N_2O	CO_2e	Threshold (CO_2e)	Exceedance
2025	206	0.00730742	0.00676384	208	68,039	No
2026	15	0.00060503	0.00022711	16	68,039	No

Source: ACAM Version 5.0.23a

Table 6: Total GHG Emissions (Metric Tons) Compared to State and National Baseline

	CO_2	CH_4	N_2O	CO_2e
State Total	454,809,294	1,104,855	116,098	456,03011,247
U.S. Total	10,272,908,358	51,253,823	3,001,415	10,327,163,597
Preferred Alternative	222	0.007912	0.006991	224
Percent of Florida Totals	**0.00004874%**	**0.00000072%**	**0.00000602%**	**0.00004911%**
Percent of U.S. Totals	**0.00000216%**	**0.00000002%**	**0.00000023%**	**0.00000217%**

Source: ACAM Version 5.0.23a
Note: Table reflects total GHG emissions over the two-calendar-year construction period.

Table 7: Social Cost of Greenhouse Gases (2020 U.S. Dollars, 2.5 Percent Discount Factor)

Preferred Alternative Annual SC-GHG ($1000 / Year)				
YEAR	**CO_2**	**CH_4**	**N_2O**	**Total**
2025	$17.12	$0.02	$0.20	$17.34
2026	$1.30	$0.00	$0.01	$1.31
Florida Annual SC-GHG ($1000 / Year)				
YEAR	**CO_2**	**CH_4**	**N_2O**	**Total**
2025	$18,874,585.70	$1,215,340.97	$1,741,465.95	$21,831,392.62
2026	$19,101,990.35	$1,270,583.74	$1,741,465.95	$22,114,040.04
U.S. Annual SC-GHG ($1000 / Year)				
YEAR	**CO_2**	**CH_4**	**N_2O**	**Total**
2025	$426,325,696.86	$56,379,205.70	$45,021,229.08	$527,726,131.63
2026	$431,462,151.04	$58,941,896.86	$45,021,229.08	$535,425,276.98
Total SC-GHG ($1000 / Year)				
	CO_2	**CH_4**	**N_2O**	**Total**
Preferred Alternative	$18.41	$0.02	$0.21	$18.64
Florida	$37,976,576.06	$2,485,924.71	$3,482,931.90	$43,945,432.66
U.S.	$857,787,847.89	$115,321,102.56	$90,042,458.16	$1,063,151,408.61
Preferred Alternative SC-GHG Percent of Totals				
	CO_2	**CH_4**	**N_2O**	**Total**
Florida	0.00004849%	0.00000070%	0.00000602%	0.00004242%
U.S.	0.00000215%	0.00000002%	0.00000023%	0.00000175%

Source: ACAM Version 5.0.23a (note: totals reflect rounding in ACAM)

As shown in **Table 5**, construction of the Preferred Alternative would cause minor short-term, direct, GHG emissions increases during the construction period. Emissions of construction related GHG in each year would be well below applicable insignificance indicators. Therefore, the Preferred Alternative's impacts on climate change would be *less-than-significant*, and no further analysis is required. The total SC-GHG of the Preferred Alternative would be approximately $18,640.

Neither component of the Preferred Alternative is located in a floodplain (**Figure 5**), and both components would be designed to ensure that precipitation at the sites is moved to existing stormwater management features, including minor surface grading in the area of the BAF to improve overland flow at the site. As such, precipitation and flooding are not anticipated to be a concern for the Preferred Alternative. The BAF would be constructed in compliance with the High Velocity Hurricane Zone and Miami-Dade County building codes.

3.3.2.2 No Action Alternative

Under the No Action Alternative, the proposed installation improvements would not be constructed and there would be no temporary increase in GHG emissions. The No Action Alternative would have no impact on climate change.

3.4 EARTH RESOURCES

Earth resources analyzed in this EA include geology, topography, and soils. Geology refers to surface and subsurface materials and processes, as well as their seismic tendencies and stability. Topography pertains to changes in both the elevation and terrain of a certain area. Soils are typically described in terms of their type, physical characteristics, and types of land use. The ROI for earth resources includes the geology, topography, and soils that lie within the Proposed Action Area.

Prime Farmland: Prime Farmland is defined as land that is available for and has a combination of physical and chemical characteristics that are best suited for producing food, feed, forage, fiber, and oilseed crops (USDA, 2015). The Farmland Protection Policy Act of 1981 (7 USC 4201 et seq.) states that federal agencies must "minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses." No prime farmland is located within or directly adjacent to the ROI (NRCS, 2024). Therefore, activities under the Preferred Alternative would have no potential to affect prime farmlands and this resource is dismissed from further analysis.

Hydric soils: Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part. Under natural conditions, these soils are able to support the growth of hydrophytic vegetation. The presence of hydric soils is one of the criteria used to identify and delineate wetlands. No hydric soils are present within or adjacent to the ROI (NRCS, 2024). Therefore, activities under the Preferred Alternative would have no potential to affect hydric soils and this resource is dismissed from further analysis.

3.4.1 Affected Environment

Geology: Homestead ARB is located on the Miami Rock Ridge, within the southern portion of the Atlantic Coastal Ridge, which is characterized as a relict beach ridge consisting of very porous oolitic limestone, interbedded with sandy limestone and thin layers of hard limestone, that formed under warm, shallow marine waters during higher sea levels of the Pleistocene era about 2 million years ago (Homestead ARB, 2015; NRCS, 1996). The U.S. Geological Survey (USGS) 2023 update of the Seismic Hazard Map shows the area is at low risk of seismic hazard (i.e., hazard level 1 out of 7) (USGS, 2024).

Topography: The majority of Homestead ARB is relatively flat, with elevations ranging from approximately 5 to 10 feet above sea level (Homestead ARB, 2015).

Soils: Homestead ARB generally contains relatively poor to moderately well drained soils formed on marine terraces that typically do not contain significant areas of hydric soil inclusions. Due to decades of

development, many of the native soil profiles have been disturbed and no longer exist. The developed lands were graded and filled and are now classified within the modern soil taxonomy criteria as Urban Lands.

The soils in the ROI are relatively sandy and have moderate water infiltration rates. The precise depth to the water table at the ROI is unknown, though it is estimated to vary between 18 to 60 inches below ground surface (NRCS, 2024). Three soil map units are identified in the ROI. While the BAF area and utility corridor only consist of soils classified under the Udorthents/Urban land complex map unit, the proposed RV storage area consists of soils classified as both Cardsound marly silty clay/Urban Land complex and Urban Land. None of the soil map units are considered to be prime farmland or hydric soils (NRCS, 2024) (**Table 8** and **Figure 4**).

Table 8: Select Soil Characteristics for the Proposed Action Area

Map Unit Name	Acres	Landform / Description
10: Udorthents, limestone substratum-Urban land complex, 0 to 2 percent slopes	3.4	Marine terraces; somewhat poorly drained soils, depth to water table is about 18 to 42 inches; depth to restrictive feature (lithic bedrock) is about 40 to 85 inches.
15: Urban land, 0 to 2 percent slopes	1.0	Hills on marine terraces, ridges on marine terraces, knolls on marine terraces, rises on marine terraces, flatwoods on marine terraces.
56: Cardsound marly silty clay loam-Rock outcrop-Urban land complex, 0 to 2 percent slopes	3.6	Rises on marine terraces; moderately well drained soils, depth to water table is about 42 to 60 inches; depth to restrictive feature (lithic bedrock) is about 2 to 9 inches.

Source: (NRCS, 2024)

3.4.2 Environmental Consequences

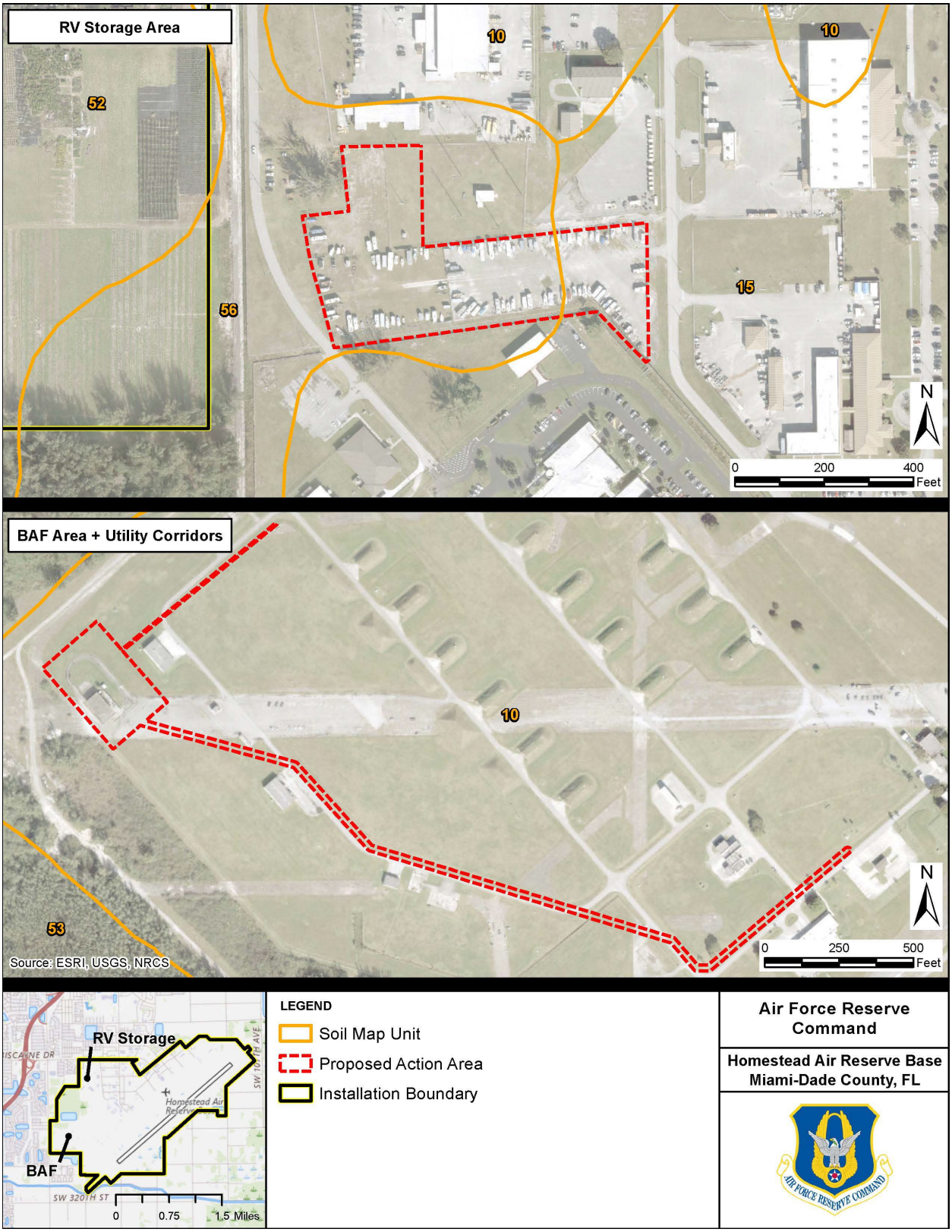
An earth resources impact would be significant if it would expose people or structures to major geological hazards or substantially increase potential occurrences of erosion or sedimentation.

3.4.2.1 Preferred Alternative

Geology: During construction, ground disturbance and soil removal activities would include minor grading for paving at the RV storage area and the BAF, as well as trenching activities within narrow corridors up to 4 feet below ground surface for utility line installations. Bedrock may be encountered during these construction activities. Bedrock would be excavated using hand tools and conventional excavation equipment, if necessary. As such, minor localized impacts to geological conditions would be expected. While these impacts would permanently alter the geology in the ROI, impacts would affect only a small area within Homestead ARB. Furthermore, no geologic hazards or seismic events are expected to interfere with, or pose an operational risk to, construction activities, nor would construction activities exacerbate the local risk of a seismic event occurring. Therefore, the Preferred Alternative would result in *long-term, less-than-significant adverse impacts* to geology would occur under the Preferred Alternative.

Topography: Although the ROI is generally flat, minor grading and trenching would be necessary for construction of paved surfaces and utility line installation. Any such grading would not meaningfully impact the topography of the ROI. Any excavated soils removed for utility line installation would be used to backfill the trenches to ground level. *No impacts* to topography would occur under the Preferred Alternative.

Figure 4: Soils on the Proposed Action Area



Soils: Construction under the Preferred Alternative would disturb up to 7.9 acres. Disturbed soils may be temporarily susceptible to runoff and erosion. Since the Proposed Action would exceed 1 acre of land disturbance, a NPDES General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems would be obtained for the project, pursuant to the Clean Water Act (CWA) (33 USC 1251 et seq). Furthermore, the current Homestead ARB Stormwater Pollution Prevention Plan (SWPPP) would be implemented, which has identified potential sources of pollutants, described pollution prevention activities (i.e., BMPs) to be implemented on the site, and established erosion and sediment controls to manage stormwater discharges and minimize sedimentation to the extent practicable. Implementation of the erosion and sediment control measures specified in the SWPPP and NPDES permit would minimize potential impacts to soil runoff and erosion. Potential impacts on soils may also occur if petroleum products or other liquids associated with construction equipment were accidentally spilled or released. Potential hazardous and toxic materials and waste (HTMW) impacts are discussed further in **Section 3.11**.

As part of the BAF design, Homestead ARB would ensure the pre-development hydrology of the sites would be maintained to the maximum extent technically feasible pursuant to Section 438 of EISA. This would be accomplished through site grading, the use of LID features, such as stormwater management features, and site revegetation to prevent erosion. Implementation of these measures would manage long-term soil erosion and sedimentation in unpaved areas during operation of the new facility; paved areas would have no potential for long-term impacts to soils. Therefore, The Preferred Alternative would result in *short-term, less-than-significant adverse impacts* to soils. There would be no *long-term impacts* to soils.

3.4.2.2 No Action Alternative

Under the No Action Alternative, the proposed improvements at Homestead ARB would not be constructed and the related soil disturbance and removal associated with the Preferred Alternative would not occur. Therefore, there would be *no impact* to earth resources associated with the No Action Alternative.

3.5 WATER RESOURCES

Water resources analyzed in this EA include surface water (including stormwater), wetlands, floodplains, and groundwater. Surface water resources comprise lakes, rivers, and streams and are important for a variety of ecological, economic, recreational, aesthetic, and human health reasons. Wetlands are areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (USACE, 1987). Wetlands serve a variety of functions including flood control, groundwater recharge, maintenance of biodiversity, wildlife habitat, recreational opportunities, and maintenance of water quality. Floodplains are belts of low, level ground on one or both sides of a stream channel and are subject to either periodic or infrequent inundation by flood water. A 100-year floodplain has a 1 percent chance of inundation in any given year. Groundwater can be defined as subsurface water resources that are interlaid in layers of rock and soil and recharged by surface water seepage. Groundwater is important for its use as a potable water source, agricultural irrigation, and industrial applications.

The ROI for surface waters, wetlands, and floodplains includes the boundaries of the Proposed Action Area, as well as the down-gradient waterbodies receiving stormwater runoff within 0.5 miles. The ROI for groundwater includes the portion of the groundwater basin that underlies the Proposed Action Area.

Wetlands: Approximately 230 acres of jurisdictional wetlands occur on Homestead ARB (Homestead ARB, 2015). Wetlands are primarily located adjacent to the airfield. There are no wetlands present within, in the vicinity, or downstream of the Proposed Action Area. Therefore, activities under the Preferred Alternative would have no potential to affect wetlands and this resource is dismissed from further analysis.

Floodplains: Based on Federal Emergency Management Act (FEMA) Flood Insurance Rate Map (FIRM) Panel 12086C0732L, effective 9/11/2009, there are no 100-year floodplains or regulatory floodways present within the Proposed Action Area (**Figure 5**) (FEMA, 2009). Stormwater on the Proposed Action Area drains into existing canals; proposed development of the Proposed Action Area is not anticipated to impact any off-site floodplains or contribute to any loss in flood control capacity. Therefore, the Preferred Alternative would have no potential to impact floodplains and this resource is dismissed from further analysis.

3.5.1 Affected Environment

Surface Water: Homestead ARB has generally poor natural drainage due to the relatively flat terrain and the high-water table. Stormwater runoff is collected through a series of drainage systems that eventually flow into the Boundary Canal system (Homestead ARB, 2015). The Boundary Canal System includes two main canals, the Boundary Canal and the Flightline Canal, as well as associated smaller ditches and canals. The West-South segment of the Boundary Canal System drains from the northwest corner near Biscayne Drive, slightly north of the proposed RV storage area and flows south, collecting stormwater flowing west from the proposed BAF (**Figure 5**). Both project sites discharge into the Boundary Canal, which runs the perimeter of the installation. During periods of heavy rainfall, water is pumped out of the reservoir, into Military Canal, and eventually flows into Biscayne Bay, approximately two miles east of Homestead ARB.

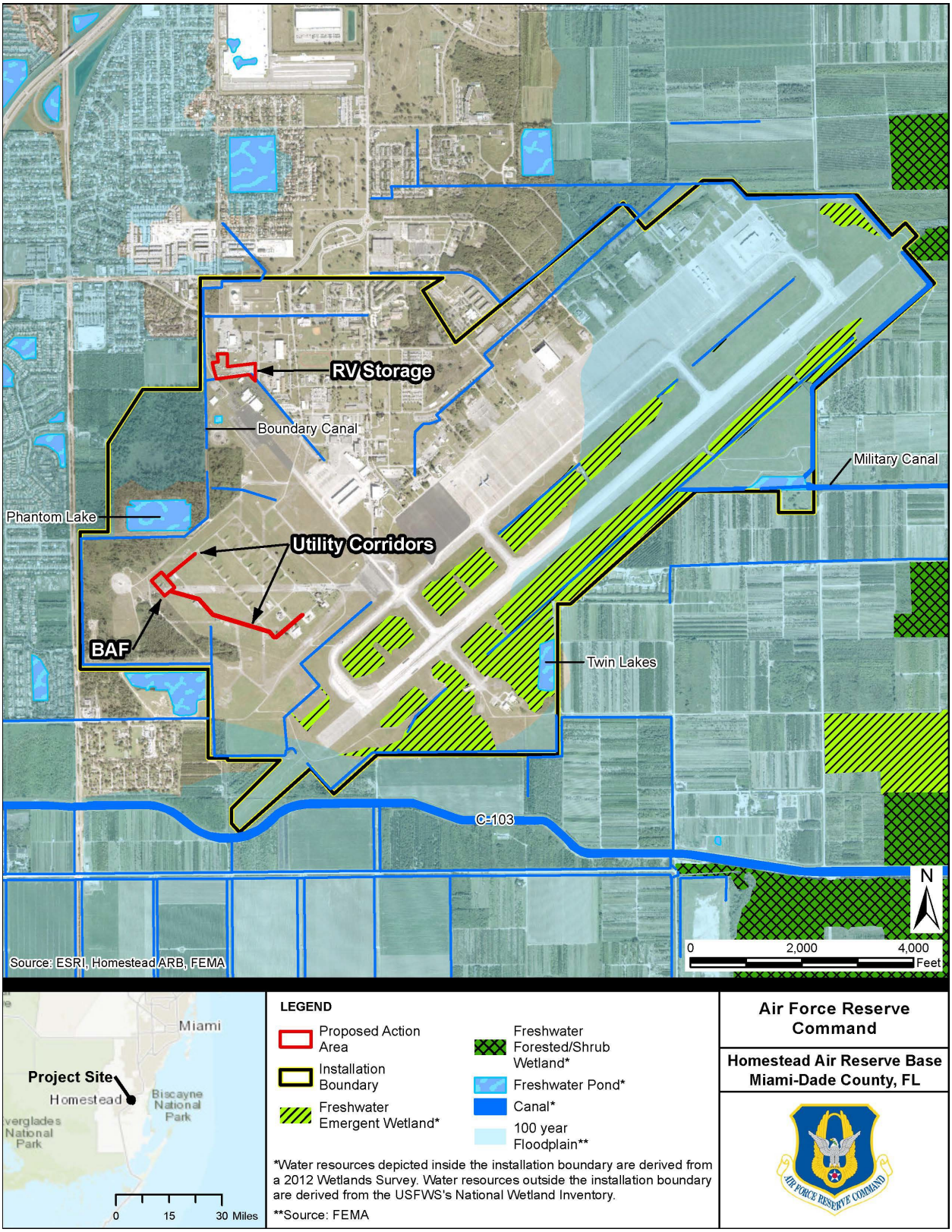
Pursuant to Section 303(d) of the Clean Water Act, states maintain a list of surface waters impaired by pollution. The Florida Department of Environmental Protection's (FDEP) 303d list includes Military Canal, which is identified as impaired due to high specific conductance (amount of dissolved ions in liquid that relates to the ability to conduct electricity) (FDEP, 2023).

The FDEP has designated all the water bodies within Homestead ARB as Class III Surface Waters which are used for recreation and maintenance of a healthy, well-balanced fish and wildlife population (Chapter 62-302.400, Florida Administrative Code) These surface water bodies include lakes.

Groundwater: There are three aquifers underneath Homestead ARB. The Biscayne aquifer is a shallow aquifer situated approximately 80 to 100 feet below Homestead (Homestead ARB, 2015). The Biscayne Aquifer is a sole source aquifer according to the USEPA (USEPA, 2024c). Because of its location, the Biscayne Aquifer receives water inputs from stormwater that sits and penetrates the ground surface. Beneath the Biscayne Aquifer is the Intermediate Confining Unit that isolates Biscayne Aquifer from the Floridan Aquifer (Homestead ARB, 2015). The Intermediate Confining Unit continues to a depth of approximately 800 feet. Approximately 1,000 feet below Homestead ARB lies the Lower Floridan Aquifer. This aquifer contains high levels of saltwater intrusion because of its proximity to Biscayne Bay. The Lower Floridan Aquifer receives water through rainfall and stormwater infiltration. Homestead ARB is connected to the city water utility supplied by Miami-Dade County Water and Sewer Department (Homestead ARB, 2015).

Coastal Resources: The Proposed Action Area is located within Florida's coastal zone and must comply with the enforceable policies established under Florida's Coastal Management Program. Federal Consistency Determinations are submitted to the FDEP for state review.

Figure 5: Water Resources on and near Homestead ARB



3.5.2 Environmental Consequences

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

3.5.2.1 Preferred Alternative

Surface Water: While there are no surface waters within the Proposed Action Area, portions of the Boundary Canal are within the ROI for water resources and could be impacted by stormwater runoff from the Proposed Action Area. Proposed construction activities for the Preferred Alternative would involve soil disturbance that could result in increased runoff from the Proposed Action Area without proper erosion and sediment control measures. Construction activities that disturb one or more acres of land are subject to the requirements of the CWA; therefore, Homestead ARB would obtain a NPDES permit and comply with the provisions included in its SWPPP, since both components of the Preferred Alternative would impact over one acre of land. The SWPPP would identify potential sources of pollutants, describe all pollution prevention activities that would be implemented, and establish erosion and sediment control to manage stormwater discharges and minimize sedimentation to the extent practicable. Construction crews would adhere to best management practices outlined in the SWPPP, and the erosion and sediment controls would be implemented prior to land disturbing activities and maintained in good working order for the duration of construction. Therefore, the Preferred Alternative would have *short-term, less-than-significant impacts* on surface waters in the ROI.

The Preferred Alternative would permanently create up to 2.53 acres (0.23 acres for BAF and 2.3 acres for RV storage improvements) of new impervious surfaces, which could increase the amount of runoff in the ROI. However, stormwater at the Project Sites would sheet flow across pavement into adjacent pervious areas where it would either infiltrate or travel into Homestead ARB's existing canal system. Overall, the Preferred Alternative would not meaningfully affect stormwater capacity of the canal systems on base and downstream. Moreover, the Project would be designed to minimize stormwater impacts to the extent practicable. Homestead ARB would ensure the BAF project is designed to ensure that post-project hydrology mirrors pre-project hydrology in compliance with Section 438 of the EISA. Therefore, the Preferred Alternative would have *long-term, less-than-significant impacts* on surface waters in the ROI.

While Military Canal is impaired due to specific conductance, stormwater BMPs outlined in the SWPPP would be implemented to manage stormwater runoff, and the BAF specifically would be designed to maintain the pre-development hydrology of a site in compliance with Section 438 of the EISA. Overall, the Preferred Alternative would not appreciably exacerbate specific conductance in Military Canal. Therefore, the Preferred Alternative would have a *negligible impact* on impaired streams under Section 303(d) of the CWA.

Groundwater: Maximum excavation depth is anticipated to be 4 feet below ground surface to facilitate installation of utilities. Though there are three aquifers present beneath Homestead ARB, the shallowest aquifer, Biscayne Aquifer, occurs at 80 feet below the surface. The Preferred Alternative has no potential to impact aquifers underneath Homestead ARB and would not include any wells or water withdrawals. Potential impacts to groundwater may occur from the accidental spill of petroleum products or other liquids on the sites during construction activities. With implementation of BMPs, such as carrying out routine inspections of equipment, maintaining spill-containment materials on-site, and adhering to site-specific HTMW plans, the potential for impacts to the groundwater would be minimized. Therefore, the Preferred

Alternative would result in *no impact* to groundwater in the ROI. Because the Proposed Action is a direct federal action, it is not subject to Sole Source Aquifer project review by the USEPA.

Coastal Resources: Implementation of the Preferred Alternative would be consistent to the maximum extent practicable with Florida's enforceable policies, with compliance with applicable regulations and appropriate agency coordination. The AFRC's Federal Consistency Determination is available in **Appendix E**.

3.5.2.2 No Action Alternative

Under the No Action Alternative, the proposed improvements at Homestead ARB would not be constructed and there would be *no impact* to water resources.

3.6 BIOLOGICAL RESOURCES

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

The ROI for biological resources includes vegetation present within the boundaries of the Proposed Action Area, terrestrial wildlife present on-site or within 0.2 miles of the site boundaries, and aquatic resources present downstream of the site within 0.5 miles (in accordance with the ROI for surface waters; see **Section 3.5**).

3.6.1 Affected Environment

Vegetation: Homestead ARB is located in the Southern Florida Coastal Plain ecoregion, which historically consists of flat plains with wet soils, marshland, and swamp land cover. However, this original vegetation has been significantly altered within the boundaries of Homestead ARB due to development activities. Current land cover on base primarily consists of turf and landscaped areas, as well as remnant pine rockland, open grasslands, and wetland marshes (Homestead ARB, 2015). Vegetation on the proposed RV storage area largely consists of areas of temple grass (*Zoysia* sp.), which is currently disturbed with frequent mowing and placement of RVs. Similarly, the proposed BAF site and associated utility corridors are largely previously disturbed and dominated by non-native grass species including temple grass and St. Augustine (*Stenotaphrum secundatum*) intermixed with several forb species. The BAF areas receive continual, routine mowing to maintain vegetation at a height of 2 to 4 inches. The Integrated Natural Resources Management Plan (INRMP) and the Statement of Work for Grounds Maintenance of the Cantonment and Munitions Area guides general vegetation management at Homestead ARB (Homestead ARB, 2015). While the Proposed Action Area is dominated by non-native grasses, there are two federally listed species that also inhabit these disturbed habitats, discussed below.

Invasive plant species, such as Brazillian pepper, Australian pine, Burma reed (*Neyaudia reynaudiana*), and Napier grass (*Cenchrus purpureus*) are known to occur on Homestead ARB. Specifically, Burma reed, Napier grass, and other exotic grasses are located throughout Homestead ARB and likely present on the Proposed Action Area. Homestead ARB implements an Integrated Pest Management Plan to guide management of invasive species on the installation (Homestead ARB, 2015).

Wildlife: Homestead ARB supports a diversity of wildlife species. Common mammals found on base include the coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), opossum (*Didelphis virginiana*), marsh rabbit (*Sylvilagus palustris*), raccoon (*Procyon lotor*), and bobcat (*Lynx rufus*). Birds known to occur

on base include herons (*Ardea herodias, Egretta tricolor*), mottled ducks (*Anas fulvigula*), double-crested cormorants (*Phalacrocorax auritus*), and red-shouldered hawks (*Buteo lineatus*). Reptile and amphibian species include the checkered garter snake (*Thamnophis marcianus*), Florida soft shell turtle (*Apalone ferox*), snapping turtle (*Chelydra serpentina*), Florida chorus frog (*Pseudacris nigrita verrucose*), and pygmy rattlesnake (*Sistrurus miliarius*). Some wetlands and lakes around base provide habitat for species like the largemouth bass (*Micropterus salmoides*), bluegill (*Lepomis macrochirus*), and striped mullet (*Mugil cephalus*) (Homestead ARB, 2015).

Special Status Species: AFRC previously completed programmatic Section 7 consultation for Ongoing and Future Military and Non-Military Operations at Homestead ARB, which included a May 2018 Biological Assessment and the corresponding September 2019 Biological Opinion (BO) (**Appendix F**) (USFWS, 2019). The proposed BAF and RV storage improvements were not specifically included under this prior consultation; however, these projects do meet the intent and general parameters for inclusion within the "Planned Facilities Demolition, Renovation, Development and Construction" category of this prior programmatic consultation. Additionally, the BAF is proposed at the same location as described and covered in the 2019 BO for the then-proposed MAC Pad.

AFRC queried the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database to determine whether any newly federally listed species (i.e., since completion of the prior programmatic consultation) have the potential to occur in the Proposed Action Area. According to IPaC, 33 federally listed threatened and endangered species, one proposed federally endangered species, and one candidate species have the potential to occur at the Proposed Action Area. The BO established that three federally listed species may be adversely affected by operations, including construction as described in this EA, at Homestead ARB: Florida bonneted bat (*Eumops floridanus*; federally threatened); sand flax (*Linum arenicola*; federally threatened); and Small's milkpea (*Galactia smallii*; federally endangered). An additional 13 species are covered in the existing 2019 BO: American alligator (*Alligator mississippiensis*), American crocodile (*Crocodylus acutus*), wood stork (*Mycteria americana*), Everglade snail kite (*Rostrhamus sociabilis plubeus*), Bartram's scrub hairstreak butterfly (*Strymon acis bartrami*), Blodgett's silverbrush (*Argythamnia blodgettii*), Carter's small-flowered flax (*Linum carteri carteri*), eastern indigo snake (*Drymarchon corais couperi*), Everglades bully (*Sideroxylon reclinatum* spp. *Austrofloridense*), Florida brickell-bush (*Brickellia mosieri*), Florida leafwing butterfly (*Anaea troglodyte floridalis*), Florida prairie-clover (*Dalea carthagenensis floridana*), and tiny polygala (*Polygala smallii*). These species are excluded from further discussion due to their inclusion in the 2019 BO, which determined that covered activities *may affect, are not likely to adversely affect* these species.

The remaining 19 species are not identified in the 2019 BO. Of these, 12 species are identified in Homestead ARB's INRMP as either not occurring or being unlikely to occur on Homestead ARB: Florida panther (*Felis concor coryi*)/puma (*Felis concolor*), green sea turtle (*Chelonia mydas*), hawksbill sea turtle (*Eretmochelys imbricata*), leatherback sea turtle (*Dermochelys coriacea*), loggerhead sea turtle (*Caretta caretta*), Miami blue butterfly (*Cyclargus (=Hemiargus) thomasi bethunebakeri*), cape sable thoroughwort (*Chromolaena frustrata*), crenulate lead-plant (*Amorpha crenulata*), deltoid spurge (*Chamaesyce deltoidei* spp. *deltoidea*), Florida pineland crabgrass (*Digitaria pauciflora*), and Florida semaphore cactus (*Consolea corallicola*). These species are dismissed from further discussion due to either not occurring or being unlikely to occur on the Proposed Action Area. The Proposed Action would have no effect on these species.

The last seven species, as well as the three species identified in the 2019 BO as potentially incurring adverse effects from operations at Homestead ARB, are briefly discussed in **Table 9**. Notably, Homestead ARB implements a Protected Plant Management Plan, which identifies measures that may be implemented to manage the habitat for Small's milkpea, sand flax, and other state-protected species (Homestead ARB, 2015).

Table 9: Federally Listed Species with Potential to Occur on the Proposed Action Area[1]

Species	Federal Status	Discussion
Florida bonneted bat (*Eumops floridanus*)	Endangered	The Florida bonneted bat is the largest bat species in Florida and is insectivorous (FWC, 2024a). This species has a low population estimate and is restricted to a few counties in southern Florida. Their foraging habitat includes tropical hardwood, pineland, and mangrove habitats as well as urban areas including golf courses and neighborhoods (FWC, 2024a). Acoustic surveys completed in 2015 and 2016 confirmed usage of Homestead ARB for foraging and potentially roosting, though no roost sites were identified (USFWS, 2019). Known roost locations include mature pine and cypress trees (USFWS, 2024b). This species does not hibernate and will remain active year-round (Animal Diversity Web, 2021).
Tricolored bat (*Perimyotis subflavus*)	Proposed Endangered	The tricolored bat is Florida's smallest bat and is insectivorous (FWC, 2024b). This species forms maternity colonies during the summer in palm fronds, or man-made structures such as outdoor sheds or barns (FWC, 2024b). It is unknown whether this species occurs on or in the vicinity of Homestead ARB.
Sand flax (*Linum arenicola*)	Endangered	Sand flax is an herbaceous plant with small, yellow flowers (Homestead ARB, 2015). This species occurs in pine rocklands and disturbed areas. This species does occur on Homestead ARB and in areas where it is known to occur, the grounds maintenance statement of work ensures specific requirements for mowing are met to protect this species. A survey conducted in June 2024 documented 329 sand flax individuals within the proposed RV storage area. This species does not occur in the proposed BAF area and associated utility corridors (Homestead ARB, 2024)
Small's milkpea (*Galactia smallii*)	Endangered	Small's milkpea is a small legume with purple flowers that occurs in pine rockland habitat (Homestead ARB, 2015). This species does occur on Homestead ARB and in areas where it is known to occur, the grounds maintenance statement of work ensures specific requirements for mowing are met to protect this species. A survey conducted in June 2024 documented 2,770 Small's milkpea occurrences within the proposed BAF area and associated utility corridors. This species does not occur in the proposed RV storage area (Homestead ARB, 2024).
Eastern black rail (*Laterallus jamaicensis ssp. jamaicensis*)	Threatened	The eastern black rail is a small marsh bird. In Florida, it is specifically found in tidal marshes along the coast (National Audubon Society, 2024). There is no suitable habitat for the species on the proposed sites. Therefore, the species has no potential to occur at the Proposed Action Area.

[1] This table excludes the 12 species identified in Homestead ARB's INRMP as either not occurring or being unlikely to occur on Homestead ARB.

Species	Federal Status	Discussion
Gulf sturgeon (*Acipenser oxyrinchus*)	Threatened	The gulf sturgeon is an anadromous fish species that spends time in the ocean during its adult years, and then travels to freshwater to spawn and lay eggs (NOAA Fisheries, 2022). This species may travel through the canal onto Homestead ARB; however, the Proposed Action would occur in the upland away from water sources. Therefore, the species has no potential to occur at the Proposed Action Area.
Beach jacquemontia (*Jacquemontia reclinate*)	Endangered	The beach jacquemontia is a low-growing vine that occurs in pine rocklands and coastal dunes (Homestead ARB, 2015; Florida Natural Areas Inventory, 2000). This species has the potential to occur within the pine rocklands on Homestead ARB; however, it has never been documented in any field surveys of those habitats on the base. Furthermore, the Proposed Action Area are not within pine rocklands or coastal dune habitat. Therefore, this species has no potential to occur at the Proposed Action Area.
Carter's mustard (*Warea carteri*)	Endangered	Carter's mustard is an annual herb that relies on fire and occurs in either sandy and/or pine forests (iNaturalist, 2024). This species has the potential to occur in pine rockland habitat on Homestead ARB; however, no pine rockland habitat is found within the Proposed Action Area. Additionally, the Proposed Action Area are in the maintained (regularly mowed) portion of the airfield; no fire is permitted in these areas.
Pineland sandmat (*Chamaesyce deltoidei pinetorum*)	Threatened	Pineland sandmat is a fire-dependent herb that occurs in pine rocklands (USFWS, 2022). This species has the potential to occur in pine rockland habitat on Homestead ARB; however, no pine rockland habitat is found within the Proposed Action Area.
Monarch butterfly (*Danaus Plexippus*)	Candidate	While not federally protected, IPaC identified the monarch butterfly as potentially occurring on the Proposed Action Area. Monarchs in North America undergo long-distance migration between summer and overwintering sites, although this species is known to be a year-round resident in Florida (Fish & Wildlife Federation of Florida, 2024; USFWS, 2024c). This species is not known to occur on Homestead ARB. Additionally, both the BAF and RV storage improvement sites are periodically mowed and vegetation is maintained at a height between 2 to 4 inches and 7 to 14 inches, respectively, to decrease attractiveness to wildlife (Homestead ARB, 2015). Therefore, the Proposed Sites represent marginal habitat for this species.

Additionally, the Florida Fish and Wildlife Conservation Commission (FWC) regulates state-listed wildlife species[2] while the Florida Department of Agriculture and Consumer Services (FDACS) regulates state-listed plant species. Currently there are 39 wildlife species that are state-designated threatened, 447 state-designated endangered plant species, and 118 state-threatened plant species (FWC, 2022; FDACS, 2023). A survey conducted in June 2024 of the Proposed Action Area identified three state-threatened plant species, Christmasberry (*Crossopetalum ilicifolium*), Everglades greenbrier (*Smilax havanensis*), and Bahama ladder brake (*Pteris bahamensis*), within the proposed RV storage area. No state-threatened plant species were identified with the proposed BAF area and associated utility corridors.

Many birds are year-round or part time residents of Homestead ARB. Wetlands, ponds, and ditch habitats on the installation are commonly used by wading birds. IPaC identified 26 migratory Birds of Conservation Concern (BCC)[3] as having potential to occur on the Proposed Action Area. The breeding season for these BCCs is generally April through August, although multiple species breed in the fall and winter months. Six of the species identified do not breed in this area of Florida (USFWS, 2024a). Notably, the Florida burrowing owl (*Athene cunicularia floridana*) is known to occur on Homestead ARB and perennial nesting sites are located within the Munitions Area. The burrowing owl population may consist of both year-round non-migratory individuals as well as winter migrants. The mating and breeding season for this species extends from February through July (Homestead ARB, 2015). Homestead ARB conducts periodic monitoring for burrowing owl presence and institutes protective buffers of rough grass around owl burrows (Homestead ARB, 2015).

Bald eagles (*Haliaeetus leucocephalus*) are periodically observed at Homestead ARB; however, no nests occur within or in the immediate vicinity of the installation. The nearest documented bald eagle nest is located approximately 2.5 miles northeast of the installation (Audubon, 2020).

3.6.2 Environmental Consequences

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

3.6.2.1 Preferred Alternative

Vegetation: Construction of the Preferred Alternative would disturb up to approximately 4.0 acres of existing vegetation (0.23 acres for BAF, 1.5 for utility extensions, and 2.3 acres for RV storage expansion), 2.53 acres of which would be permanently converted to pavement. No trees would be removed under the Preferred Alternative, however, existing shrubs, if encountered, would be removed during construction. Following construction, sod would be restored in temporarily disturbed areas, including areas where utility extensions would occur. The potential spread of weeds or invasive species during construction would be managed in accordance with best management practices outlined in the Integrated Pest Management Plan, including restrictions on pesticide application when wind speed exceeds 10 miles per hour and only using pesticides in accordance with product labels and instructions (Homestead ARB, 2015). The Preferred Alternative would not substantially diminish the populations of any regionally or locally important vegetation species. Therefore, the Preferred Alternative would have *short and long term, less-than significant adverse impacts* on vegetation in the ROI.

[2] In 2010, the FWC established an imperiled species management system and revised its imperiled species rules. Following this revision, all federally listed species are incorporated into the Florida Endangered and Threatened Species List. Additional species listed by FWC are included as state-designated threatened species *(FWC, 2022)*.

[3] The USFWS identifies BCCs with potential to occur on the Proposed Action Area. BCCs are defined as "migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent [the USFWS's] highest conservation priorities" *(USFWS, 2021)*.

Wildlife: During construction, common wildlife species occurring on the Proposed Action Area would be physically displaced, and construction noise and increased human activity may also disturb wildlife species located within 0.2 mile of construction activities. Mobile wildlife species, such as birds and small mammals, would likely relocate to areas of similar habitat near the sites although less-mobile species (e.g., some reptiles and amphibians) could be inadvertently destroyed by construction activities. Although disturbance from construction impacts would constitute an adverse impact, such impacts would occur at the individual level rather than the population or species levels, and would not inhibit the continued presence of common wildlife populations and species near the Proposed Action Area. Once construction is complete, common wildlife species accustomed to disturbances associated with an active military installation and close proximity to an active airfield would likely return to the Proposed Action Area. In addition, the Preferred Alternative would not create any elements that would encourage additional bird activity near the Homestead ARB airfield, thus avoiding BASH concerns. Therefore, construction of the Preferred Alternative would result in *short-term, less-than-significant adverse impacts* to wildlife.

Although the Preferred Alternative would include approximately 2.53 acres of permanent vegetation clearing (mostly turf grass), this would not constitute a substantial reduction in habitat availability for common wildlife species. Therefore, the Preferred Alternative would have a *long-term, less-than-significant adverse impact* to wildlife.

Special Status Species: AFRC has determined the Preferred Alternative would have *no effect* on the eastern black rail, gulf sturgeon*,* beach jacquemontia, Carter's mustard, and pineland sandmat due to lack of suitable habitat within the Proposed Action Area. AFRC also determined the Preferred Alternative would have *no effect* on the tricolored bat (*Perimyotis subflavus)*. Although it is unknown whether this species occurs on or in the vicinity of Homestead ARB, the conservation measure identified below for the Florida bonneted bat (i.e., pre-demolition inspection) would similarly protect this species.

Effects on the Florida bonneted bat, sand flax, and Small's milkpea would be covered under AFRC's 2019 BO. AFRC would conduct the following conservation measures outlined in the 2019 BO to minimize potential impacts to these three species.

- A qualified biologist would conduct a visual inspection of the existing MAC Pad canopy to identify roosting bats prior to initiation of proposed demolition activities. If the visual inspection identifies the presence of roosting bats, AFRC will coordinate with the USFWS on how to proceed with demolition.
- A qualified biologist conducted surveys in June 2024 of the Proposed Action Area for Small's milkpea and sand flax. Within the proposed RV storage area, 329 sand flax individuals were documented and no Small's milkpea occurrences[4] were found (Homestead ARB, 2024). Within the proposed BAF area, no sand flax individuals were documented, and 2,770 Small's milkpea occurrences were found (Homestead ARB, 2024). AFRC would include removal, including relocation, of sand flax and Small's milkpea plants resulting from the Preferred Alternative in its annual report to USFWS in accordance with Monitoring and Reporting Requirements set forth in the 2019 BO. Additionally, AFRC would plan to replant sand flax at a 5:1 ratio and Small's milkpea at a 3:1 ratio within 3 years, and would notify USFWS when this action is completed.

AFRC submitted their effect determinations for federally listed species to USFWS in April 2024 (**Appendix A**). No response has been received.

While Homestead ARB is not subject to the Florida State regulations concerning state-listed species, it strives to comply with state and local laws governing natural resources to the maximum extent practicable.

[4] An occurrence may include multiple collocated Small's milkpea plants.

In accordance with the INRMP, AFRC would endeavor to minimize potential impacts to the state-listed species. Three state-listed threatened species were documented during the June 2024 survey within the RV Storage Improvements Proposed Action Area: Christmasberry, Everglades greenbrier, and Bahama ladder brake. Potential adverse impacts to state-listed species would be similar to those described for vegetation and wildlife: habitat loss, displacement, disturbance, and/or mortality. Therefore, the Preferred Alternative would result in *short-* and *long-term, less-than-significant adverse impacts* to state-protected species.

Potential impacts to migratory birds could include disturbance to breeding individuals, particularly if construction occurred during the nesting season and nests are located within or adjacent to the construction site. Most birds would likely avoid the Proposed Action Area and/or relocate to nearby habitats in the area. Homestead ARB would survey the ROI prior to construction for nesting or breeding birds, as well as owl burrows. Depending on the bird species and location of the nesting/breeding activity, a construction buffer around the nest site may be implemented. Monitoring of any nesting/breeding activity would also be conducted to determine if a construction delay or other restrictions are warranted. With these impact minimization measures, construction would have a *short-term*, *negligible adverse impact* on migratory birds, including BCCs identified within IPaC.

No impacts to bald eagles would occur as no nests occur in the vicinity of the Proposed Action Area and foraging eagles would be expected to avoid the Proposed Action Area due to construction related disturbance and increased human presence.

3.6.2.2 No Action Alternative

Under the No Action Alternative, the proposed installation improvements at Homestead ARB would not be constructed and related impacts on vegetation, wildlife, and special status species associated with the Preferred Alternative would not occur. Therefore, there would be *no impacts* on biological resources associated with the No Action Alternative.

3.7 CULTURAL RESOURCES

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

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

Consistent with Section 106 of the NHPA, DoDI 4710.02, Air Force Instruction (AFI) 90-2002, and AFMAN 32-7003, the AFRC is also consulting with five federally recognized tribes that are historically affiliated with Homestead ARB and the surrounding area regarding the potential for the Preferred Alternative to affect properties of cultural, historical, or religious significance to the tribes. The AFRC initiated consultation with each tribe via letter in April 2024; a record of this consultation is provided in **Appendix C**. On June 18, 2024, the Seminole Nation of Oklahoma responded requesting to be informed of any inadvertent findings

or discoveries resulting from the Proposed Action. To date, tribes have identified no properties of cultural, historical, or religious significance on the Proposed Action Area.

The ROI for cultural resources is the area of potential effects (APE) as defined by the NHPA. The AFRC has defined two separate APEs for the proposed BAF and RV improvement and expansion. The APEs for both sites consist of the Proposed Action Area and a 0.25 mile radius around the Proposed Action Area to account for visual impacts.

3.7.1 Affected Environment

There are a total of four historic resources within the APE: three standing structures over 45 years of age, and one historic K-9 Cemetery (AFRC, 2021). The three standing structures have previously been determined ineligible for listing on the National Register of Historic Places (NRHP); however, the K-9 Cemetery was determined eligible for listing due to its military significance (AFRC, 2021). This cemetery is located outside the gates of the Munitions Area approximately 626 feet from the proposed BAF area, and was used to bury service dogs from approximately 1942 to 1992. The cemetery is no longer in use.

The Integrated Cultural Resources Management Plan for Homestead ARB outlines that the only archaeologically sensitive areas on the base are the areas of pine flatwoods or natural limestone marl, neither of which occur within the Proposed Action Area (Homestead ARB, 2017). The Proposed Action Area is generally located on previously disturbed land, surrounded by support facilities and associated roads. The utility corridors are located within existing rights-of-way and already-paved areas west of the runway. The NRCS has mapped the soils in the proposed BAF area as Orthodents, limestone substratum-Urban land complex, and in the proposed RV storage area as Urban land and Cardsound marly silty clay loam-rock outcrop-Urban land complex soils (**Section 3.4**).

3.7.2 Environmental Consequences

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

3.7.2.1 Preferred Alternative

The Preferred Alternative would have *no effect*, direct or indirect, on historic properties, as the location has been previously surveyed for historic standing structures and contains urban land complex soils that are previously disturbed and have low potential for inadvertent archeological discoveries. The Proposed Action Area is located over 600 feet at the nearest from the NRHP-eligible K-9 Cemetery and therefore would not impact this resource. AFRC provided its effect determination to SHPO in accordance with Section 106 of the NHPA in July 2024. On August 16, 2024, the SHPO concurred via letter that the Proposed Action would have no effect on historic properties (**Appendix B**).

Although the Proposed Action Area is not located in an archaeologically sensitive area, there is the potential for inadvertent archaeological discoveries while conducting ground-disturbing activities. Should any unanticipated cultural resource be encountered during construction, or other activities associated with the Preferred Alterative, Homestead ARB would immediately cease work and report the discovery to the Florida SHPO and federally recognized tribes for consultation on how to proceed.

3.7.2.2 No Action Alternative

Under the No Action Alternative, the installation improvements would not be implemented, and there would be *no impact* on cultural resources.

3.8 UTILITIES

Utilities include water storage facilities, treatment plants, and delivery systems; supplemental power generation, transmission, and distribution facilities, including, but not limited to, wind turbines, generators, substations, and power lines; natural gas transmission and distribution facilities; sewage collection systems and treatment plants; and communication systems.

The ROI for utilities includes all areas and end users within Homestead ARB that may be impacted from temporary utility disruptions or an increased demand on utilities. No off-base utility changes would occur.

No utility modifications or impacts would occur as part of the RV storage improvement and expansion component of the Proposed Action. The remainder of this section focuses on utility resources associated with the proposed BAF component.

3.8.1 Affected Environment

The utility infrastructure at Homestead ARB includes electrical, potable water, wastewater, and fiber optic communication systems. Florida Power & Light provides electrical power to Homestead ARB (AFRC, 2023). There is no natural gas supply at Homestead ARB although Florida City Gas supplies natural gas to portions of the surrounding area. The Miami-Dade Water and Sewer Department supplies potable drinking water to the area through county supply lines. Homestead ARB has a private sanitary sewer collection system permitted by the Miami-Dade County Department of Environmental Resources Management, which includes four private sanitary sewer pump stations and a sanitary sewer collection system. The South District Wastewater Treatment Plant, operated by the Maimi-Dade Water and Sewer Department, treats wastewater from the base. A private contractor collects and disposes of solid waste at the base, and Homestead ARB implements a solid waste recycling and disposal program that meets Air Force goals for diversion from landfills (AFRC, 2020b).

Utility infrastructure currently present at the proposed BAF area include electrical and fiber optic communications systems. The nearest potable water and sanitary sewer lines are located approximately 0.56 mile southeast of the site.

3.8.2 Environmental Consequences

A utilities impact would be significant if it would result in prolonged or permanent service disruptions to other utility end users, or substantially increase utility demand so as to burden utility providers or reduce local utility supply to the surrounding communities.

3.8.2.1 Preferred Alternative

Construction of the Preferred Alternative would involve the extension of electrical, water distribution, and sewer systems to the proposed BAF from existing on-base infrastructure to accommodate the utility requirements of the new facility. The existing electrical system would be upgraded and extended along an 870-foot corridor from connections to the east of the proposed BAF. Florida Power and Light has indicated there is sufficient capacity to support the new facility (AFRC, 2023). Water distribution and sewer lines would be extended to the BAF in parallel trenches along a 0.6-mile corridor of existing right-of-way. Water

and sewer connections are not anticipated to exceed the capacity of Homestead ARB's current infrastructure. Additionally, approximately 1.5 miles of existing fiber optic communication lines would be upgraded within the existing duct bank (no new lines are proposed). Overall, construction of the Preferred Alternative may result in disruptions to utility systems at Homestead ARB while connections are being made; however, any disruptions are anticipated to be temporary and localized to Homestead ARB. Demolition of the MAC Pad would also result in a temporary, marginal increase in solid waste generated. AFRC would dispose of non-recyclable demolition debris at an offsite permitted landfill facility. Therefore, construction of the Preferred Alternative would result in *short-term, less-than-significant impacts* to utilities.

Operation of the BAF would increase the overall utility usage at Homestead ARB; however, the increase would be marginal compared to existing utility usage at the installation. There would be no impact to the level of service provided elsewhere at Homestead ARB or in surrounding areas. Therefore, the Preferred Alternative would have *long-term, negligible* impacts on utility usage/demand.

3.8.2.2 No Action Alternative

Under the No Action Alternative, the proposed BAF and RV storage improvement and expansion projects would not be completed and related utility disruptions associated with the Preferred Alternative would not occur. Therefore, there would be *no impact* on utilities associated with the No Action Alternative.

3.9 SOCIOECONOMICS & ENVIRONMENTAL JUSTICE

Socioeconomics refer to the attributes of the human environment, and include demographic and economic characteristics such as age, race, income, and employment. Changes in these fundamental socioeconomic indicators typically result in changes to additional socioeconomic indicators, such as housing availability, commercial services, and public services. Socioeconomic data at local, county, regional, and state levels permit characterization of baseline conditions in the context of regional and state trends. Additionally, EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, directs federal agencies to consider the potential adverse impacts of their activities on children. For the purposes of this analysis, children are defined as persons under the age of 18 years.

Public services include fire protection, emergency medical services, law enforcement, schools, libraries, and parks. All of these public services are located within 5 miles of Homestead ARB. Homestead ARB is bordered by residential areas to the north, west, and south. There are also numerous retail and food service locations in the City of Homestead, and many are less than 5 miles outside the Homestead ARB installation boundary. Given that there would not be any change to personnel at Homestead ARB, *no impact* to public services is expected and they are dismissed from further analysis.

Environmental justice is based on the principle that all people have a right to live in and enjoy a clean and healthful environment. This means equal protection and meaningful involvement of all people with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies and the equitable distribution of environmental benefits.

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, directs federal agencies to consider the potential adverse impacts of their activities on minority and low-income populations, and requires that impacts that may disproportionately affect these communities be addressed. EO 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All*, reaffirms these principles, further directing agencies to consider measures aimed at addressing and preventing disproportionate and adverse environmental and health impacts on communities with environmental justice concerns, including cumulative impacts from pollution or climate change. The CEQ and USEPA Federal Interagency Working Group on Environmental Justice (now the White House

Environmental Justice Interagency Council or IAC) have established criteria for identifying communities with environmental justice concerns with respect to race and income. Minority populations, defined as persons who identify themselves as Black or African-American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, Some Other Race, and Two or More Races, and/or as Hispanic or Latino ethnicity, exist where the percentage of minorities exceeds 50 percent or is meaningfully greater relative to the general population of the larger surrounding area or community. Low-income populations exist where there is a substantial discrepancy between a community and the larger surrounding communities with regard to income and poverty status, as measured by the percent of individuals living below the federal poverty level (CEQ, 1997; EJ IWG, 2016).

Homestead ARB is located just outside the Homestead city limits, within Miami-Dade County, Florida (FL). The ROI for socioeconomics and environmental justice includes Census Tract 107.05, Block Groups 1 and 2; Census Tract 107.06, Block Groups 1 and 2; Census Tract 110.08, Block Groups 1 and 2, and Census Tract 9807, Block Group 1 (**Figure 6**). These communities are adjacent to Homestead ARB and would be most likely to experience any impacts from the Proposed Action, both with regard to changes in socioeconomic characteristics and potential disproportionate impacts.

3.9.1 Affected Environment

Socioeconomic data for the ROI, the City of Homestead, and Miami-Dade County is presented in **Table 10**. Minority population and income data for the ROI, the City of Homestead, and Miami-Dade County, FL, is presented in **Table 11.**

The populations of the census tracts within the ROI range from 1,242 to 4,802. The census tracts within the ROI have similar populations of children, ranging from 29 percent to 37 percent, which is comparable to that of the City of Homestead at 32 percent, though it is considerably larger than that of Miami-Dade County at 20 percent (**Table 10**). No individuals, including children, currently live on or occupy the Proposed Action Area. The occurrence of children in the vicinity of the Proposed Action Area would not be a frequent or regular presence as the Preferred Alternative would occur on an active ARB that is fenced off from the public with restricted entry.

The unemployment rate is variable between the census tracts in the ROI, with the exception of census tract 9807, ranging from 2 percent to 13 percent. However, these tracts are still considered comparable to that of the City of Homestead and Miami-Dade County, which are 5 percent and 6 percent respectively (**Table 10**). The significantly higher unemployment rate in Census Tract 9807 (46 percent) can likely be attributed to the presence of permanent supportive housing communities for homeless populations that are located north of Homestead ARB (**Figure 6**). These communities, operated by Camillus House and the Chapman Partnership in conjunction with the Miami-Dade Homeless Trust, have the capacity to house more than 870 permanent and temporary residents, many of whom are likely suffering from unemployment (Miami-Dade County Homeless Trust, 2024). The median household income in the majority of the census tracts within the ROI is comparable to that of the City of Homestead and Miami-Dade County, with the exception being Census Tract 110.08, which is notably higher than the surrounding communities (**Table 10**).

As shown in **Table 11**, large minority populations are present across the ROI and the City of Homestead and Miami-Dade County, exceeding 80 percent in all geographies. Given the large minority populations also present in the surrounding block groups and in the overall City of Homestead and Miami-Dade County, the minority populations of the block groups in the ROI are not considered meaningfully greater than that of the surrounding community. No communities with environmental justice concerns with respect to race are therefore considered present in the ROI.

Figure 6: Environmental Justice ROI

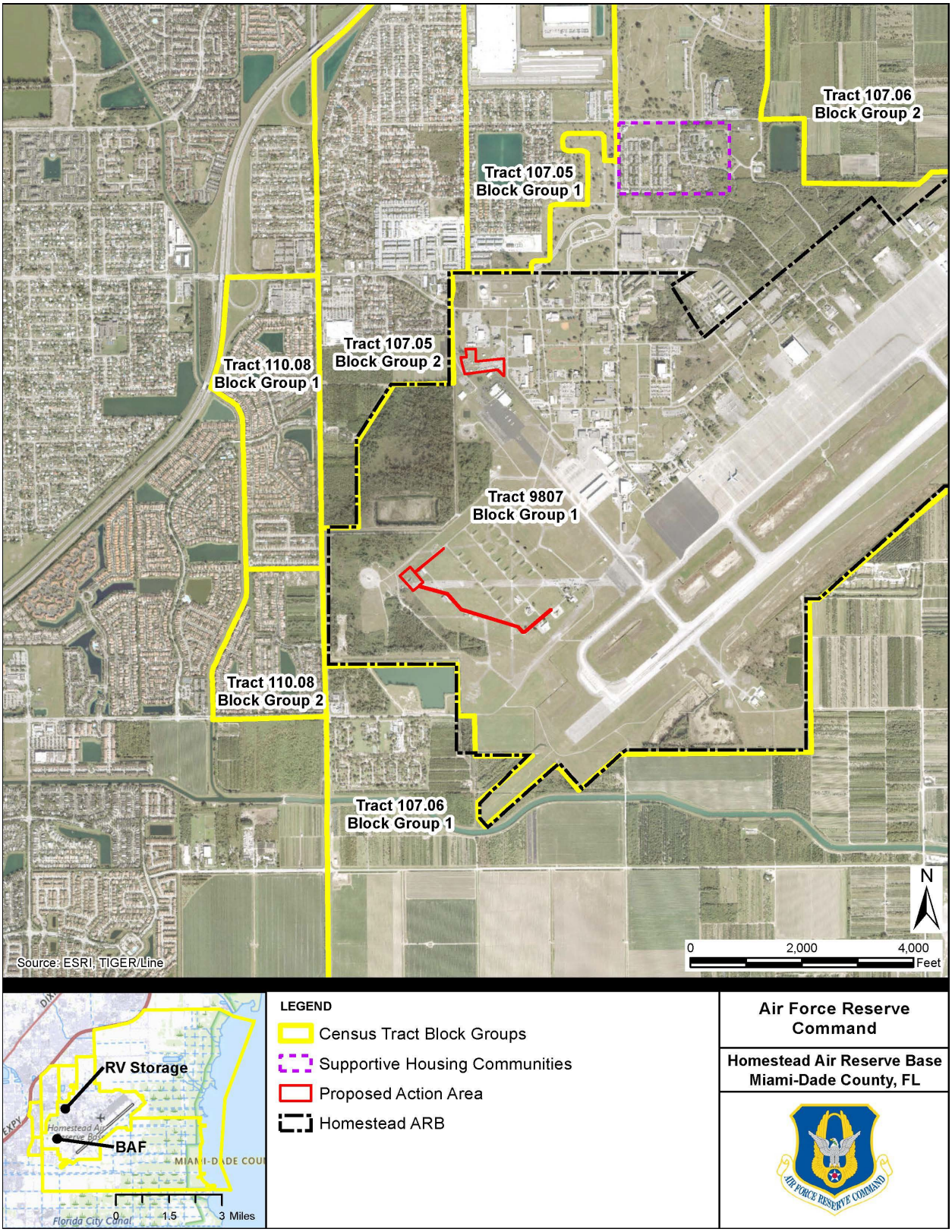


Table 10: 2022 Socioeconomic Characteristics in the ROI

Location	Total Population	Median Household Income	Unemployment Rate (%)	Population Under 18 Years (%)
Miami-Dade County, FL	2,688,237	$64,215	5%	20%
Homestead, FL	79,996	$57,739	6%	32%
Census Tract 107.05	4,795	$59,936	2%	29%
Census Tract 107.06	3,334	$59,554	13%	31%
Census Tract 110.08	4,802	$79,417	6%	37%
Census Tract 9807	1,242	N/A[1]	46%[2]	37%

Sources: (U.S. Census Bureau, 2022c; USEPA, 2024d).
1. Data not available.
2. This census tract contains supportive housing communities for the homeless located north of Homestead ARB, managed by Camillus House and the Chapman Partnership (**Figure 6**) (Carrfour, 2024; Camillus House, 2019; Chapman Partnership, 2024; Miami-Dade County Homeless Trust, 2024).

Table 11: 2022 Minority Population and Income Characteristics in the ROI

Location	Total Population	Non-Hispanic White Alone (%)	Minority Population (%)	Low-Income Population (%)
Miami-Dade County, FL	2,688,237	13.0%	87.0%	15.3%
Homestead, FL	79,996	11.0%	89.0%	20.4%
Census Tract 107.05, Block Group 1	1,294	1.1%	98.9%	16.0%
Census Tract 107.05, Block Group 2	3,501	2.9%	97.1%	15.5%
Census Tract 107.06, Block Group 1	1,320	0.0%	100.0%	26.2%
Census Tract 107.06, Block Group 2	2,014	4.5%	95.5%	6.4%
Census Tract 110.08, Block Group 1	2,169	10.4%	89.6%	14.5%
Census Tract 110.08, Block Group 2	2,633	16.1%	83.9%	5.2%
Census Tract 9807, Block Group 1	1,242	8.5%	91.5%	83.0%[1]

Sources: (U.S. Census Bureau, 2022a; 2022b; 2022d).
1. This census tract contains supportive housing communities for the homeless located north of Homestead ARB, managed by Camillus House and the Chapman Partnership (**Figure 6**).

The CEQ has developed a Climate and Economic Justice Screening Tool (CEJST) to identify census tracts that are considered overburdened and underserved based on a combination of burden and socioeconomic thresholds. Specifically, if a census tract is above certain percentiles for any burden or threshold, it is identified as disadvantaged (CEQ, 2022). The CEJST identified Census Tracts 9807 and 107.04 as disadvantaged. It should be noted that the census tract mapping for the CEJST is slightly outdated and has changed in recent years, and therefore Census Tract 107.04 in the CEJST encompasses other census tracts that are both inside and outside the ROI for this Proposed Action, including Census Tracts 107.05 and 107.06. Despite this, the areas surrounding Homestead ARB are still considered disadvantaged. The burdens for Census Tract 9807 include high rate of expected agricultural loss from natural hazards, low-income population, high energy cost, asthma, close proximity to Superfund sites, poverty, unemployment, and a population whose high school education is less than a high school diploma. The burdens for Census Tract 107.04 include high rate of expected agricultural loss from natural hazards, high projected flood risk, low-income population, high housing cost, close proximity to Superfund sites, transportation barriers, linguistic isolation, unemployment, and a population whose high school education is less than a high school diploma. Census Tract 110.08 is not identified as disadvantaged by the CEJST (CEQ, 2022).

Low-income populations residing in the City of Homestead and Miami-Dade County account for 20.4 percent and 15.3 percent, respectively, of the overall populations. This is comparable to that of six of the seven block groups in the ROI, whose low-income populations range from 5.2 percent to 26.2 percent. However, in accordance with guidance published by the IAC, low-income populations exist where the low-income population exceeds that of the reference community. Census Tract 107.05, Block Group 1; Census Tract 107.05, Block Group 2; and Census Tract 107.06, Block Group 1 are all considered to have low-income populations given that their low-income populations (16 percent, 15.5 percent, and 26.2 percent, respectively) exceed that of the reference community of Miami-Dade County. Census Tract 9807, Block Group 1, which contains the permanent supportive housing communities for the homeless, has a low-income population of 83 percent, which is significantly higher than the other locations (**Table 11**). Therefore, these four block groups, and in particular the supportive housing communities, are considered to be communities with environmental justice concerns.

3.9.2 Environmental Consequences

A socioeconomic impact would be significant if it would 1) substantially alter the location and distribution of the local population, or 2) change current economic conditions in the ROI in a way that would be notable and harmful for surrounding communities and residents. An environmental justice impact would be significant if it would result in disproportionately adverse human health and environmental impacts, or exposures to environmental risks, on minority or low-income populations.

3.9.2.1 Preferred Alternative

Implementation of the Preferred Alternative would not adversely affect socioeconomic conditions in the ROI. Proposed construction activities would likely either be completed by local contractors or troop labor. The use of local contractors would temporarily increase employment opportunities, personal incomes, and material purchases within the nearby communities. The use of non-local contractors, if applicable, would also result in direct economic benefits to the local community associated with expenditures on lodging, food, and retail. Tax revenues associated with direct and indirect construction expenditures would also benefit local economic conditions. Overall, the Preferred Alternative would have a *short-term, beneficial impact* on the socioeconomic conditions in the ROI during construction activities.

With respect to communities with environmental justice concerns, projected GHGs, PM, and other pollutant emissions resulting from the Preferred Alternative are well below the insignificance indicators for impacts to air quality and climate change (see **Table 3** for list of emissions). Therefore, the Preferred Alternative is

not expected to impact air quality or contribute to climate change in a meaningful way that could result in increased or disproportionate climate vulnerabilities for the identified low-income supportive housing communities (**Sections 3.2** and **3.3**). There would be *no disproportionately adverse impacts* to communities with environmental justice concerns with respect to air quality and climate change.

Demolition of the existing MAC Pad and construction of the proposed BAF would occur between approximately 0.2 and 1.0 mile from the low-income block groups, and nearly 1.5 miles away from the supportive housing communities. The low-income block groups and the supportive housing communities are located outside of the 1,250-foot explosives safety siting established for the operation of the proposed BAF. The supportive housing communities would also be approximately 0.7 mile away from the construction and operation of the proposed improved RV storage area. All construction and operational activities associated with the Preferred Alternative would occur at a sufficient distance from low-income populations, limiting potential exposure to these activities. Further, given that the Proposed Action would occur exclusively on a fenced, secure facility, the potential for these populations to be exposed to safety concerns is minimal (**Section 3.10**). Therefore, there would be *no disproportionate adverse impacts* to communities with environmental justice concerns with respect to safety.

Excavation and construction activities associated with the Preferred Alternative would not result in a release of HTMW that would significantly impact soil or water quality in the ROI, nor would activities disproportionately affect nearby low-income populations, including the supportive housing communities in close proximity to the proposed RV storage area. The construction and operation of the proposed RV storage area would neither impede nor interrupt ongoing remediation efforts and would therefore have a *negligible impact* on the contaminated sites (**Section 3.11**). These sites are located between approximately 400 feet to 1.16 miles from the low-income block groups, and approximately 0.7 mile from the supportive housing communities. Therefore, there would be *no disproportionate adverse impacts* to communities with environmental justice concerns with respect to HTMW. Overall, there would be *no impact* to communities with environmental justice concerns in the ROI associated with the Preferred Alternative.

Once construction is complete, the new BAF would be incorporated into Homestead ARB's military operations, and the RV storage area would be incorporated into Homestead ARB's public works operations. There would be no change to the type of activities, number or personnel, number of flights, or number or type of aircraft stationed at Homestead ARB. Therefore, there would be *no long-term or ongoing impacts* to socioeconomic conditions or to communities with environmental justice concerns in the ROI.

3.9.2.2 No Action Alternative

Under the No Action Alternative, the installation improvements would not be implemented, and there would be *no impact* on socioeconomic conditions or to communities with environmental justice concerns in the ROI.

3.10 SAFETY AND OCCUPATIONAL HEALTH

This section considers activities or operations that have the potential to affect the safety, well-being, or health of members of Homestead ARB and the public. The primary goal is to identify and prevent accidents or impacts on the public. This section addresses construction safety, as well as safety during training activities, including the potential for munitions mishaps and hazards.

Air Force regulations that deal with various aspects of safety include DAFI 91-202, U.S. Air Force Mishap Prevention Program, and Department of Defense Instruction (DODI) 6055.07, Mishap Notification, Investigation, Reporting, and Record Keeping. Workplace safety regulations are generally addressed under the 29 CFR series, Occupational Safety and Health Administration (OSHA) standards. Applicable OSHA

standards are reflected in AFMAN 91-203, *Air Force Occupational Safety, Fire, and Health Standards*. Any explosives safety related aspects (e.g., unexploded ordnances, sited locations, etc.) are addressed in DESR 6055.09 and AFMAN 91-201 *Explosives Safety Standards*.

The ROI for Safety and Occupational Health includes the immediate vicinity surrounding the proposed RV storage area and areas within 1,250 feet of the proposed BAF to account for the required explosives safety siting.

3.10.1 Affected Environment

All ground operations at Homestead ARB are performed in accordance with applicable Air Force safety regulations, technical guidance, and standards stipulated in the previously identified Air Force occupational safety and health requirements and regulations. Emergency services present on Homestead ARB include fire, emergency response services, and physical security. The nearest hospital is Baptist Health Homestead, located approximately 1.1 mile southwest of the installation. Bird-aircraft strikes constitute a safety concern at Homestead ARB because they can result in damage to aircraft and injury to aircrews, and potentially result in aircraft crashes. Homestead ARB implements a BASH program, which aims to discourage birds from occupying the vicinity of the airfield. Key components of the BASH program include maintaining vegetation at specific heights and eliminating sources of standing water in the vicinity of the airfield (Homestead ARB, 2015).

No unique or notable safety concerns are present in the vicinity of the RV storage area.

The proposed BAF area is located on the site of the existing MAC Pad within the Homestead ARB Munitions District, which encompasses the western portion of the installation. The MAC Pad has an established explosive safety siting. The explosives safety siting process is outlined in DESR 6055.09 and is used to strategically locate areas where explosives and munitions are handled and stored to ensure safety of personnel, facilities, and the surrounding environment.

3.10.2 Environmental Consequences

A safety and occupational health impact would be considered significant if it would 1) violate any Department of Defense (DoD) safety regulations, including those applicable to munitions safety; 2) create unsafe airfield operations; or 3) potentially result in an emergency that would exceed existing emergency response systems.

3.10.2.1 Preferred Alternative

Demolition and construction activities under the Preferred Alternative would involve unavoidable inherent risks to health and safety, primarily associated with the operation of heavy construction equipment. Demolition and construction activities associated with the Preferred Alternative would be conducted in accordance with applicable federal, state, Air Force, and local worker safety and regulatory requirements and guidelines, including those established by OSHA. Adherence to these requirements would substantially minimize the potential for worker injuries.

Training activities at the BAF would similarly comply with all applicable Air Force safety requirements and guidelines, as under existing operations, to ensure the safety of AFRC reservists. To comply with applicable munitions safety regulations, the BAF is required to have a 1,250-foot explosives safety siting to minimize potential hazards to neighboring operations. The existing approved explosive safety siting for the MAC Pad would be maintained for the BAF (AFRC, 2023). In the event of an emergency, Homestead ARB's existing emergency response services would be dispatched, if needed. Additionally, neither construction nor

operation of the Preferred Alternative would create conditions that would encourage additional bird activity near the airfield. Homestead ARB is a secure military installation and access is not granted to the general public without prior approval. Therefore, the Preferred Alternative would result in *short- and long-term, less-than-significant adverse impacts* to safety and occupational health.

3.10.2.2 No Action Alternative

Under the No Action Alternative, the installation improvements would not be implemented, and there would be *no impact* on safety and occupational health.

3.11 HAZARDOUS AND TOXIC MATERIALS AND WASTE

This section describes the use and presence of hazardous materials and the generation of hazardous waste at the Proposed Action 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. Generally, hazardous wastes are discarded materials or substances (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. The ROI for HTMW includes the immediate vicinity surrounding the Proposed Action Area.

The DoD Environmental Restoration Program (DERP) was established to provide for the cleanup of environmental contamination at DoD installations. Eligible DERP sites include those contaminated by past defense activities that require cleanup under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), and certain corrective actions required by the Resource Conservation and Recovery Act. Non-DERP sites are remediated under the Compliance-Related Cleanup Program. The DERP is organized into the following program categories: 1) Installation Restoration Program (IRP), 2) Military Munitions Response Program (MMRP), and 3) Building Demolition/Debris Removal. Homestead ARB contains several IRP and MMRP sites, which will be discussed in the sections below.

3.11.1 Affected Environment

Hazardous materials at Homestead ARB are used, handled, stored, and managed in accordance with AFMAN 32-7002, *Environmental Compliance and Pollution Prevention, Hazardous Material Management, Chapters 3 and 5*. Homestead ARB is a small quantity generator (SQG) of hazardous waste, generating greater than 100 kilograms (kg), but less than 1,000 kg, of hazardous waste each calendar month and accumulating no more than 6,000 kg at any one time (USEPA, 2023). Homestead ARB maintains a Hazardous Waste Management Plan (HWMP), which contains procedures for managing hazardous wastes in accordance with applicable DoD, federal, and state regulations and requirements. Homestead ARB also maintains a SWPPP, which is implemented in conjunction with the HWMP to address incident response and emergency responsibilities resulting from spills or discharges of HTMW (Homestead ARB, 2015).

At Homestead ARB, the operation of aircraft, vehicles, and equipment requires the use of various hazardous materials, including fuels, solvents, lubricants, and caustics. If released, these materials have the potential to harm the environment by impacting air, soil, or water quality. The transfer and storage of petroleum, oils, and lubricants (POLs) is the activity that poses the greatest potential threat to the local environment. POLs have a variety of hazardous components (e.g., benzene, toluene, xylene, and

naphthalene). The greatest potential hazardous material is jet propulsion (JP)-8 fuel because of the large quantities used at the base. Large quantities of JP-8 are transferred via trucks from the base's POL Complex to the flightline for aircraft fueling. Fuel overfill spills from aircraft or refueler trucks can occur on the flightline or in the POL Complex. The base has implemented several environmental programs (e.g., spill control and response, hazardous waste management, and storm water pollution prevention) that have been successful in controlling hazardous materials and waste releases to the environment (Homestead ARB, 2015).

In the event of a reportable spill (more than 25 gallons on pervious surfaces or more than 100 gallons on all other surfaces), Homestead ARB must submit a report to USEPA Region IV within 14 days of the release. The SWPPP must also be modified to include a full description of the release and measures that will prevent the reoccurrence of such a release. Accidental spills and releases that occur at Homestead ARB are generally small in nature and extremely infrequent. However, if a large spill occurs, drainage from the spill area will eventually flow into the network of oil/water separators on base that Homestead ARB uses to remove oil, grease, fuel, and other floatable materials from stormwater and minimize the potential for contamination. Most oil/water separators at Homestead ARB discharge to the sanitary sewer and are not identified as current stormwater BMPs (Homestead ARB, 2015).

The USEPA added Homestead ARB to the Superfund National Priorities List in 1990. The Air Force leads the investigation of cleanup actions at Homestead, while the USEPA and FDEP provide oversight (USEPA, 2024e). Two IRP sites are located within or near the ROI, Operable Unit (OU) -13, and OU-4. OU-13, the site of a former hazardous materials storage building, is located approximately 150 feet northwest of the existing MAC pad paved driveway. Cleanup for OU-13 is expected to be completed in 2026 (USEPA, 2024e). OU-4, the site of a motor pool oil leak, is located immediately adjacent to the northernmost edge of the proposed RV storage area. A Record of Decision specifying a remedy of land use controls, including site use restrictions, restricted site access; signage, and groundwater monitoring, was issued in 1995; groundwater monitoring was discontinued in 1996 after contaminant levels were found to be within allowable levels (USACE, 2023). Additionally, a removal action was conducted in 2001, which excavated approximately 105 tons of contaminated soils from nearby drainage ditches and disposed of it off-site (USEPA, 2005). An inspection in 2022 of OU-4 confirmed that land use controls, including the perimeter fence and asphalt cover remain in place (USACE, 2023).

Remedial investigations for per- and polyfluoroalkyl substance (PFAS) contamination at Homestead ARB are currently ongoing. A known PFAS site is located directly north of the proposed RV storage area (overlapping OU-4). Soil and groundwater sampling surrounding Building 307 indicate PFAS levels above screening levels in groundwater, while levels are below screening levels in soil (Homestead ARB, 2023). Delineation of this PFAS site is ongoing, and it is possible the contaminated groundwater plume extends into the subsurface of the proposed RV storage area. There is no known PFAS or perfluoro-octane sulfonic acid (PFOS) soil contamination at the existing MAC Pad.

Additionally, the existing MAC Pad does not contain any asbestos-containing material. It is unknown if lead-based paints, polychlorinated biphenyls (PCB), or fluorescent lighting containing mercury are present at the existing MAC Pad (AFRC, 2023).

3.11.2 Environmental Consequences

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

3.11.2.1 Preferred Alternative

Implementation of the Preferred Alternative would not add any new hazardous materials that exceed the base's current hazardous waste management capacity. The Preferred Alternative would not increase the maximum daily consumption of JP-8 fuel, and no additional hazardous waste storage tanks would be required. Homestead ARB would continue to be classified as an SQG and generate less than 1,000 kg of hazardous wastes each month during various operation and maintenance activities. Existing procedures for the centralized management of the procurement, handling, storage, and issuance of hazardous materials are adequate to accommodate the Preferred Alternative.

Prior to demolishing the MAC Pad, Homestead ARB would conduct a survey to identify the presence of hazardous materials (e.g., lead-based paints, PCBs, mercury) and incorporate disposal procedures into the project phasing. Construction of the BAF and RV storage area, including the operation of equipment and vehicles, would create the potential for discharge, spills, and contamination from commonly used products such as diesel fuel, gasoline, oil, antifreeze, and lubricants within the ROI. Additionally, POL storage and waste generation may occur during the operation of the new BAF facility. All HTMW discovered, generated, or used during the demolition of the MAC Pad or the construction and operation of the BAF and RV storage area would be handled, contained, and disposed of in accordance with Homestead ARB's HWMP, SWPPP, and all applicable local, state, and federal regulations, as well as other BMPs to avoid the release of HTMW into the environment.

The RV storage area would be constructed to minimize impacts to OU-4 and the PFAS site that occur directly adjacent to the Proposed Action Area. The minor grading and paving associated with the RV storage area construction would not impact the land use controls (fencing and signage) associated with OU-4. Soils within the proposed RV storage area are not anticipated to be contaminated from the motor pool oil leak or PFAS. However, the project would be designed to balance soil cut and fill to the extent practicable to minimize the need to remove soil from the site. If during final design it is determined that soil excavation and removal is required, AFRC would adhere to its well-established, required procedures for soil re-use at Homestead ARB and, as a last resort, soil disposal off-site; these procedures include the Miami-Dade County Soil Re-Use Policy (Miami-Dade County, 2018). Additionally, construction of the RV storage area is not anticipated to encounter the potentially PFAS-contaminated groundwater plume due to the shallow grading required. Following construction, groundwater monitoring wells may be installed within the RV storage area to facilitate the ongoing PFAS investigations on Homestead ARB; the presence of the RV storage area would not interrupt, delay, or impede these investigations or potential future cleanup efforts. Overall, the proposed RV storage area would have a *negligible impact* on the nearby OU-4 and PFAS site.

Construction and operation of the BAF would have *no impact* on OU-13. Any HTMW required for operation of the BAF would be managed through adherence to existing procedures for the management, handling, storage, and issuance of hazardous materials on the base.

Therefore, the Preferred Alternative would have the potential for *short-term, less-than-significant adverse impacts* from HTMW during construction. There would be *no impact* from HTMW during the operation of the Preferred Alternative.

3.11.2.2 No Action Alternative

Under the No Action Alternative, the installation improvements would not be implemented, and there would be *no impact* on HTMW.

4.0 CUMULATIVE IMPACTS

4.1 INTRODUCTION

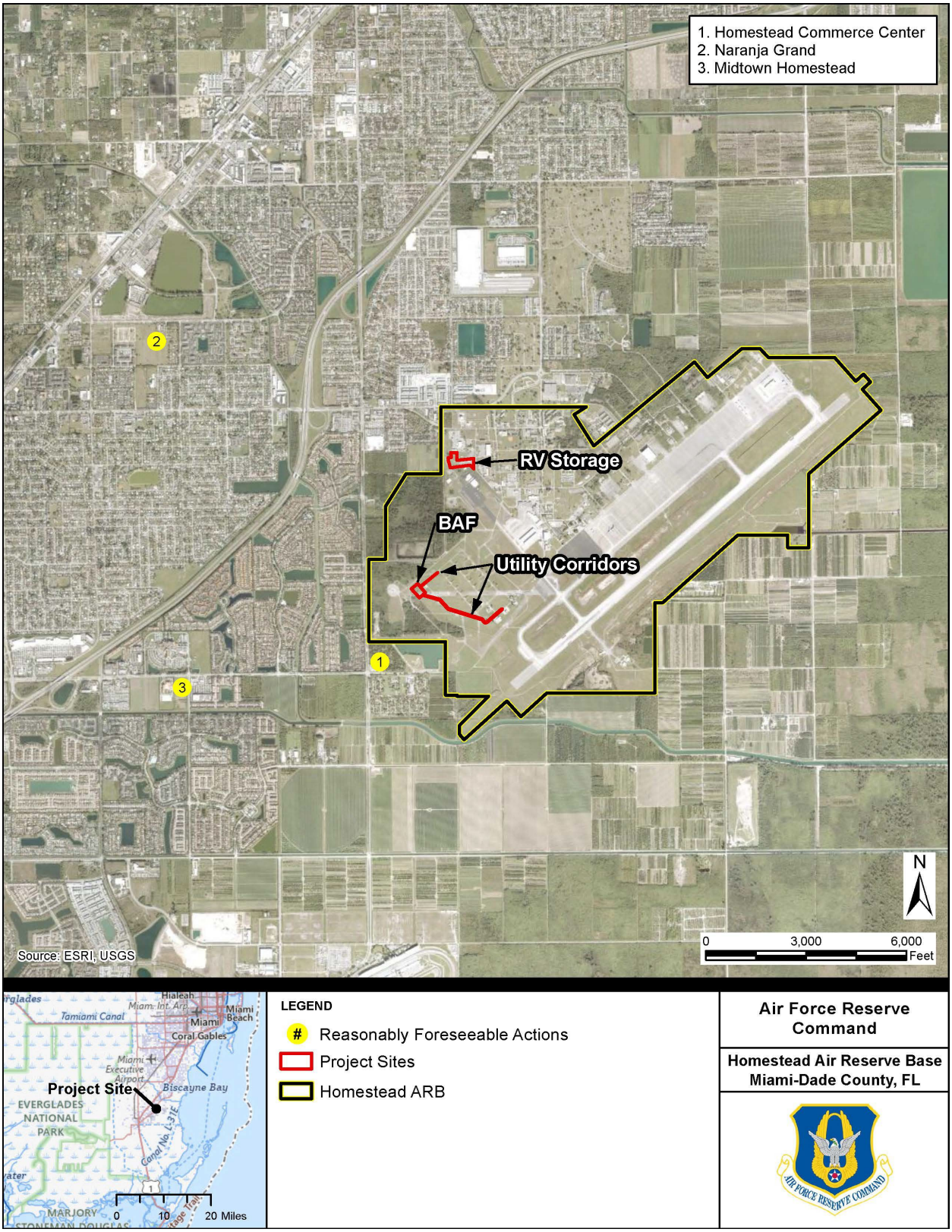
The AFRC identified and reviewed past, present, and reasonably foreseeable actions and land uses that have or are planned to occur within the ROI, which includes Homestead ARB and the surrounding off-base areas. Past and present projects are generally addressed within the environmental baseline of the ROI for each resource area; thus, this analysis focuses on reasonably foreseeable future actions in the ROI. The AFRC analyzed the potential for the Preferred Alternative to have cumulative effects with these other reasonably foreseeable actions.

Baseline conditions in the ROI generally include trending development, improving airfield circulation, and expansion or upgrades of outdated training facilities and infrastructure. AFRC did not identify any past, present, or reasonably foreseeable actions that would occur on-base. Rather, reasonably foreseeable actions that were identified in the ROI would all occur in the surrounding off-base areas. These projects are listed in **Table 12** and **Figure 7**.

Table 12: Reasonably Foreseeable Actions near Homestead ARB

Project Name	Project Type	Description
1. Homestead Commerce Center	Commercial	Major development is anticipated to occur on 18.24 acres of land southwest of Homestead ARB. The project would include two hotel buildings, a day care, self-storage, commercial and restaurant areas, an office building, as well as a storage area for vehicles (Volz, 2023a).
2. Naranja Grand	Residential	Housing Trust Group is breaking ground on a two-building affordable housing complex northwest of Homestead ARB on a 5.3-acre parcel that will include 120 apartment units specifically reserved for adults 55 years and older whose income ranges from 30 percent to 70 percent of the area median income. Additional units are anticipated to be constructed in the future. Construction is estimated to be completed in spring of 2025 (Dodd, 2024; Housing Trust Group, 2024).
3. Midtown Homestead	Mixed-use	The City of Homestead approved a mixed-use project consisting of numerous developments, with varying construction start and completion dates, west of Homestead ARB along Campbell Drive. Planned developments include restaurants, apartments, and single-family homes (Volz, 2023b).

Figure 7: Reasonably Foreseeable Actions



4.2 EVALUATION OF CUMULATIVE EFFECTS

Table 13 discusses potential cumulative impacts that could occur from implementation of the Preferred Alternative and reasonably foreseeable future actions. No significant cumulative impacts are anticipated as a result of the Preferred Alternative.

Table 13: Potential Cumulative Impacts by Resource Area

Resource Area	Potential for Significant Cumulative Impacts?	Rationale
Air Quality	No	Construction of the Preferred Alternative and reasonably foreseeable actions would generate air emissions from the use of construction equipment and vehicles. Emissions from the Preferred Alternative and other reasonably foreseeable actions would not exceed regulatory thresholds or exacerbate pollutant concentrations that are not in attainment, as project-specific compliance with applicable regulatory requirements and implementation of BMPs would further minimize air emissions. Therefore, cumulative impacts would be *less-than-significant*.
Climate	No	Construction of the Preferred Alternative and reasonably foreseeable actions would generate GHG emissions from the use of construction equipment and vehicles. Construction emissions would be temporary and minor. Emissions from the Preferred Alternative and other reasonably foreseeable actions are not anticipated to substantially increase the vulnerability of the ROI, or nearby properties, to the effects of climate change. Therefore, cumulative impacts would be *less-than-significant*.
Earth Resources	No	The Preferred Alternative and reasonably foreseeable actions would not appreciably alter geological or topographic conditions in the ROI. While bedrock may be encountered, impacts to bedrock would be minor and localized. Any grading would not meaningfully impact the topography of the Proposed Action Area or affect surface drainage and runoff patterns. Construction under the Preferred Alternative would disturb soils and create the potential for runoff and erosion. However, through adherence to BMPs included in the SWPPP, the AFRC would ensure the Preferred Alternative's cumulative impact on soils when considered with other reasonably foreseeable actions is minimized to the greatest extent practicable. Therefore, cumulative impacts would be *less-than-significant*.
Water Resources	No	The Preferred Alternative would not be constructed within any wetlands or floodplains and therefore would have no potential to contribute to cumulative impacts to those resources. The Preferred Alternative and reasonably foreseeable actions would result in impacts from erosion and sedimentation; however, AFRC would ensure impacts are minimized to the extent practicable through adherence to BMPs included in the SWPPP. Additionally, impacts to the impairment status of Military Canal would be negligible. Therefore, cumulative impacts would be *less-than-significant*.

Resource Area	Potential for Significant Cumulative Impacts?	Rationale
Biological Resources	No	The Preferred Alternative and reasonably foreseeable actions would result in impacts to vegetation and wildlife associated with construction and development. However, the Proposed Action and reasonably foreseeable actions are not anticipated to substantially reduce any regionally or locally important habitat or general wildlife species. Further, the areas in which reasonably foreseeable actions would occur are generally already disturbed or in previously developed areas surrounded by urban and suburban development. The Preferred Alternative would result in impacts to the federally listed Small's milkpea and sand flax. However, ongoing conservation requirements included in the INRMP and BO would ensure the lasting survival and conservation within AFRC-owned lands. In addition, no BASH concerns would arise as the reasonably foreseeable actions would not create standing pools of water, new habitat, or other areas near the airfield that birds would find attractive. Therefore, cumulative impacts would be *less-than-significant*.
Cultural Resources	No	The Proposed Action would have no adverse effect on cultural resources; therefore, there would also be *no cumulative effect* on cultural resources.
Utilities	No	Construction of the BAF would increase the utility demand on Homestead ARB, although it would not have the potential to substantially burden local utility providers or supply in combination with other reasonably foreseeable actions nearby. Service disruptions to utilities during construction of the Preferred Alternative would be temporary and not affect off-base users. Therefore, cumulative impacts would be *less-than-significant*.
Socioeconomics & Environmental Justice	No	In the short term, the Preferred Alternative, when taken in consideration with reasonably foreseeable actions, would result in *beneficial impacts* on the local economy. Collective expenditures by temporary and permanent workforces would benefit local accommodation, food, and retail industries, as well as local fiscal benefits from associated sales tax revenues. As no EJ communities of concern with respect to race are present within the ROI and the Preferred Alternative would not result in disproportionate adverse impacts to the low-income populations or supportive housing communities to the north of the installation, there is no potential for the Proposed Action and reasonably foreseeable actions to disproportionately impact communities with environmental justice concerns. There would be *no cumulative effect* on communities with environmental justice concerns.
Safety and Occupational Health	No	Potential safety hazards associated with the construction of the Preferred Alternative and reasonably foreseeable actions would be minimal, and would have no overlap with safety considerations of reasonably foreseeable actions off-base. Similarly, the explosives safety siting associated with the proposed BAF would ensure that off-base areas are not at risk from munitions, so there would be no cumulative safety and occupational health impacts occur during operation of the BAF. There would be *no cumulative effect* on safety and occupational health.

Resource Area	Potential for Significant Cumulative Impacts?	Rationale
Hazardous and Toxic Materials and Waste	No	Construction activities associated with the Preferred Alternative and reasonably foreseeable actions could result in potential discharge, spills, and contamination, as well as encounters with unexpected hazardous materials. Any construction activities requiring ground disturbance could expose previously unknown sources of hazardous materials. Proper permitting and compliance procedures would be in place to prevent exposure and the spread of any identified contamination. Existing procedures for the handling, storage, and issuance of hazardous materials are adequate to ensure the Preferred Alternative does not contribute to cumulative HTMW impacts. Further, the Preferred Alternative and reasonably foreseeable actions would have no potential to interfere with the clean-up any of Homestead's IRP sites. Overall, cumulative effects would be *less-than-significant*.

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5.0 LIST OF PREPARERS

5.1 AFRC PREPARERS

Name	Title
Joshua Friers	Natural and Cultural Resources Manager

5.2 AECOM PREPARERS

Name	Role	Degree	Years of Experience
Carrie Kyzar	Project Manager, EA review and oversight	M.S. in Environmental Management B.S. in Environmental Science	22
Michael Busam	Deputy Project Manager, EA preparation	B.S. in Environmental Science and Policy	9
Benjamin Obenland	Preparation of EA sections	M.S. in Environmental Management B.S. in Environmental Science and Policy	5
Bridgette Glass	Preparation of EA sections	M.S. in Ecology B.S. in Wildlife, Fish, and Conservation Biology	11
Evan Dodd	Preparation of EA sections and Figures	B.S. in Environmental Sciences B.S. in Marine Biology	1
Sam Hartsfield	Preparation EA sections and air quality analysis	M.S. in Environmental Science and Management B.S. in Biology	15

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APPENDIX A:

CONSULTATION WITH FEDERAL, STATE, AND LOCAL AGENCIES

Consultation with Federal, State, and Local Agencies

The AFRC 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 the Proposed Action, to inform the range of issues to be addressed in the EA. The AFRC sent an Early Notification Letter, delivered by mail or email, to each agency listed below in April 2024. A sample of these letters, as well as all responses received, is provided in this appendix.

Federal Agencies

Biscayne National Park
9700 SW 328th Street
Sir Lancelot Jones Way
Homestead, FL 33033
POC: Morgan Elmer, Natural Resources Chief
Email: Morgan_Elmer@nps.gov

Everglades National Park
40001 State Road 9336
Homestead, FL 33034
POC: Daniel Noon, Chief, Planning and Compliance; Fred Herling, Planner
Email: daniel_noon@nps.gov
fred_herling@nps.gov

Federal Aviation Administration
Southern Region
1701 Columbia Avenue
College Park, GA 30337
POC: Michael O'Harra, Regional Administrator
Email: Michael.O'Harra@faa.gov

Federal Emergency Management Agency
Region 4
3003 Chamblee-Tucker Road
Atlanta, GA 30341
POC: Robert Samaan, Regional Administrator
Email: FEMA-R4-Info@fema.dhs.gov

National Oceanic and Atmospheric Administration, Southeast Regional Office
Habitat Conservation Division & Protected Resources Division
263 13th Avenue South
St. Petersburg FL 33701
POC: Virginia Fay, Assistant Regional Administrator
Email: virginia.fay@noaa.gov

National Park Service
Florida/Caribbean IPMT
18001 Old Cutler Road, Suite 419
Palmetto Bay, FL 33157
POC: Brian Lockwood, Liaison
Email: Brian_Lockwood@nps.gov

U.S. Army Corps of Engineers
Jacksonville District
701 San Marco Blvd
Jacksonville, FL 32207
Email: publicmail.cesaj-cc@usace.army.mil

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

U.S. Environmental Protection Agency
Region 4
61 Forsyth Street SW
Atlanta, GA 30303
POC: Jeaneanne Gettle, Acting Regional Administrator
Email: Gettle.Jeaneanne@epa.gov

U.S. Fish & Wildlife Service
Florida Ecological Services Field Office
777 37th Street
Suite D-101
Vero Beach, FL 32960-3559
Email: fw4flesregs@fws.gov

State Agencies

Florida Department of Agriculture and Consumer Services
4510 Oak Fair Blvd Ste 100
Tampa, FL 33610
POC: Wilton Simpson, Commissioner
Email: Wilton.Simpson@FDACS.gov

Florida Department of Environmental Protection
Office of Intergovernmental Programs
3900 Commonwealth Boulevard, MS 47
Tallahassee, FL 32399
POC: Chris Stahl, Clearinghouse Coordinator
Email: State.Clearinghouse@FloridaDEP.gov

Florida Department of Environmental Protection
Southeast District
3301 Gun Club Rd MSC 7210-1
West Palm Beach, FL 33406
POC: Jason Andreotta, District Director
Email: Southeast.District@floridadep.gov

Florida Department of State
Division of Historical Resources/Bureau of Historic Preservation
R.A. Gray Building
500 S. Bronough Street
Tallahassee, FL 32399-0250
Email: CompliancePermits@dos.myflorida.com

Florida Department of Transportation
District 6
1000 N.W. 111 Avenue
Miami, Florida 33172
POC: Stacy Miller, District 6 Secretary
Email: FDOT-D6COMM@dot.state.fl.us
stacy.miller@dot.state.fl.us

Florida Fish and Wildlife Conservation Commission
South Region
8535 Northlake Boulevard
West Palm Beach, FL 33412
POC: Thomas Reinert, Ph.D., Regional Director
Email: Thomas.Reinert@MyFWC.com

Local/Regional Agencies

Miami-Dade County
Development Services Division
111 NW 1st Street, 11th floor
Miami, Florida 33128
POC: Eric Silva, Assistant Director for Development Services
Email: dpnz@miamidade.gov
eric.silva@miamidade.gov

City of Homestead
Development Services
100 Civic Court
Homestead, FL 33030
POC: Joseph Corradino, Director
Email: jcorradino@cityofhomestead.com

Miami-Dade Aviation Department
Aircraft Noise & Environmental Planning Office
5600 NW 36 Street Suite 533
Miami, FL 33166
POC: Norman Hegedus, Section Chief
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Native American Tribes

Miccosukee Tribe of Indians of Florida
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Miami, FL 33144
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beverlyt@miccosukeetribe.com

Miccosukee Tribe of Indians of Florida HC
SR Box 68 Old Loop Road
Ochopee, FL 34141
POC: Fred Dayhoff, Section 106 and NAGPRA Coordinator
Email: zaydah@MiccosukeeTribe.com
Phone: (239) 695-4360

Muskogee (Creek) Nation of Oklahoma
P.O. Box 580
Okmulgee, OK 74447
POC: David Hill, Principal Chief
Email: dhill@mcn-nsn.gov
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POC: RaeLynn Butler, Manager, Historic and Cultural Preservation
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section106@mcn-nsn.gov
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Poarch Band of Creek Indians of Alabama
5811 Jack Springs Road
Atmore, AL 36502
POC: Carolyn White, THPO
Email: cwhite@pci-nsn.gov
THPOinfo@pci-nsn.gov
Phone: (251) 368-9136 ext. 2532

POC: Stephanie A. Bryan, Tribal Chair and CEO
Email: tribalchairinfo@pci-nsn.gov

POC: Kelli Ramer, Department Contacts Tribal Council Office Director
Email: kramer@pci-nsn.gov
Phone: (251) 368-9136 ext. 2110
Fax: (251) 368-2293

Seminole Tribe of Florida
6300 Stirling Road
Hollywood, FL 33024
POC: Marcellus W. Osceola, Jr., Chairman
Email: Chairman@semtribe.com

Big Cypress Seminole Indian Reservation
30290 Josie Billie Hwy PMB 1004
Clewiston, FL 33440
POC: Tina Marie Osceola, Director, THPO
Email: info.thpo@semtribe.com
Phone: (863) 983-6549

Seminole Nation of Oklahoma
P.O. Box 1498
Wewoka, OK 74884
POC: Jeff Harjo, Director, THPO
Email: harjo.je@sno.nsn.gov
Phone: (405) 788-5913

Sample Consultation Letter

DEPARTMENT OF THE AIR FORCE
482ND FIGHTER WING
HOMESTEAD AIR RESERVE BASE

March 15, 2024

Lawrence Ventura Jr.
Environmental Flight Chief
482nd Fighter Wing
29350 Westover Street
Building 232
Homestead ARB, FL 33039

Daniel Noon Chief, Planning and Compliance; and
Fred Herling, Planner
Everglades National Park
40001 State Road 9336
Homestead, FL 33034

Dear Mr. Noon and Mr. Herling:

The United States (U.S.) Air Force Reserve Command (AFRC) is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of installation improvements at Homestead Air Reserve Base (ARB) in Miami-Dade County, Florida (Proposed Action). The proposed installation improvements include two primary activities: 1) construction and operation of a Bomb Assembly Facility (BAF), and 2) expansion and improvement of an existing recreational vehicle (RV) storage area. Homestead ARB is located approximately 5 miles northeast of the city of Homestead and 20 miles southwest of the city of Miami. The Proposed Action would take place at two sites, totaling approximately 6.5 acres of previously disturbed land within Homestead ARB (**Figure 1**). Homestead ARB hosts the 482nd Fighter Wing, which functions as a fully combat-ready unit capable of providing F-16C multi-purpose fighter aircraft, mission-ready pilots, and support personnel for short-notice worldwide deployment.

Bomb Assembly Facility

Homestead ARB currently lacks the infrastructure needed to conduct bomb assembly training for reservists of the 482nd Fighter Wing. The 482nd Fighter Wing requires a dedicated, on-site BAF at Homestead ARB capable of supporting required training activities. The purpose of this project is to provide personnel at Homestead ARB with a dedicated on-site area for bomb assembly for use during monthly reservist training drills. This component of the Proposed Action would occur within an approximately 2-acre parcel within the Munitions District at Homestead ARB (**Figure 1**). The existing Munitions Assembly Conveyor (MAC) Pad, which consists of a degraded concrete canopy on concrete columns, would be demolished and replaced with an approximately 8,000-square-foot BAF in its place. Much of the proposed site is currently paved, although several adjacent grassy areas would be paved with concrete to accommodate operation of the BAF. In addition, sewer and water lines would be extended to the new BAF from Homestead ARB's existing utility infrastructure along an approximately 0.6-mile corridor depicted on **Figure 1**. These utility lines would be installed belowground via trenching. Approximately 1.5 miles of existing 6-strand fiber optic cable extending to the site would be replaced with a 12-strand cable within the existing duct bank, although no ground disturbance is anticipated to result from the fiber optic cable replacement. Construction access and staging areas would occur entirely

Sample Consultation Letter

on existing paved areas adjacent to the project site. During operation, bombs and other munitions would be assembled at this location during monthly training drills for reservists of the 482nd Fighter Wing.

Recreational Vehicle Storage Improvement and Expansion

Homestead ARB currently lacks sufficient RV storage infrastructure within the installation. The existing RV storage area is insufficient in capacity and the pavement is in poor condition, resulting in RV storage occurring on adjacent, unpaved areas (**Figure 1**). The purpose of this project is to expand and improve the RV storage area within a 4.5-acre parcel to provide better drainage and storage conditions. This component of the Proposed Action would involve re-paving the existing, 2.2-acre RV storage area, and grading and installing asphalt on an approximately 2.3-acre adjacent grassy area currently used for spillover storage of RVs.

The EA will analyze the potential range of environmental impacts that could result from the Proposed Action (i.e., the Preferred Alternative) and the No Action Alternative. The Preferred Alternative includes construction and operation of a BAF, and expansion and improvement of the RV storage area as described above. The Preferred Alternative does not include any changes in personnel.

The No Action Alternative, which reflects the status quo, will be analyzed as a baseline for comparison of potential effects from the Proposed Action. Under the No Action Alternative, Homestead ARB and personnel would not have a dedicated facility for bomb assembly training and munitions training would continue to be accomplished in a "space available" manner, negatively impacting the duration and quality of training. Homestead ARB would also continue to operate their existing RV storage area, including the paved and unpaved portions.

The EA will be prepared in compliance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code 4321, *et seq.*), the Council on Environmental Quality NEPA Implementing Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and the Air Force Environmental Impact Analysis Process (32 CFR 989). To support development of the EA, AFRC will also conduct a site-specific plant survey to identify the presence of threatened or endangered plant species on the proposed sites.

As part of this EA, we request your assistance in identifying any potential areas of environmental impact to be assessed in this analysis. If you have any specific items of interest about this Proposed Action, please contact Mr. Josh Friers, Cultural and Natural Resources Manager, Homestead ARB, by email to: joshua.friers.2@us.af.mil; or by mail to: Josh Friers, 29350 Westover Street, Bldg 232, Homestead ARB, FL 33039 within 30 days of receipt of this letter.

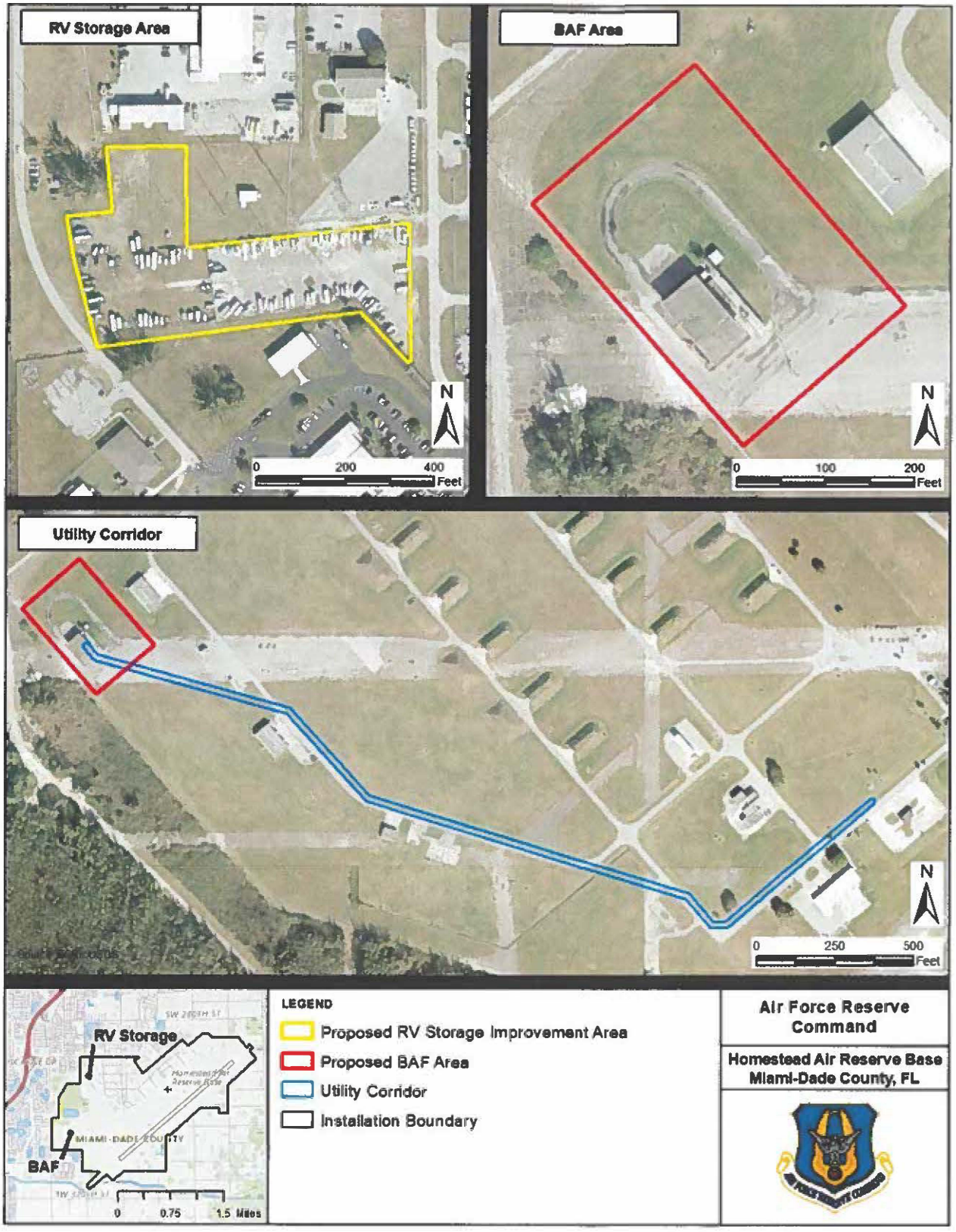
Sincerely,

LAWRENCE VENTURA, JR.,
Chief, Environmental Flight

Attachment:
1.nFigure 1: Proposed Site for RV Expansion and BAF Constructionn

Sample Consultation Letter

Figure 1: Proposed Site for RV Expansion and BAF Construction



Obenland, Benjamin

From: FRIERS, JOSHUA W CIV USAF AFRC 482 MSG/CEV <joshua.friers.2@us.af.mil>
Sent: Friday, May 3, 2024 7:51 AM
To: Obenland, Benjamin
Subject: FW: National Park Service (Biscayne and Everglades National Parks) Response to Proposed AFRC Improvements at Homestead ARB
Attachments: Homestead ARB Installation Improvements EA Notification Letter (2024-03-15).pdf

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This message came from outside your organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Report Suspicious

From: Noon, Daniel <Daniel_Noon@nps.gov>
Sent: Thursday, May 2, 2024 5:39 PM
To: FRIERS, JOSHUA W CIV USAF AFRC 482 MSG/CEV <joshua.friers.2@us.af.mil>
Cc: Hopson, Sarah <Sarah_Hopson@nps.gov>; Santini, Astrid R <Astrid_Santini@nps.gov>; Ramos, Pedro <Pedro_Ramos@nps.gov>; Diaz, Sabrina L <Sabrina_Diaz@nps.gov>; Elmer, Morgan M <Morgan_Elmer@nps.gov>; Dean, Tylan F <tylan_dean@nps.gov>; Marano, Joshua <Joshua_Marano@nps.gov>; Ciolino, Bonnie M <Bonnie_Ciolino@nps.gov>
Subject: [Non-DoD Source] National Park Service (Biscayne and Everglades National Parks) Response to Proposed AFRC Improvements at Homestead ARB

You don't often get email from daniel_noon@nps.gov. Learn why this is important

Dear Mr. Friers,

I received the certified letter on April 16, 2024 regarding the U.S. Air Force Reserve Command (AFRC) preparing an environmental assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of installation improvements at Homestead Air Reserve Base (ARB).

I shared the letter describing the proposed installation improvements at the Homestead ARB bomb assembly facility and recreational vehicle storage with our National Park Service (NPS) staff at Biscayne and Everglades national parks. The staff at Everglades National Park did not identify any potential areas of environmental impact to be assessed in the EA analysis. The following was provided from the staff at Biscayne National Park:

Water quality is a potential area of environment impact to be assessed in the EA, especially if such impact cannot be sufficiently mitigated through the implementation of best management practices (BMPs) that keep construction and subsequent facility operations and maintenance related sediment, contaminants, and debris from entering adjacent canals that flow into Biscayne Bay. The NPS staff at Biscayne National Park is interested in obtaining additional information on how stormwater would be managed at the two installation improvement locations. Recurring water quality sampling and reporting is a suitable monitoring measure to confirm there is no additional water quality degradation into the waters of Biscayne National Park. Please contact Biscayne National Park Natural Resources Chief Morgan McCosh Elmer at morgan_elmer@nps.gov to discuss these potential impacts and mitigation measures.

Thank you for notifying the NPS and the opportunity to provide feedback on the proposal.

Sincerely,

Daniel Noon
Chief of Planning & Environmental Compliance
Everglades and Dry Tortugas National Parks
Office: 305-242-7717
Email: daniel_noon@nps.gov

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Florida Department of Transportation

RON DESANTIS
GOVERNOR

1000 N.W. 111 Avenue
Miami, Florida 33172

JARED W. PERDUE, P.E.
SECRETARY

May 15, 2024

Mr. Josh Friers
Cultural and Natural Resources Manager
Homestead Air Reserve Base
29350 Westover Street, Bldg. 232
Homestead ARB, Florida 33039

SUBJECT: US Air Force Reserve Command Homestead Air Reserve Base - Environmental Assessment

Dear Mr. Friers:

The Florida Department of Transportation (FDOT) is in receipt of your letter dated March 15, 2024, received on April 17, 2024. regarding the subject Environmental Assessment (EA). As indicated in the letter, the United States (U.S.) Air Force Reserve Command (AFRC) is preparing an EA to evaluate the potential environmental impacts resulting from the construction and operation of installation improvements at Homestead Air Reserve Base (ARB) in Miami-Dade County, Florida (Proposed Action). The proposed installation improvements include two primary activities: 1) construction and operation of a Bomb Assembly Facility (BAF), and 2) expansion and improvement of an existing recreational vehicle (RV) storage area. The Proposed Action would take place at two sites, totaling approximately 6.5 acres of previously disturbed land within Homestead ARB.

FDOT has conducted an Area of Interest (AOI) screening utilizing the FDOT Environmental Screening Tool (EST) to aid in the identification of any resources of importance. Attached are the results of the review of each of the areas of the Proposed Action described in the letter.

Based on a preliminary review of the proposed project, it has been determined that there are no State roads directly adjacent to the Homestead ARB or the Proposed Action areas. Therefore, there will be no involvement needed by FDOT District Six. For the demolition of the Munitions Assembly Conveyor (MAC) Pad, site remediation, if required, will need to be conducted in accordance with Florida Department of Environmental Protection (FDEP) regulations. Should there be a need for project activities to be performed within or adjacent to FDOT District Six Right-of-Way, it is required that coordination take place with the FDOT District Six Permit Office. Please

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contact the District Six Permits Engineer, Elizabeth Jett, P.E. at (305)-470-5356 or via email at Elizabeth.jett@dot.state.fl.us as necessary.

Thank you for the opportunity to provide input into the development of the EA. Please feel free to contact Dat Huynh, P.E., District Planning and Environmental Administrator at 305-470-5201 or via email at Dat.Huynh@dot.state.fl.us regarding future coordination for this project.

Sincerely,

DocuSigned by:
9A89F25A78144F3...
Stacy L. Miller, P.E.
FDOT District Six Secretary

Attachments

cc: Lawrence Ventura Jr., Department of the Air Force
Daniel Iglesias, P.E., Florida Department of Transportation
Rudy Garcia, P.E., Florida Department of Transportation
Dat Huynh, P.E., Florida Department of Transportation
Steven C. James, RLA, Florida Department of Transportation
Elizabeth Jett, P.E., Florida Department of Transportation

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Project Name:	U.S. Air Force Reserve Command Homestead Air Reserve Base - Environmental Assessment				
Description:	RV Storage Area, part 1/3 of the U.S. Air Force Reserve Command's request in identifying potential areas of environmental impact for construction of Homestead Air Reserve Base improvements.				
County:	Miami-Dade County				
AREA OF INTEREST SCREENING: POTENTIAL PROJECT IMPACTS TO ENVIRONMENTAL RESOURCES					
Topic	Impact Potential				List or briefly detail present/potential resources (Results reported for 500-foot buffer) (Environmental Screening Tool Sociocultural Data Report – Intersecting)
	High	Med.	Low	None	
Social and Economic					
1) Social	☐	☐	☒	☐	The RV Storage Area is located within the Miami Urbanized Area and partially within one US Census Designated Place [Homestead Base]. Community features present within the 500-foot buffer include one airport runway [Homestead Air Reserve Base Runway], and one aviation transportation facility [Homestead Air Reserve Base (also a Florida Natural Areas Inventory (FNAI) public land)]. Total population in the census block groups intersected by the RV Storage Area is 4,743; total number of households is 1,226. Compared to Miami-Dade County – lower White population %, higher minority population %, higher % of age 18 or below, lower % of age 65 and over, lower median family income, higher %s of population and households below poverty level, higher % of households with public assistance income, higher % of individuals who completed high school with no diploma, lower % of individuals with high school or higher education, slightly lower % of occupied housing units with no vehicle, and lower % of individuals that speak English less than very well [650 persons (14.84%)]. The proposed project is intended to expand the existing RV storage area on the Homestead Air Reserve Base to prevent grass parking. The project is not anticipated to result in a major change to community cohesion as it is proposed on land that is not available to the public; no further neighborhood division or social isolation is expected to occur. However, temporary increased noise and vibration impacts to existing communities could be a concern with increased traffic during construction. Environmental Justice communities are present. Limited English Proficiency (LEP) accommodations should be considered.

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Project Name:	U.S. Air Force Reserve Command Homestead Air Reserve Base - Environmental Assessment
Description:	RV Storage Area, part 1/3 of the U.S. Air Force Reserve Command's request in identifying potential areas of environmental impact for construction of Homestead Air Reserve Base improvements.
County:	Miami-Dade County

AREA OF INTEREST SCREENING: POTENTIAL PROJECT IMPACTS TO ENVIRONMENTAL RESOURCES

Topic	Impact Potential				List or briefly detail present/potential resources (Results reported for 500-foot buffer) (Environmental Screening Tool Sociocultural Data Report – Intersecting)
	High	Med.	Low	None	
2) Economic	☐	☐	☐	☒	There are no economic resources present as the project area is within the Homestead Air Reserve Base and surrounded by government-owned land and facilities.
3) Land Use Changes	☐	☐	☐	☒	The 500-foot buffer of the RV Storage Area is partially within one U.S. Military Installation [Homestead Air Reserve Base]. The area primarily consists of public/semi-public land use with smaller segments of agricultural and a small piece of residential. The project is not likely to require additional access or right-of-way.
4) Mobility	☐	☐	☒	☐	Mobility features within the 500-foot buffer of the RV Storage Area include one airport runway [Homestead Air Reserve Base Runway] and one aviation transportation facility [Homestead Air Reserve Base]. The project is intended to expand to account for elevated RV traffic currently parking on adjacent unpaved areas and to repair existing pavement in poor condition. The project may create some additional traffic through added RV capacity but minimum impact to mobility is anticipated.
5) Aesthetic Effect	☐	☐	☒	☐	Aesthetic features in the area include 0.66 acres (1.31%) of multiple dwelling units, low rise (two stories or less). Since the area is primarily within publicly owned military land, minimum involvement is anticipated regarding aesthetic effects/impacts to the aesthetic character of the area. Design treatments that are compatible architecturally and aesthetically with the surrounding area should be considered.
6) Relocation Potential	☐	☐	☐	☒	The existing area is primarily within publicly owned military lands. The structures proximate to the RV Storage Area are part of the Homestead Air Reserve Base. No property acquisitions are anticipated from this construction.
7) Farmlands	☐	☐	☐	☒	3.32 acres (6.62%) of farmland of unique importance and 6.13 acres (12.19%) of agricultural land use are present [container nursery and ROW crops]. The project area occurs entirely within the Miami Urbanized Area. Lands within the project vicinity do not meet the definition of

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Project Name:	U.S. Air Force Reserve Command Homestead Air Reserve Base - Environmental Assessment
Description:	RV Storage Area, part 1/3 of the U.S. Air Force Reserve Command's request in identifying potential areas of environmental impact for construction of Homestead Air Reserve Base improvements.
County:	Miami-Dade County

AREA OF INTEREST SCREENING: POTENTIAL PROJECT IMPACTS TO ENVIRONMENTAL RESOURCES

Topic	Impact Potential				List or briefly detail present/potential resources (Results reported for 500-foot buffer) (Environmental Screening Tool Sociocultural Data Report – Intersecting)
	High	Med.	Low	None	
					farmland as defined in 7 CFR 658, and the provisions of the Farmland Protection Policy Act of 1981 do not apply because the project is entirely within the Miami Urbanized Area.
Cultural					
1) Historic Sites/Districts	☐	☐	☒	☐	One historic standing structure [ineligible for listing on the National Register of Historic Places]. Miami-Dade County is a National Historic Preservation Act – Florida Certified Local Government. Minimal impacts regarding historic sites/districts are anticipated.
2) Archaeological Sites	☐	☐	☐	☒	Five field surveys have been conducted in the project area [1989 – 2022]. There are no Florida Site File archaeological sites reported to date. No involvement with archeological resources is anticipated.
3) Recreation Areas	☐	☐	☐	☒	There is one Florida Managed Area [Homestead Air Reserve Base] within the 500-foot buffer of the project area. No involvement is anticipated regarding recreation areas as the project area is within military-owned land not accessible to the public and there will be no impact to use or enjoyment of amenities during project construction.
Natural					
1) Wetlands and Other Surface Waters	☐	☐	☒	☐	National Wetlands Inventory Database: 0.86 acres (1.71%) of riverine wetlands are present. The RV Storage Area is within one water management district boundary [South Florida Water Management District], one FNAI public lands [Homestead Air Reserve Base], four mitigation bank service areas [Everglades Phase 1 and 2, Hole in the Donut, and Pembroke Pines], and one sole source aquifer [Biscayne Aquifer SSA]. Minimal involvement regarding wetlands is anticipated given that some wetlands are present within and adjacent to the RV Storage Area.
2) Special Designations	☐	☐	☒	☐	There is one sole source aquifer within the 500-foot buffer of the project area [Biscayne Aquifer SSA].

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Project Name:	U.S. Air Force Reserve Command Homestead Air Reserve Base - Environmental Assessment
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County:	Miami-Dade County

AREA OF INTEREST SCREENING: POTENTIAL PROJECT IMPACTS TO ENVIRONMENTAL RESOURCES

Topic	Impact Potential				List or briefly detail present/potential resources (Results reported for 500-foot buffer) (Environmental Screening Tool Sociocultural Data Report – Intersecting)
	High	Med.	Low	None	
3) Water Quality	☐	☐	☒	☐	The RV Storage Area is within one watershed containing Waters Not Attaining Standards [Military Canal-WBID: 3304 (impaired for specific conductance)]. Water resources present include: one principal aquifer of the state of Florida [Biscayne Aquifer], one recharge area of the Floridan aquifer [discharge/less than 1], and one sole source aquifer [Biscayne Aquifer SSA]. The project area currently has limited stormwater facilities, but the project intends to provide better drainage. Avoidance and minimization measures should be incorporated into the project's design to address any adverse impacts to water quality as a result of the project.
4) Wild and Scenic Rivers	☐	☐	☐	☒	No Wild and Scenic Rivers nor waters that are part of the Nationwide Rivers Inventory are present.
5) Drainage and Floodplain	☐	☐	☒	☐	The project area is located partially within the 100-year floodplain [Flood Zone AH – 7.36 acres (14.67%)]. Minimal involvement regarding floodplains is anticipated given that 100-year floodplain is present within and adjacent to the project area.
6) Coastal Barrier Resources	☐	☐	☐	☒	The segment is in one coastal county – subject to Coastal Zone Management Act (CZMA). No Coastal Barrier Resource Systems are present.
7) Protected Species and Habitat	☒	☐	☒	☐	South Florida Ecosystem Management Area (Lower East Coast) – 50.26 acres (99.98%); Rare Black Bear Range; FNAI element occurrence documented or likely for the Wedgelet Fern, Bahama Brake, Porter's Broad-Leaved Spurge, and Krug's Holly and potential for mangrove rivulus and An Ataenius beetle; threatened or endangered species occurrence (documented or likely) – Bahama Braka, Krug's Holly, Porter's Broad-Leaved Spurge, and Wedgelet Fern; consultation area for the American crocodile, the Florida bonneted bat, and Miami-Dade Keys plants; Florida Fish and Wildlife Conservation Commission (FWC) watersheds containing rare and imperiled fish [American eel and opossum pipefish]; and core foraging area for the wood stork. Minimal involvement regarding protected species and habitat is anticipated given the possible need for agency coordination to address potential project impacts to identified species.

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Project Name:	U.S. Air Force Reserve Command Homestead Air Reserve Base - Environmental Assessment
Description:	RV Storage Area, part 1/3 of the U.S. Air Force Reserve Command's request in identifying potential areas of environmental impact for construction of Homestead Air Reserve Base improvements.
County:	Miami-Dade County

AREA OF INTEREST SCREENING: POTENTIAL PROJECT IMPACTS TO ENVIRONMENTAL RESOURCES					
Topic	Impact Potential				List or briefly detail present/potential resources (Results reported for 500-foot buffer) (Environmental Screening Tool Sociocultural Data Report – Intersecting)
	High	Med.	Low	None	
8) Essential Fish Habitat	☐	☐	☐	☒	The RV Storage Area does not occur within any Essential Fish Habitat.
9) Acquisition Restoration Council (ARC)	☐	☐	☐	☒	The RV Storage Area is not within or adjacent to any ARC lands. No involvement regarding ARC is anticipated.
Physical					
1) Highway Traffic Noise	☐	☐	☒	☐	Features potentially sensitive to noise and vibration impacts include one airport runway [Homestead Air Reserve Base Runway], one aviation transportation facility [Homestead Air Reserve Base], one U.S. military installation [Homestead Air Reserve Base], and 0.66 acres (1.31%) of residential areas [multiple dwelling units, low rise (two stories or less)].
2) Air Quality	☐	☐	☒	☐	Miami-Dade County is in attainment. Minimal temporary impacts are anticipated during project construction.
3) Contamination	☐	☐	☒	☐	15 FDEP Environmental Restoration Integrated Cleanup (ERIC) sites, one NPDES stormwater permit, two petroleum contamination monitoring sites, six storage tank contamination monitoring sites, two SUPER Act Risk Source, and one SUPER Act Well. Note that some of these resources may overlap with one another.
4) Utility/Railroad	☐	☐	☒	☐	Utility data is unavailable for this project area. No railroads are present.
5) Construction	☐	☐	☒	☐	Very poorly drained soils are the only soils present. Stormwater management features in the area will need to be constructed as few are currently present. No known potential conflicts with utilities if construction occurs. A small segment of wetlands traverses just south of the project area within the 500-foot project buffer. Potential construction challenges could include the presence of very poorly drained soils, some contamination sites, and the consideration for the presence of wetlands.
6) Bicycles and Pedestrians	☐	☐	☐	☒	No sidewalks or bicycle lanes are present.
7) Navigation	☐	☐	☐	☐	No navigable waterways are present.

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Project Name:	U.S. Air Force Reserve Command Homestead Air Reserve Base - Environmental Assessment
Description:	Bomb Assembly Facility, part 2/3 of the U.S. Air Force Reserve Command's request in identifying potential areas of environmental impact for construction of Homestead Air Reserve Base improvements.
County:	Miami-Dade County

AREA OF INTEREST SCREENING: POTENTIAL PROJECT IMPACTS TO ENVIRONMENTAL RESOURCES

Topic	Impact Potential				List or briefly detail present/potential resources (Results reported for 500-foot buffer) (Environmental Screening Tool Sociocultural Data Report – Intersecting)
	High	Med.	Low	None	
Social and Economic					
1) Social	☐	☐	☒	☐	The Bomb Assembly Facility is located within the Miami Urbanized Area and within one US Census Designated Place [Homestead Base]. Community features present within the 500-foot buffer include one aviation transportation facility [Homestead Air Reserve Base (also a Florida Natural Areas Inventory (FNAI) public land)]. Total population in the census block groups intersected by the Bomb Assembly Facility is 1,242; total number of households is 210. Compared to Miami-Dade County – lower White population %, higher minority population %, higher % of age 18 or below, lower % of age 65 and over, lower median family income, higher %s of population and households below poverty level, higher % of households with public assistance income, higher % of individuals who completed high school with no diploma, lower % of individuals with high school or higher education, significantly higher % of occupied housing units with no vehicle, and lower % of individuals that speak English less than very well [63 persons (5.62%)]. The proposed project is intended to provide a dedicated bomb assembly training facility on site for use during monthly reservist drills on the Homestead Air Reserve Base. The project is not anticipated to result in a major change to community cohesion as it is proposed on land that is not available to the public; no further neighborhood division or social isolation is expected to occur. However, temporary increased noise and vibration impacts to existing communities could be a concern with increased traffic during construction. Environmental Justice communities are present. Limited English Proficiency (LEP) accommodations should be considered.
2) Economic	☐	☐	☐	☒	There are no economic resources present as the project area is within the Homestead Air Reserve Base and surrounded by government-owned land and facilities.

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Project Name:	U.S. Air Force Reserve Command Homestead Air Reserve Base - Environmental Assessment
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County:	Miami-Dade County

AREA OF INTEREST SCREENING: POTENTIAL PROJECT IMPACTS TO ENVIRONMENTAL RESOURCES

Topic	Impact Potential				List or briefly detail present/potential resources (Results reported for 500-foot buffer) (Environmental Screening Tool Sociocultural Data Report – Intersecting)
	High	Med.	Low	None	
3) Land Use Changes	☐	☐	☐	☒	The 500-foot buffer of the Bomb Assembly Facility is within one U.S. Military Installation [Homestead Air Reserve Base]. The area consists of public/semi-public land use. The project is not likely to require additional access or right-of-way.
4) Mobility	☐	☐	☒	☐	Mobility features within the 500-foot buffer of the Bomb Assembly Facility include one aviation transportation facility [Homestead Air Reserve Base]. Minimum impact to mobility is anticipated.
5) Aesthetic Effect	☐	☐	☒	☐	Since the area is within publicly owned military land, minimum involvement is anticipated regarding aesthetic effects/impacts to the aesthetic character of the area. Design treatments that are compatible architecturally and aesthetically with the surrounding area should be considered.
6) Relocation Potential	☐	☐	☐	☒	The existing area is fully within publicly owned military lands. The structures proximate to the Bomb Assembly Facility are part of the Homestead Air Reserve Base. No property acquisitions are anticipated from this construction.
7) Farmlands	☐	☐	☐	☒	8.19 acres (25.04%) of farmland of unique importance are present. The project area occurs entirely within the Miami Urbanized Area. Lands within the project vicinity do not meet the definition of farmland as defined in 7 CFR 658, and the provisions of the Farmland Protection Policy Act of 1981 do not apply because the project is entirely within the Miami Urbanized Area.
Cultural					
1) Historic Sites/Districts	☐	☐	☒	☐	Four historic standing structures [ineligible for listing on the National Register of Historic Places]. Miami-Dade County is a National Historic Preservation Act – Florida Certified Local Government. Minimal impacts regarding historic sites/districts are anticipated.
2) Archaeological Sites	☐	☐	☐	☒	Three field surveys have been conducted in the project area [1989 – 2022]. There are no Florida Site File archaeological sites reported to date. No involvement with archaeological resources is anticipated.

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Project Name:	U.S. Air Force Reserve Command Homestead Air Reserve Base - Environmental Assessment
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County:	Miami-Dade County

AREA OF INTEREST SCREENING: POTENTIAL PROJECT IMPACTS TO ENVIRONMENTAL RESOURCES

Topic	Impact Potential				List or briefly detail present/potential resources (Results reported for 500-foot buffer) (Environmental Screening Tool Sociocultural Data Report – Intersecting)
	High	Med.	Low	None	
3) Recreation Areas	☐	☐	☐	☒	There is one Florida Managed Area [Homestead Air Reserve Base] within the 500-foot buffer of the project area. No involvement is anticipated regarding recreation areas as the project area is within military-owned land not accessible to the public and there will be no impact to use or enjoyment of amenities during project construction.
Natural					
1) Wetlands and Other Surface Waters	☐	☐	☐	☒	National Wetlands Inventory Database: No wetlands identified. The Bomb Assembly Facility is within one water management district boundary [South Florida Water Management District], one FNAI public lands [Homestead Air Reserve Base], four mitigation bank service areas [Everglades Phase 1 and 2, Hole in the Donut, and Pembroke Pines], and one sole source aquifer [Biscayne Aquifer SSA]. No involvement regarding wetlands is anticipated given there are no wetlands identified.
2) Special Designations	☐	☐	☒	☐	There is one sole source aquifer within the 500-foot buffer of the project area [Biscayne Aquifer SSA].
3) Water Quality	☐	☐	☒	☐	The Bomb Assembly Facility is within one watershed containing Waters Not Attaining Standards [Military Canal-WBID: 3304 (impaired for specific conductance)]. Water resources present include: one principal aquifer of the state of Florida [Biscayne Aquifer], one recharge area of the Floridan aquifer [discharge/less than 1], and one sole source aquifer [Biscayne Aquifer SSA]. The project area currently has limited stormwater facilities and project construction could cause additional stormwater and runoff impacts. Avoidance and minimization measures should be incorporated into the project's design to address any adverse impacts to water quality as a result of the project.
4) Wild and Scenic Rivers	☐	☐	☐	☒	No Wild and Scenic Rivers nor waters that are part of the Nationwide Rivers Inventory are present.

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Project Name:	U.S. Air Force Reserve Command Homestead Air Reserve Base - Environmental Assessment
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County:	Miami-Dade County

AREA OF INTEREST SCREENING: POTENTIAL PROJECT IMPACTS TO ENVIRONMENTAL RESOURCES

Topic	Impact Potential				List or briefly detail present/potential resources (Results reported for 500-foot buffer) (Environmental Screening Tool Sociocultural Data Report – Intersecting)
	High	Med.	Low	None	
5) Drainage and Floodplain	☐	☐	☐	☒	The project area is located fully outside of the 100 and 500-year floodplains. No involvement regarding floodplains is anticipated given that no floodplains are present within and adjacent to the project area.
6) Coastal Barrier Resources	☐	☐	☐	☒	The segment is in one coastal county – subject to Coastal Zone Management Act (CZMA). No Coastal Barrier Resource Systems are present.
7) Protected Species and Habitat	☐	☐	☒	☐	South Florida Ecosystem Management Area (Lower East Coast) – 32.71 acres (100%); Rare Black Bear Range; FNAI element occurrence potential for the An Ataenius beetle; consultation area for the American crocodile, the Florida bonneted bat, and Miami-Dade Keys plants; and core foraging area for the wood stork. Minimal involvement regarding protected species and habitat is anticipated given the possible need for agency coordination to address potential project impacts to identified species.
8) Essential Fish Habitat	☐	☐	☐	☒	The Bomb Assembly Facility does not occur within any Essential Fish Habitat.
9) Acquisition and Restoration Council (ARC)	☐	☐	☐	☒	The Bomb Assembly Facility is not within or adjacent to any ARC lands. No involvement regarding ARC is anticipated.
Physical					
1) Highway Traffic Noise	☐	☐	☒	☐	Features potentially sensitive to noise and vibration impacts include one aviation transportation facility [Homestead Air Reserve Base] and one U.S. military installation [Homestead Air Reserve Base].
2) Air Quality	☐	☐	☒	☐	Miami-Dade County is in attainment. Minimal temporary impacts are anticipated during project construction.
3) Contamination	☐	☐	☒	☐	Two FDEP Environmental Restoration Integrated Cleanup (ERIC) sites, one NPDES stormwater permit, and one storage tank contamination monitoring sites. Note that some of these resources may overlap with one another.

DocuSign Envelope ID: 4A3A4673-918E-4196-B357-43E03A85D5F5

Project Name:	U.S. Air Force Reserve Command Homestead Air Reserve Base - Environmental Assessment
Description:	Bomb Assembly Facility, part 2/3 of the U.S. Air Force Reserve Command's request in identifying potential areas of environmental impact for construction of Homestead Air Reserve Base improvements.
County:	Miami-Dade County

AREA OF INTEREST SCREENING: POTENTIAL PROJECT IMPACTS TO ENVIRONMENTAL RESOURCES

Topic	Impact Potential				List or briefly detail present/potential resources (Results reported for 500-foot buffer) (Environmental Screening Tool Sociocultural Data Report – Intersecting)
	High	Med.	Low	None	
4) Utility/Railroad	☐	☐	☒	☐	Utility data is unavailable for this project area. No railroads are present. This project does include the replacement of 1.5 miles of existing 6-strand fiber optic cable with a 12-strand cable within the existing duct bank with no anticipated ground disturbance. Additionally, sewer and water lines would be extended on approximately 0.6-miles to the new Bomb Assembly Facility from the Homestead Air Reserve Base's existing utility infrastructure below ground via trenching.
5) Construction	☐	☐	☒	☐	Very poorly drained soils are the only soils present. Stormwater management features in the area will need to be constructed as few are currently present. No known potential conflicts with utilities if construction occurs. Potential construction challenges could include the presence of very poorly drained soils, some contamination sites, and the consideration for the presence of wetlands.
6) Bicycles and Pedestrians	☐	☐	☐	☒	No sidewalks or bicycle lanes are present.
7) Navigation	☐	☐	☐	☒	No navigable waterways are present.

DocuSign Envelope ID: 4A3A4673-918E-4196-B357-43E03A85D5F5

Project Name:	U.S. Air Force Reserve Command Homestead Air Reserve Base - Environmental Assessment				
Description:	Utility Corridor, part 3/3 of the U.S. Air Force Reserve Command's request in identifying potential areas of environmental impact for construction of Homestead Air Reserve Base improvements.				
County:	Miami-Dade County				
AREA OF INTEREST SCREENING: POTENTIAL PROJECT IMPACTS TO ENVIRONMENTAL RESOURCES					
Topic	Impact Potential				List or briefly detail present/potential resources (Results reported for 500-foot buffer) (Environmental Screening Tool Sociocultural Data Report – Intersecting)
	High	Med.	Low	None	
Social and Economic					
1) Social	☐	☐	☒	☐	The Utility Corridor is located within the Miami Urbanized Area and within one US Census Designated Place [Homestead Base]. Community features present within the 500-foot buffer include one aviation transportation facility [Homestead Air Reserve Base (also a Florida Natural Areas Inventory (FNAI) public land)]. Total population in the census block groups intersected by the Utility Storage Area is 1,242; total number of households is 210. Compared to Miami-Dade County – lower White population %, higher Black or African American %, higher minority population %, higher % of age 18 or below, lower % of age 65 and over, lower median family income, higher %s of population and households below poverty level, higher % of households with public assistance income, higher % of individuals who completed high school with no diploma, lower % of individuals with high school or higher education, significantly higher % of occupied housing units with no vehicle, and lower % of individuals that speak English less than very well [63 persons (5.62%)]. The proposed project is intended to provide updated facilities for the new bomb assembly training facility on the Homestead Air Reserve Base. The project is not anticipated to result in a major change to community cohesion as it is proposed on land that is not available to the public; no further neighborhood division or social isolation is expected to occur. However, temporary increased noise and vibration impacts to existing communities could be a concern with increased traffic during construction. Environmental Justice communities are present. Limited English Proficiency (LEP) accommodations should be considered.
2) Economic	☐	☐	☐	☒	There are no economic resources present as the project area is within the Homestead Air Reserve Base and surrounded by government-owned land and facilities.

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Project Name:	U.S. Air Force Reserve Command Homestead Air Reserve Base - Environmental Assessment
Description:	Utility Corridor, part 3/3 of the U.S. Air Force Reserve Command's request in identifying potential areas of environmental impact for construction of Homestead Air Reserve Base improvements.
County:	Miami-Dade County

AREA OF INTEREST SCREENING: POTENTIAL PROJECT IMPACTS TO ENVIRONMENTAL RESOURCES

Topic	Impact Potential				List or briefly detail present/potential resources (Results reported for 500-foot buffer) (Environmental Screening Tool Sociocultural Data Report – Intersecting)
	High	Med.	Low	None	
3) Land Use Changes	☐	☐	☐	☒	The 500-foot buffer of the Utility Corridor is within one U.S. Military Installation [Homestead Air Reserve Base]. The area consists of public/semi-public land use. The project is not likely to require additional access or right-of-way.
4) Mobility	☐	☐	☒	☐	Mobility features within the 500-foot buffer of the Utility Corridor include one aviation transportation facility [Homestead Air Reserve Base]. Minimum impact to mobility is anticipated.
5) Aesthetic Effects	☐	☐	☒	☐	Since the area is within publicly owned military land, minimum involvement is anticipated regarding aesthetic effects/impacts to the aesthetic character of the area. Design treatments that are compatible architecturally and aesthetically with the surrounding area should be considered.
6) Relocation Potential	☐	☐	☐	☒	The existing corridor is fully within publicly owned military lands. The structures proximate to the Utility Corridor are part of the Homestead Air Reserve Base. No property acquisitions are anticipated from this construction.
7) Farmlands	☐	☐	☐	☒	0.87 acres (1.02%) of farmland of unique importance are present. The project area occurs entirely within the Miami Urbanized Area. Lands within the project vicinity do not meet the definition of farmland as defined in 7 CFR 658, and the provisions of the Farmland Protection Policy Act of 1981 do not apply because the project is entirely within the Miami Urbanized Area.
Cultural					
1) Historic Sites/Districts	☐	☐	☒	☐	Seven historic standing structures [ineligible for listing on the National Register of Historic Places]. Miami-Dade County is a National Historic Preservation Act – Florida Certified Local Government. Minimal impacts regarding historic sites/districts are anticipated.
2) Archaeological Sites	☐	☐	☐	☒	Three field surveys have been conducted in the project area [1989 – 2022]. There are no archaeological sites reported to date. No involvement with archeological resources is anticipated.

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Project Name:	U.S. Air Force Reserve Command Homestead Air Reserve Base - Environmental Assessment
Description:	Utility Corridor, part 3/3 of the U.S. Air Force Reserve Command's request in identifying potential areas of environmental impact for construction of Homestead Air Reserve Base improvements.
County:	Miami-Dade County

AREA OF INTEREST SCREENING: POTENTIAL PROJECT IMPACTS TO ENVIRONMENTAL RESOURCES

Topic	Impact Potential				List or briefly detail present/potential resources (Results reported for 500-foot buffer) (Environmental Screening Tool Sociocultural Data Report – Intersecting)
	High	Med.	Low	None	
3) Recreation Areas	☐	☐	☐	☒	There is one Florida Managed Area [Homestead Air Reserve Base] within the 500-foot buffer of the project area. No involvement is anticipated regarding recreation areas as the project area is within military-owned land not accessible to the public and there will be no impact to use or enjoyment of amenities during project construction.
Natural					
1) Wetlands and Other Surface Waters	☐	☐	☒	☐	National Wetlands Inventory Database: 0.09 acres (0.11%) of riverine wetlands are present. The Utility Corridor is within one water management district boundary [South Florida Water Management District], one FNAI public land [Homestead Air Reserve Base], four mitigation bank service areas [Everglades Phase 1 and 2, Hole in the Donut, and Pembroke Pines], and one sole source aquifer [Biscayne Aquifer SSA]. Minimal involvement regarding wetlands is anticipated given that some wetlands are present within and adjacent to the Utility Corridor.
2) Special Designations	☐	☐	☒	☐	There is one sole source aquifer within the 500-foot buffer of the project area [Biscayne Aquifer SSA].
3) Water Quality	☐	☐	☒	☐	The Utility Corridor is within one watershed containing Waters Not Attaining Standards [Military Canal – WBID:3304 (impaired for specific conductance)]. Water resources present include: one principal aquifer of the state of Florida [Biscayne Aquifer], one recharge area of the Floridan aquifer [discharge/less than 1], and one sole source aquifer [Biscayne Aquifer SSA]. The project area currently has limited stormwater facilities, and the project includes installing lines belowground via trenching. Avoidance and minimization measures should be incorporated into the project's design to address any adverse impacts to water quality as a result of the project.
4) Wild and Scenic Rivers	☐	☐	☐	☒	No Wild and Scenic Rivers nor waters that are part of the Nationwide Rivers Inventory are present.

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Project Name:	U.S. Air Force Reserve Command Homestead Air Reserve Base - Environmental Assessment
Description:	Utility Corridor, part 3/3 of the U.S. Air Force Reserve Command's request in identifying potential areas of environmental impact for construction of Homestead Air Reserve Base improvements.
County:	Miami-Dade County

AREA OF INTEREST SCREENING: POTENTIAL PROJECT IMPACTS TO ENVIRONMENTAL RESOURCES

Topic	Impact Potential				List or briefly detail present/potential resources (Results reported for 500-foot buffer) (Environmental Screening Tool Sociocultural Data Report – Intersecting)
	High	Med.	Low	None	
5) Drainage and Floodplain	☐	☐	☐	☒	The project area is located entirely outside of the 100 and 500-year floodplains. No involvement regarding floodplains is anticipated given that no floodplains are present within and adjacent to the project corridor.
6) Coastal Barrier Resources	☐	☐	☐	☒	The segment is in one coastal county – subject to Coastal Zone Management Act (CZMA). No Coastal Barrier Resource Systems are present.
7) Protected Species and Habitat	☐	☐	☒	☐	South Florida Ecosystem Management Area (Lower East Coast) – 84.97 acres (100%); Rare Black Bear Range; FNAI element occurrence potential for the An Ataenius beetle; consultation area for the American crocodile, the bonneted bat, and Miami-Dade Keys plants; and core foraging area for the wood stork. Minimal involvement regarding protected species and habitat is anticipated given the possible need for agency coordination to address potential project impacts to identified species.
8) Essential Fish Habitat	☐	☐	☐	☒	The Utility Corridor does not occur within any Essential Fish Habitat.
9) Acquisition and Restoration Council (ARC)	☐	☐	☐	☒	The Utility Corridor is not within or adjacent to any ARC lands. No involvement regarding ARC is anticipated.
Physical					
1) Highway Traffic Noise	☐	☐	☒	☐	Features potentially sensitive to noise and vibration impacts include one aviation transportation facility [Homestead Air Reserve Base] and one U.S. military installation [Homestead Air Reserve Base].
2) Air Quality	☐	☐	☒	☐	Miami-Dade County is in attainment. Minimal temporary impacts are anticipated during project construction.
3) Contamination	☐	☐	☒	☐	Two FDEP Environmental Restoration Integrated Cleanup (ERIC) sites, one NPDES stormwater permit, and one storage tank contamination monitoring site. Note that some of these resources may overlap with one another.

DocuSign Envelope ID: 4A3A4673-918E-4196-B357-43E03A85D5F5

Project Name:	U.S. Air Force Reserve Command Homestead Air Reserve Base - Environmental Assessment
Description:	Utility Corridor, part 3/3 of the U.S. Air Force Reserve Command's request in identifying potential areas of environmental impact for construction of Homestead Air Reserve Base improvements.
County:	Miami-Dade County

AREA OF INTEREST SCREENING: POTENTIAL PROJECT IMPACTS TO ENVIRONMENTAL RESOURCES

Topic	Impact Potential				List or briefly detail present/potential resources (Results reported for 500-foot buffer) (Environmental Screening Tool Sociocultural Data Report – Intersecting)
	High	Med.	Low	None	
4) Utility/Railroad	☐	☐	☒	☐	Utility data is unavailable for this project area. No railroads are present. This project does include the replacement of 1.5 miles of existing 6-strand fiber optic cable with a 12-strand cable within the existing duct bank with no anticipated ground disturbance. Additionally, sewer and water lines would be extended on approximately 0.6-miles below ground via trenching.
5) Construction	☐	☐	☒	☐	Very poorly drained soils are the only soils present. Stormwater management features in the area will need to be constructed as few are currently present. No known potential conflicts with utilities if construction occurs. Potential construction challenges could include the presence of very poorly drained soils, some contamination sites, and the consideration for the presence of wetlands.
6) Bicycles and Pedestrians	☐	☐	☐	☒	No sidewalks or bicycle lanes are present on the corridor.
7) Navigation	☐	☐	☐	☒	No navigable waterways are present.

DEPARTMENT OF THE AIR FORCE
482ND FIGHTER WING
HOMESTEAD AIR RESERVE BASE

March 15, 2024

Lawrence Ventura Jr.
Environmental Flight Chief
482nd Fighter Wing
29350 Westover Street
Building 232
Homestead ARB, FL 33039

U.S. Fish & Wildlife Service
Florida Ecological Services Field Office
777 37th Street
Suite D-101
Vero Beach, FL 32960

Dear Sir or Madam,

The United States (U.S.) Air Force Reserve Command (AFRC) is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of installation improvements at Homestead Air Reserve Base (ARB) in Miami-Dade County, Florida (Proposed Action). This correspondence is intended to (1) confirm the AFRC's approach to consultation under Section 7 of the Endangered Species Act of 1973 for this project, and (2) offer the Service the opportunity to identify issues for consideration in the EA or to provide information that may be relevant for the impact analysis.

Project Description

Homestead ARB is located approximately 5 miles northeast of the city of Homestead and 20 miles southwest of the city of Miami. The Proposed Action would take place at two sites, totaling approximately 6.5 acres of previously disturbed land within Homestead ARB (**Attachment 1**). Homestead ARB hosts the 482nd Fighter Wing, which functions as a fully combat-ready unit capable of providing F-16C multi-purpose fighter aircraft, mission-ready pilots, and support personnel for short-notice worldwide deployment.

Bomb Assembly Facility

Homestead ARB currently lacks the infrastructure needed to conduct bomb assembly training for reservists of the 482nd Fighter Wing. The 482nd Fighter Wing requires a dedicated, on-site BAF at Homestead ARB capable of supporting required training activities. The purpose of this project is to provide personnel at Homestead ARB with a dedicated on-site area for bomb assembly for use during monthly reservist training drills. This component of the Proposed Action would occur within an approximately 2-acre parcel within the Munitions District at Homestead ARB (**Attachment 1**). The existing Munitions Assembly Conveyor (MAC) Pad, which consists of a degraded concrete canopy on concrete columns, would be demolished and replaced with an approximately 8,000-square-foot BAF in its place. Much of the proposed site is currently paved, although several adjacent grassy areas would be

paved with concrete to accommodate operation of the BAF. In addition, sewer and water lines would be extended to the new BAF from Homestead ARB's existing utility infrastructure along an approximately 0.6-mile corridor depicted on **Attachment 1**. These utility lines would be installed belowground via trenching. Approximately 1.5 miles of existing 6-strand fiber optic cable extending to the site would be replaced with a 12-strand cable within the existing duct bank, although no ground disturbance is anticipated to result from the fiber optic cable replacement. Construction access and staging areas would occur entirely on existing paved areas adjacent to the project site. During operation, bombs and other munitions would be assembled at this location during monthly training drills for reservists of the 482nd Fighter Wing.

Recreational Vehicle Storage Improvement and Expansion

Homestead ARB currently lacks sufficient RV storage infrastructure within the installation. The existing RV storage area is insufficient in capacity and the pavement is in poor condition, resulting in RV storage occurring on adjacent, unpaved areas (**Attachment 1**). The purpose of this project is to expand and improve the RV storage area within a 4.5-acre parcel to provide better drainage and storage conditions. This component of the Proposed Action would involve re-paving the existing, 2.2-acre RV storage area, and grading and installing asphalt on an approximately 2.3-acre adjacent grassy area currently used for spillover storage of RVs.

The EA will analyze the potential range of environmental impacts that could result from the Proposed Action (i.e., the Preferred Alternative) and the No Action Alternative. The Preferred Alternative includes construction and operation of a BAF, and expansion and improvement of the RV storage area as described above. The Preferred Alternative does not include any changes in personnel. The No Action Alternative, which reflects the status quo, will be analyzed as a baseline for comparison of potential effects from the Proposed Action. Under the No Action Alternative, Homestead ARB and personnel would not have a dedicated facility for bomb assembly training and munitions training would continue to be accomplished in a "space available" manner, negatively impacting the duration and quality of training. Homestead ARB would also continue to operate their existing RV storage area, including the paved and unpaved portions.

Section 7 of the ESA

AFRC queried the United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) database to determine whether any federally listed species have the potential to occur in the Project Site (Project Code 2024-0053313). According to IPaC, 34 federally listed threatened, endangered, and candidate species have the potential to occur at the Project Site (see **Attachment 3** for the official species list).

AFRC previously completed programmatic Section 7 consultation for Ongoing and Future Military and Non-Military Operations at Homestead ARB, which included a May 2018 Biological Assessment and the corresponding September 2019 Biological Opinion (BO) (USFWS, 2019). The proposed BAF and RV storage improvements were not specifically included under this prior consultation; however, these projects do meet the intent and general parameters for inclusion within the "Planned Facilities Demolition, Renovation, Development and Construction" category of this prior programmatic consultation. Additionally, the BAF is proposed at the same location as described and covered in the 2019 BO for the then-proposed Munitions Conveyer (MAC) pad.

Thirteen of the species identified by IPaC for the current Proposed Action are covered under the existing 2019 BO, for which USFWS concurred with determinations of May Affect but Not Likely to Adversely Affect: American alligator (*Alligator mississippiensis*), American crocodile (*Crocodylus*

acutus), wood stork (*Mycteria americana*), Everglade snail kite (*Rostrhamus sociabilis plubeus*), Bartram's scrub hairstreak butterfly (*Strymon acis bartrami*), Blodgett's silverbrush (*Argythamnia blodgettii*), Carter's small-flowered flax (*Linum carteri carteri*), eastern indigo snake (*Drymarchon corais couperi*), Everglades bully (*Sideroxylon reclinatum* spp. *Austrofloridense*), Florida brickell bush (*Brickellia mosieri*), Florida leafwing butterfly (*Anaea troglodyte floridalis*), Florida prairie-clover (*Dalea carthagenensis floridana*), and tiny polygala (*Polygala smallii*).

Additionally, the 2019 BO established that three federally listed species may be adversely affected by operations at Homestead ARB: Florida bonneted bat (*Eumops floridanus*; federally endangered); sand flax (*Linum arenicola*; federally endangered); and Small's milkpea (*Galactia smallii*; federally endangered). Each of these species is discussed in relation to the current Proposed Action below:

> **Florida Bonneted Bat:** In accordance with Minimization and Conservation Measure #1, a qualified biologist will visually inspect the MAC canopy prior to initiation of proposed demolition activities. If the visual inspection identifies the presence of roosting bats, AFRC will coordinate with the Service on how to proceed with demolition. The proposed RV storage improvements are anticipated to have ***no effect*** on the Florida bonneted bat.
>
> **Sand Flax and Small's Milkpea:** In accordance with Minimization and Conservation Measure #1, a qualified biologist will survey both Project Sites for sand flax and Small's milkpea in June of 2024.

AFRC will continue to abide by the 2019 BO. Adverse effects from the Proposed Action would be minimized by clearly marking with flagging, fencing, or signposts, and delineating in the field by a biologist, the limits of disturbance (LOD) for the Proposed Action. No unauthorized personnel or equipment (including off-road vehicle access) would be allowed in native habitats outside the LOD or designated access routes. All project-related activities would occur within the designated construction boundary. AFRC would also include removal, including relocation, of sand flax and Small's milkpea plants resulting from this Proposed Action in its annual report to the Service in accordance with Monitoring and Reporting Requirements set forth in the 2019 BO. Finally, AFRC would plan to replant sand flax at a 5:1 ratio and Small's milkpea at a 3:1 ratio within 3 years, and would notify the Service when this Conservation Recommendation is carried out.

The remaining 18 species identified by IPaC are not covered under the 2019 BO. Of these, 12 species are identified in Homestead ARB's Integrated Natural Resources Management Plan (INRMP) as either not occurring, or being unlikely to occur, on Homestead ARB: Florida panther (*Felis concor coryi*)/puma (*Felis concolor*), green sea turtle (*Chelonia mydas*), hawksbill sea turtle (*Eretmochelys imbricata*), leatherback sea turtle (*Dermochelys coriacea*), loggerhead sea turtle (*Caretta caretta*), Miami blue butterfly (*Cyclargus (=Hemiargus) thomasi bethunebakeri*), cape sable thoroughwort (*Chromolaena frustrata*), crenulate lead-plant (*Amorpha crenulata*), deltoid spurge (*Chamaesyce deltoidei* spp. *deltoidea*), Florida pineland crabgrass (*Digitaria pauciflora*), and Florida semaphore cactus (*Consolea corallicola*) (**Attachment 4**) (Homestead ARB, 2015). The Proposed Action would have ***no effect*** on these species, as they are unlikely to be present at the Project Site.

However, five of the listed threatened or endangered species, the eastern black rail (*Laterallus jamaicensis ssp. Jamaicensis*), gulf sturgeon (*Acipenser oxyrinchus),* beach jacquemontia (*Jacquemontia reclinata*), Carter's mustard (*Warea carteri)*, and pineland sandmat (*Chamaesyce deltoidei pinetorum)* were not included in the prior consultation in 2018 or addressed in the Homestead ARB INRMP. Additionally, IPaC identified the monarch butterfly (*Danaus plexippus*), a Federal candidate species, as potentially occurring on the Project Sites. Effect determinations for these species are provided below.

Eastern Black Rail (*Laterallus jamaicensis ssp. jamaicensis*) – Federally Threatened

The eastern black rail is a small marsh bird. In Florida, it is specifically found in tidal marshes along the coast (National Audubon Society, 2024). There is no suitable habitat for the species on the Project Site. Therefore, the species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Gulf Sturgeon (*Acipenser oxyrinchus*) – Federally Threatened

The gulf sturgeon is an anadromous fish species that spends time in the ocean during its adult years, and then travels to freshwater to spawn and lay eggs (NOAA Fisheries, 2022). This species may travel through the canal onto Homestead ARB; however, the Proposed Action will occur in the upland away from water sources. Therefore, the species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Beach Jacquemontia (*Jacquemontia reclinata*) – Federally Endangered[1]

The beach Jacquemontia is a low growing vine that occurs in pine rocklands and coastal dunes (Homestead ARB, 2015; Florida Natural Areas Inventory, 2000). This species has the potential to occur within the pine rocklands on Homestead ARB; however, it has never been documented in any field surveys of those habitats on the base. Furthermore, the Proposed Action is not within pine rocklands or coastal dune habitat. Therefore, this species has no potential to occur at the site, and the Proposed Action would have ***no effect*** on this species.

Carter's Mustard (*Warea carteri*) – Federally Endangered

Carter's mustard is an annual herb that relies on fire and occurs in either sandy and/or pine forests (iNaturalist, 2024). This species has the potential to occur in pine rockland habitat on Homestead ARB; however, no pine rockland habitat is found within the Project Sites. Additionally, the Project Sites are in the maintained (regularly mowed) portion of the airfield; no fire is permitted in these areas. Therefore, the Proposed Action would have ***no effect*** on this species.

Pineland Sandmat (*Chamaesyce deltoidei pinetorum*) – Federally Threatened[1]

Pineland sandmat is a fire-dependent herb that occurs in pine rocklands (USFWS, 2022). This species has the potential to occur in pine rockland habitat on Homestead ARB; however, no pine rockland habitat is found within the Project Sites. Therefore, the Proposed Action would have ***no effect*** on this species.

Monarch Butterfly (*Danaus plexippus*) – Candidate

While not federally protected, IPaC identified the monarch butterfly as potentially occurring on the Project Sites. Monarchs in North America undergo long-distance migration between summer and overwintering sites, although this species is known to be a year-round resident in Florida (Fish & Wildlife Federation of Florida, 2024; USFWS, 2024). This species is not known to occur on Homestead ARB. Additionally, both the BAF and RV storage improvement sites are periodically mowed and maintained at a height between 2 to 4 inches and 7 to 14 inches, respectively, to decrease attractiveness to wildlife (Homestead ARB, 2015). Therefore, the Proposed Sites represent marginal habitat for this species and the Proposed Action is anticipated to have ***no effect*** on this species.

In conclusion, AFRC requests your concurrence that (1) the Proposed Action described herein is covered by AFRC's prior programmatic Section 7 consultation for Ongoing and Future Military and Non-Military Operations at Homestead ARB, and (2) the Proposed Action would have ***no effect*** on the other 18 species identified by IPaC that are not covered under the programmatic BO.

[1] Table 5-1 in the 2015 INRMP identifies this species as potentially occuring on Homestead ARB; however, the subsequent species description identifies this species as unlikely to occur on the installation (**Attachment 4**).

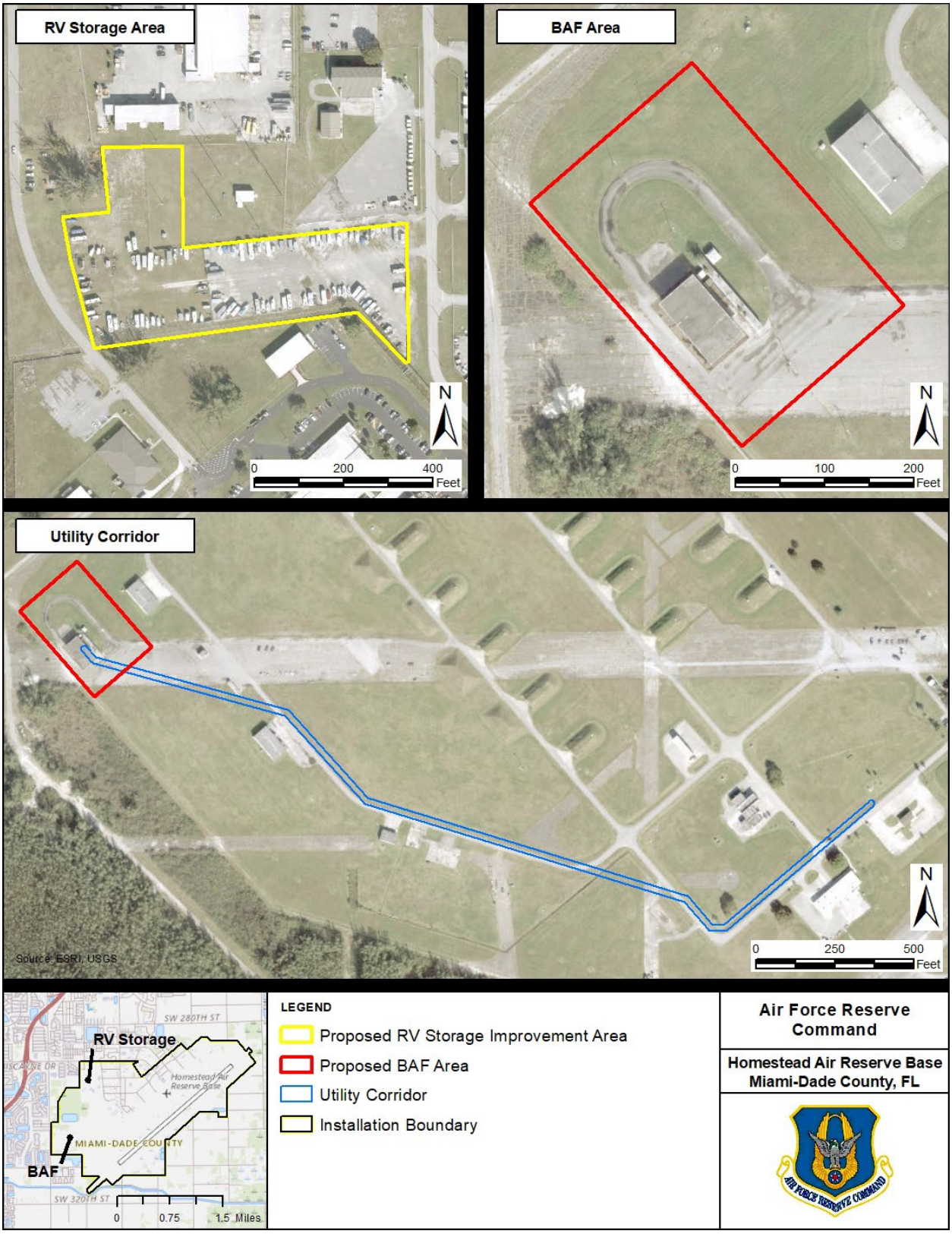
If you have any questions or information relevant to this Proposed Action, our approach to Section 7 consultation for this Proposed Action, or our upcoming NEPA impact analysis, please contact Mr. Josh Friers, Cultural and Natural Resources Manager, Homestead ARB, by email to: joshua.friers.2@us.af.mil; or by mail to: Josh Friers, 29350 Westover Street, Bldg 232, Homestead ARB, FL 33039.

Sincerely,

LAWRENCE VENTURA, JR.,
Chief, Environmental Flight

4 Attachments:
1. Proposed Sites for BAF and RV Storage
2. References
3. Official Species List via IPaC
4. Excerpt from 2015 INRMP for Homestead ARB

Attachment 1: Proposed Sites for BAF and RV Storage



Attachment 2: References

Fish & Wildlife Federation of Florida. (2024). *Are Monarch Butterflies Extending their Florida Visits*. Retrieved March 1, 2024, from https://wildlifeflorida.org/are-monarch-butterflies-extending-their-florida-visits/

Florida Natural Areas Inventory. (2000). *Beach Jacquemontia.* Retrieved February 23, 2024, from https://www.fnai.org/PDFs/FieldGuides/Jacquemontia_reclinata.pdf

Homestead ARB. (2015). *Integrated Natural Resouces Managment Plan Update for Homestead Air Reserve Base, Homestead, Florida.* Homestead Air Reserve Base. Retrieved February 23, 2024

iNaturalist. (2024). *Carter's Mustard*. Retrieved February 27, 2024, from https://www.inaturalist.org/taxa/123483-Warea-carteri

National Audubon Society. (2024). *Black Rail*. Retrieved February 28, 2024, from Audubon: https://www.audubon.org/field-guide/bird/black-rail

NOAA Fisheries. (2022, November 01). *Species Directory- Gulf Sturgeon*. Retrieved February 23, 2024, from https://www.fisheries.noaa.gov/species/gulf-sturgeon

USFWS. (2019). *Biological Opinion for Homestead Air Reserve Base - Base Operations.*

USFWS. (2022, October 14). *Federal Register- The Daily Journal of the United States Government.* Retrieved February 27, 2024, from Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Sideroxylon reclinatum ssp. austrofloridense (Everglades bully), Digitaria pauciflora (Florida pineland crabgrass), Chamaesyce deltoidea ssp. pinetorum (pineland sandmat): https://www.federalregister.gov/documents/2022/10/14/2022-21604/endangered-and-threatened-wildlife-and-plants-designation-of-critical-habitat-for-sideroxylon

USFWS. (2024). *Monarch butterfly (Danaus plexippus)*. Retrieved March 1, 2024, from https://ecos.fws.gov/ecp/species/9743#candidate

Attachment 3: Official Species List via IPAC

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Florida Ecological Services Field Office
777 37th St
Suite D-101
Vero Beach, FL 32960-3559
Phone: (352) 448-9151 Fax: (772) 562-4288
Email Address: fw4flesregs@fws.gov
https://www.fws.gov/office/florida-ecological-services

In Reply Refer To: March 11, 2024
Project Code: 2024-0060962
Project Name: Homestead ARB- Bomb Assembly Facility and Recreational Vehicle Storage Improvement and Expansion

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through IPaC by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service (fws.gov).

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of

this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Florida Ecological Services Field Office
777 37th St
Suite D-101
Vero Beach, FL 32960-3559
(352) 448-9151

PROJECT SUMMARY

Project Code: 2024-0060962

Project Name: Homestead ARB- Bomb Assembly Facility and Recreational Vehicle Storage Improvement and Expansion

Project Type: New Constr - Above Ground

Project Description: The proposed action is to provide personnel at Homestead ARB a dedicated on-site area for bomb assembly training. The location selected for this facility currently is largely paved and has an existing storage shed that would require demolition prior to construction of the facility. Utility connections are required amounting to 2,900 linear feet of trenching/ excavation. This project also involves improvements at the Recreational Vehicle Storage including asphalting existing paved surfaces (approximately 2.2 acres), and grading and installing asphalt on adjacent unimproved grassland area that is currently used for spillover RV storage (approximately 2.3 acres).

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@25.4952678,-80.40339692793074,14z

Counties: Miami-Dade County, Florida

ENDANGERED SPECIES ACT SPECIES

There is a total of 34 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Florida Bonneted Bat *Eumops floridanus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8630	Endangered
Florida Panther *Puma (=Felis) concolor coryi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1763 General project design guidelines: https://ipac.ecosphere.fws.gov/project/XI5PD2DZ4BD5JI2WJZSLZOUGLI/documents/generated/7123.pdf	Endangered
Puma (=mountain Lion) *Puma (=Felis) concolor (all subsp. except coryi)* Population: FL No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6049	Similarity of Appearance (Threatened)

BIRDS

NAME	STATUS
Eastern Black Rail *Laterallus jamaicensis ssp. jamaicensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10477	Threatened
Everglade Snail Kite *Rostrhamus sociabilis plumbeus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7713	Endangered
Wood Stork *Mycteria americana* Population: AL, FL, GA, MS, NC, SC No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8477 General project design guidelines: https://ipac.ecosphere.fws.gov/project/XI5PD2DZ4BD5JI2WJZSLZOUGLI/documents/generated/6954.pdf	Threatened

REPTILES

NAME	STATUS
American Alligator *Alligator mississippiensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/776	Similarity of Appearance (Threatened)
American Crocodile *Crocodylus acutus* Population: U.S.A. (FL) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6604	Threatened
Eastern Indigo Snake *Drymarchon couperi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/646	Threatened
Green Sea Turtle *Chelonia mydas* Population: North Atlantic DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened
Hawksbill Sea Turtle *Eretmochelys imbricata* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3656	Endangered
Leatherback Sea Turtle *Dermochelys coriacea* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1493	Endangered
Loggerhead Sea Turtle *Caretta caretta* Population: Northwest Atlantic Ocean DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1110	Threatened

FISHES

NAME	STATUS
Gulf Sturgeon *Acipenser oxyrinchus (=oxyrhynchus) desotoi*	Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/651

INSECTS

NAME	STATUS
Bartram's Hairstreak Butterfly *Strymon acis bartrami*	Endangered

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/4837

Florida Leafwing Butterfly *Anaea troglodyta floridalis*	Endangered

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/6652

Miami Blue Butterfly *Cyclargus (=Hemiargus) thomasi bethunebakeri*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/3797

Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

FLOWERING PLANTS

NAME	STATUS
Beach Jacquemontia *Jacquemontia reclinata* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1277	Endangered
Blodgett's Silverbush *Argythamnia blodgettii* Population: There is **proposed** critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/6823	Threatened
Cape Sable Thoroughwort *Chromolaena frustrata* Population: There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4733	Endangered
Carter's Mustard *Warea carteri* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5583	Endangered
Carter's Small-flowered Flax *Linum carteri carteri* Population: There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7208	Endangered
Crenulate Lead-plant *Amorpha crenulata* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6470	Endangered
Deltoid Spurge *Chamaesyce deltoidea ssp. deltoidea* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/199	Endangered
Everglades Bully *Sideroxylon reclinatum ssp. austrofloridense* Population: There is **proposed** critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/4735	Threatened
Florida Brickell-bush *Brickellia mosieri* Population: There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/956	Endangered
Florida Pineland Crabgrass *Digitaria pauciflora* Population: There is **proposed** critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/3728	Threatened
Florida Prairie-clover *Dalea carthagenensis floridana*	Endangered

NAME	STATUS

Population:
There is **proposed** critical habitat for this species.
Species profile: https://ecos.fws.gov/ecp/species/2300

Florida Semaphore Cactus *Consolea corallicola* — Endangered
Population:
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/4356

Pineland Sandmat *Chamaesyce deltoidea pinetorum* — Threatened
Population:
There is **proposed** critical habitat for this species.
Species profile: https://ecos.fws.gov/ecp/species/1914

Sand Flax *Linum arenicola* — Endangered
Population:
There is **proposed** critical habitat for this species.
Species profile: https://ecos.fws.gov/ecp/species/4313

Small's Milkpea *Galactia smallii* — Endangered
Population:
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/3360

Tiny Polygala *Polygala smallii* — Endangered
Population:
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/996

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: AECOM
Name: Bridgette Glass
Address: 707 Grant Street
City: Pittsburgh
State: PA
Zip: 15219
Email bridgette.glass@aecom.com
Phone: 9546636675

Attachment 4: Excerpt from the 2015 Homestead INRMP

reptiles. The American alligator has been frequently observed in the Boundary Canal (AMEC, 2012). Native fish species common within the Boundary Canal are largemouth bass, gar, and panfish. Tarpon and snook may occasionally occur within the Boundary Canal. Exotic fish species common in south Florida canals that may occur here are the cichlids *Cichlasoma* spp., Oscar, and tilapia.

5.4 Threatened and Endangered Species and Species of Special Concern

5.4.1 Federally Protected Species

Federally designated threatened and endangered (T&E) plants are protected under the Endangered Species Act (ESA) of 1973 (16 United States Code [U.S.C.] §§ 1531-1544, as amended). The listings of these species are maintained and periodically updated by the USFWS. Some federally listed wildlife species are also protected by other federal laws such as the Marine Mammal Protection Act (16 U.S.C. §§1361-1421h), the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 701-715s), and the Bald Eagle Protection Act (16 U.S.C. §§ 668-668c). All federally designated T&E species listed in Miami-Dade County also are protected by the State of Florida; additional state-protected species occurring in Miami-Dade County not otherwise protected by federal jurisdiction under the ESA are described in Section 5.4.2. Habitat loss, water management practices, and fragmentation generally are considered to be the primary significant threats to most of these protected species in Florida. Installations that are known to support federally listed T&E species or habitat critical for these species must address their conservation in their INRMP. While candidate species are not afforded the same protection under the ESA, installations should provide for their protection, when practicable. The federally endangered Small's milkpea and the federal candidate species sand flax are known to occur on HARB (Appendix E).

Based on past wildlife surveys and recent field observations, the only federally protected wildlife species confirmed to occur regularly on HARB is the American crocodile, which has been seen in the Twin Lakes area since 2007. However, HARB currently provides limited habitat for attracting and sustaining federally protected species (primarily birds such as the wood stork, which has been observed occasionally on the base). The bald eagle (*Haliaeetus leucocephalus*), which receives protection under the MBTA and the Bald Eagle Protection Act, is also occasionally observed at HARB. HARB is also surrounded by land uses that are similarly limited or unsuitable as habitat and is several miles from park lands and other undeveloped areas that provide conditions favorable to the continued existence of this wildlife.

Table 5-1 lists federally protected species known to Miami-Dade County. These species, along with their general preferred habitat requirements and potential to occur on-base, are discussed below.

TABLE 5-1
Federally Protected Plant and Animal Species in Miami-Dade County, FL
HARB Integrated Natural Resources Management Plan

Name	Federal Status	Potential to Occur at HARB
INSECTS and SNAILS		
Schaus swallowtail butterfly (*Heraclides aristodemus ponceanus*)	Endangered	No
Miami blue butterfly (*Cyclargus (=Hemiargus) thomasi bethunebakeri*)	Endangered	No
Bartram's hairstreak butterfly (*Strymon acis bartrami*)	Endangered	Yes
Florida leafwing butterfly (*Anaea troglodyta floridalis*)	Endangered	Yes
Stock Island tree snail (*Orthalicus reses nesodryas*)	Threatened	No
REPTILES		
American alligator (*Alligator mississippiensis*)	Threatened due to similarity of appearance to American crocodile	Yes
Hawksbill sea turtle (*Eretmochelys imbricata*)	Endangered	No
Leatherback sea turtle (*Dermochelys coriacea*)	Endangered	No
Green sea turtle (*Chelonia mydas*)	Endangered	No
Loggerhead sea turtle (*Caretta caretta*)	Threatened	No
Eastern indigo snake (*Drymarchon corais couperi*)	Threatened	Yes
American crocodile (*Crocodylus acutus*)	Threatened	Yes
Gopher tortoise (*Gopherus polyphemus*)	Candidate	No
BIRDS		
Everglade snail kite (*Rostrhamus sociabilis plumbeus*)	Endangered	Yes
Cape Sable seaside sparrow (*Ammodramus maritimus mirabilis*)	Endangered	Unlikely
Bachman's warbler (*Vermivora bachmanii*)	Endangered	Unlikely
Kirtland's warbler (*Setophaga kirtlandii*)	Endangered	Unlikely
Wood stork (*Mycteria americana*)	Endangered	Yes
Audubon's crested caracara (*Polyborus plancus audubonii*)	Threatened	Yes
Piping plover (*Charadrius melodus*)	Threatened	Unlikely
Red knot (*Calidris canutus rufa*)	Proposed Threatened	Unlikely
MAMMALS		
West Indian manatee (*Trichechus manatus*)	Endangered	Yes
Florida panther (*Puma (=Felis) concolor coryi*)	Endangered	Unlikely
Florida bonneted bat (*Eumops floridanus)*	Endangered	Yes
PLANTS		
Florida bristle fern (*Trichomanes punctatum spp. floridanum*)	Proposed Endangered	Yes
Blodgett's silverbush (*Argythamnia blodgettii*)	Candidate	Yes
Florida brickell-bush (*Brickellia mosieri*)	Endangered	Yes
Small's milkpea (*Galactia smallii*)	Endangered	Yes
Sand flax (*Linum arenicola*)	Candidate	Yes
Carter's small-flowered flax (*Linum carteri carteri*)	Endangered	Yes
Garber's spurge (*Chamaesyce garberi*)	Threatened	No
Florida pineland crabgrass (*Digitaria pauciflora*)	Candidate	Unlikely

TABLE 5-1
Federally Protected Plant and Animal Species in Miami-Dade County, FL
HARB Integrated Natural Resources Management Plan

Name	Federal Status	Potential to Occur at HARB
Deltoid spurge (*Chamaesyce deltoidea spp. deltoidea*)	Endangered	Unlikely
Okeechobee gourd (*Cucurbita okeechobeensis spp. okeechobeensis*)	Endangered	No
Beach jacquemontia (*Jacquemontia reclinata*)	Endangered	Yes
Tiny polygala (*Polygala smallii*)	Endangered	Yes
Crenulate lead-plant (*Amorpha crenulata*)	Endangered	Unlikely
Pineland sandmat (*Chamaesyce deltoidea pinetorum*)	Candidate	Yes
Cape Sable thoroughwort (*Chromolaena frustrata*)	Endangered	Unlikely
Florida prairie-clover (*Dalea carthagenensis floridana*)	Candidate	Yes
Florida semaphore cactus (*Consolea corallicola*)	Endangered	Unlikely
Everglades bully (*Sideroxylon reclinatum spp. austrofloridense*)	Candidate	Yes

Schaus Swallowtail Butterfly

The endangered Schaus swallowtail (*Heraclides aristodemus ponceanus*) is a large, dark brown and yellow butterfly. The only known locations for this butterfly are on islands within BNP that contain tropical hardwood hammocks, and on Key Largo. It has not been seen on the mainland since 1924 (Deyrup and Franz, 1994). Habitat preferences are restricted to undisturbed areas with particular types of vegetation such as torchwood (*Amyris elemifera*) and wild lime (*Zanthoxylum fagara*; Gude, 2002). There is no appropriate habitat on HARB to support the Schaus swallowtail butterfly.

Miami Blue Butterfly

The endangered Miami blue butterfly (*Cyclargus thomasi bethunebakeri*) inhabits tropical hardwood hammocks containing balloonvine. It is known from one population in Key West National Wildlife Refuge (NatureServe, 2013). Due to its extreme rarity and the lack of suitable habitat, it is unlikely to occur on HARB.

Bartram's Hairstreak Butterfly and Florida Leafwing Butterfly

The endangered Bartram's hairstreak (*Strymon acis bartrami*) and endangered Florida leafwing (*Anaea troglodyta floridalis*) occur within pine rocklands that contain their only known hostplant, pineland croton (NatureServe, 2013). This plant is known to occur in the Remnant Pine Rockland area, and as a result, both species potentially occur at HARB. A butterfly survey is proposed at HARB (see Chapter 8, Objective 2.10) to determine if these two protected species occur on the installation.

Stock Island Tree Snail

The threatened Stock Island tree snail (*Orthalicus reses)* occurs in hardwood hammocks with calcareous soils in the Florida Keys (NatureServe, 2013). HARB does not have this habitat and the species does not occur on-base.

American Crocodile

Breeding and foraging of federally threatened American crocodiles (*Crocodylus acutus*) regularly occur in Everglades National Park along the shoreline of Florida Bay, in mangrove habitats on North Key Largo, and at Florida Power and Light's Nuclear Electrical Generating Facility at Turkey Point (USFWS, 1999). Adults can disperse great distances. While American crocodiles tend to inhabit more saline waters than American alligators, they also occur in inland ponds and creeks. Access to deep water (greater than 1 meter) is also an important habitat component (USFWS, 1999). Because of their overlapping habitat, the American crocodile is often mistaken for the American alligator, but can be distinguished from the alligator by its narrower snout with the fourth tooth of the lower jaw projecting outside the upper jaw. Because of the difficulty differentiating between these species, the American alligator is listed as federally threatened due to similarity of appearance.

In 1998, extensive crocodile surveys were conducted on the former Homestead AFB, along 37 miles of canals and along 7 miles of the western shoreline of Biscayne Bay (USAF and FAA, 2000). Each location was surveyed three times. No crocodiles were observed on the former Homestead AFB, but the spectacled caiman was common and a few American alligators were observed. During these surveys, the American crocodile was recorded along the coast of Biscayne Bay and at the entrances of Florida City Canal (approximately 3 miles southeast of HARB), Goulds Canal (approximately 3 miles northeast of HARB), Military Canal, and the Fender Point area (USAF and FAA, 2000). Other surveys in 1997 recorded one crocodile each at the mouths of North Canal, Florida City Canal, and Princeton Canal, and in the Black Point and Fender Point areas (USAF and FAA, 2000). There have been regular sightings of crocodiles on HARB at the Twin Lakes since 2007, and there were periodic sightings within Military Canal during the 2003 CERCLA linear emplacement activities.

Eastern Indigo Snake

The threatened Eastern indigo (*Drymarchon corais couperi*) is a large, black, non-venomous snake that is widely distributed throughout central and south Florida, although not commonly seen (USFWS, 1999). Over most of its range, the snake frequents a variety of habitat types including pine flatwoods, scrubby flatwoods, high pine, dry prairie, tropical hardwood hammocks, edges of freshwater marshes, agricultural fields, coastal dunes, and human-altered habitats. They require a sheltered refuge, such as gopher tortoise holes, hollowed root channels, animal burrows, or hollow logs that can protect them from winter cold and drying conditions. Monitoring studies in the Everglades and Florida Keys indicate that the snakes prefer hammocks and pine forests (USFWS, 1999). Indigo snakes, particularly the males, are known to range over large areas throughout the year (perhaps as much as 0.86 mi^2) with most activity occurring in the summer and fall (Moler, 1992). The FNAI reports that indigo snakes were observed in March 1980 and in January 1981 along the Florida City Canal, approximately 2 miles south of HARB, and an indigo snake was observed along the berm of Military Canal in July 1998 (USAF and FAA, 2000).

Surveys for the snake were conducted on the former Homestead AFB in 1992, 1993, 1997, 1998, and 2001. No indigo snakes were observed during these surveys (USAF and FAA, 2000; HARB, 2002a). While this indicates that potential habitat is available along the canals, mangrove swamps, wetlands, and vacant land on or near HARB, these areas are considered to be marginal habitat for the indigo snake. Because HARB is highly developed, it is unlikely that indigo snakes

occur on the base and any use would likely be limited to areas along the boundary fringes, where there have been several unconfirmed sightings or within the Phantom Lake-Old Grenade Range area.

Sea Turtles

Four species of sea turtle forage and breed in the coastal areas of Miami-Dade County: the endangered green sea turtle (*Chelonia mydas*), endangered leatherback (*Dermochelys coriacea*), threatened loggerhead (*Caretta caretta*), and endangered hawksbill (*Eretmochelys imbricata*). While the loggerhead and hawksbill may occur occasionally in the saltwater portion of Military Canal (USAF and FAA, 2000), HARB offers no appropriate nesting or foraging habitat for these and the other sea turtles, and the saltwater barrier and storm-water pumphouse would prevent them from entering the base.

Gopher Tortoise

The candidate gopher tortoises (*Gopherus polyphemus*) require well-drained loose soil for their burrows, adequate low-growing herbs for food, and open sunlit sites for nesting. They are typically associated with xeric scrub oak, coastal strand and dune, live oak hammocks, dry prairie, pine flatwoods, and mixed hardwood-pine communities. Disturbed habitats, such as roadsides, fencerows, clearings, and old fields, often support relatively high densities (Moler, 1992). HARB does not provide appropriate habitat for the gopher tortoise, and burrows have not been seen on the base.

Everglade Snail Kite

The endangered Everglade snail kite (*Rostrhamus sociabilis plumbeus*) is found in freshwater marshes and shallow, vegetated edges of natural or man-made lakes where apple snails can be found. Because of its specific dietary and hydrological requirements, the Everglade snail kite is restricted to the watersheds of the Everglades, Lake Okeechobee, Lake Kissimmee, and the upper St. Johns River.

The snail kite has been observed on HARB, but only on rare occasion and for a short duration. The native and non-native species of apple snails are known to occur on HARB, and the snail kite forages on the native populations.

Cape Sable Seaside Sparrow

The present distribution of the federally endangered Cape Sable seaside sparrow (*Ammodramus maritimus mirabilis*) is restricted to two areas of marl prairies east and west of Shark River Slough and flanking Taylor Slough (USFWS, 1999), areas that are distant from HARB. The preferred nesting habitat appears to be mixed marl prairie community that includes muhly grass with short hydroperiods (USFWS, 1999). HARB does not have appropriate habitat or hydrological conditions to support the Cape Sable seaside sparrow, and the species has not been observed on the installation (Friers, personal communication). Based on extensive studies of the sparrow in the Everglades and the habitat conditions on HARB, it is unlikely that HARB would attract or support this species.

Bachman's warbler

The endangered Bachman's warbler (*Vermivora bachmanii*) typically occurs in moist deciduous woodlands and swamps where it forages for insects in dense foliage high in the trees. During migration and winter, this species also uses open woodland, pine, and scrub habitats. This

warbler typically nests in bushes, blackberry vines, or canes or on swamp palmetto leaves. The Bachman's warbler is also protected under the MBTA. This species would not use HARB for breeding purposes, as Florida is not within its breeding range. Any occurrences on HARB would likely be limited to the migration period. However, this species has not been observed on HARB (Friers, personal communication). The species is considered to be possibly extirpated from Florida (NatureServe, 2013). It would be highly unlikely that Bachman's warbler would occur on HARB.

Kirkland's Warbler

The endangered Kirkland's warbler (*Setophaga kirtlandii*) would only occur on HARB as a rare transient forager, but the species has not been observed on the installation (Friers, personal communication). This species summers in the Bahamas and other Caribbean islands and migrates to the lower peninsula of Michigan to breed in dense stands of scrubby jack pine. In the winter the species mainly occurs in low broadleaf scrub, including transient early successional habitats dominated by lantana (NatureServe, 2013). This species is also protected under the MBTA.

Wood Stork

The endangered wood stork (*Mycteria americana*) is a large, long-legged wading bird that breeds in colonies with other species such as the great egret, snowy egret, and white ibis. Although the majority of nesting by the southeastern population no longer occurs in south Florida, the Everglades is an important foraging area, with birds concentrating in shallow wetland areas where fish are plentiful. While wood storks (about 10 to 20) are seen each year flying above HARB, they seem to prefer nearby, off-base shallow canals that are cleaned periodically. The wood stork is also protected under the MBTA. Single or small groups of wood storks (up to 10) are regularly seen foraging on the base in the winter (USAF and FAA, 2000; Friers, personal communication). Even though there is marginal foraging potential on HARB, it is expected that their occurrence on the base would be infrequent and limited to the winter season and nesting would not be likely because of human disturbances.

Audubon's Crested Caracara

The threatened crested caracara (*Polyborus plancus audubonii*) is a large raptor that, in Florida, typically occurs in open country, dry prairie with scattered cabbage palms, wetter prairies, and occasionally in improved pastures and wooded areas with limited areas of open grassland. In Florida the center of its range is the Kissimmee Prairie, which consists of an area of shallow ponds and sloughs with scattered hammocks of live oaks and cabbage palms. This species typically nests in trees among branches or palm fronds and often in cabbage palm. This species is considered a permanent resident of much of Florida but is not common in Miami-Dade County (NatureServe, 2013; Friers, personal communication). This bird could occur on HARB for foraging or for nesting and breeding.

Piping Plover

The threatened piping plover (*Charadrius melodus*) is a small shorebird. They do not breed in Florida but migrate to the state in winter. Winter habitat includes beaches, mudflats, and sand flats. These birds most often forage in areas adjacent to large inlets and passes on the Atlantic coast (USFWS, 1999). Annual Christmas bird counts at the national parks indicate this species used to regularly winter in Miami-Dade County, but piping plovers were recorded only four

times at BNP between 1978 and 1997 (USAF and FAA, 2000). The piping plover is also protected under the MBTA. The occurrence of this species at HARB would be considered extremely rare.

Red Knot

The proposed threatened Red knot (*Calidris canutus rufa*) typically nests in Canada north of the Arctic Circle. The primary wintering area for this species includes South America, but it is known to winter in smaller numbers in Florida (NatureServe, 2013). This species is a shorebird that prefers intertidal, marine habitats. This type of habitat is not present on HARB; therefore, the red knot would not be likely to occur on-base. However, the species is occasionally documented on HARB following storms when water levels are elevated (Friers, personal communication). The red knot is also protected under the MBTA.

Florida Panther

The endangered Florida panther (*Puma concolor coryi*) often occur in association with a wide variety of vegetation, but prefer mature hardwood hammocks and pine flatwoods. Although there have been a few confirmed sightings several miles to the south of the base, the largest contiguous tract of panther habitat near HARB is the Big Cypress Swamp/Everglades region. Agricultural areas and other disturbed habitats are usually avoided, but pasture lands may be traversed at night (USFWS, 1999). In the 1980s, radio-collared panthers were tracked within 1 mile of HARB. However, their appearance at HARB is unlikely, as the base does not contain appropriate habitat for the panther and the adjacent lands are primarily commercial nurseries that are generally unsuitable to the panther for navigating to other areas.

West Indian Manatee

The federally endangered West Indian manatee (*Trichechus manatus*) inhabits coastal and inland waterways throughout Florida's east coast. Manatees require access to aquatic vegetation, freshwater sources, and at least 2 meters of water depths. Biscayne Bay supports a year-round population, with greater numbers occurring during the winter (USFWS, 1999). Near HARB, there have been numerous observations of manatees in and near Black Creek (about 3 miles north of Military and Mowry Canals) and Convoy Point (about 2 miles south of Military Canal). Three manatee sightings also occurred near Military Canal between 1989 and 1994 (USAF and FAA, 2000).

Manatees are regularly observed in the Military Canal and travel as far as the HARB stormwater pump during the winter.

Florida Bonneted Bat

This federally endangered bat species (*Eumops floridanus)* is confined to a small range in south Florida. It prefers old trees with suitable cavities, and also roosts in Spanish tile roofs. The Florida bonneted bat may colonize newly installed bat houses of appropriate design. The Florida bonneted bat has been observed in the Homestead area in close proximity to HARB. A bat survey was recently conducted on an adjacent parcel, and the Florida bonneted bat was detected in the area. A bat survey is proposed to determine if the species is present on the base. Specific Florida bonneted bat BMPs are listed in Appendix G. HARB will implement the BMPs as funding and Air Force regulations allow. Following the proposed bat survey, HARB will consult with USFWS and add appropriate conservation measures to the INRMP.

Florida Bristle Fern

The proposed endangered species Florida bristle fern (*Trichomanes punctatum* spp. *floridanum*) typically occurs on deeply shaded trunks and usually in limestone sinks or on rocks in hammocks (NatureServe, 2013). This species could occur on HARB, but it has not been observed in vegetation surveys.

Blodgett's Silverbush

The candidate species Blodgett's silverbush (*Argythamnia blodgettii*) typically occurs in low, moist limestone areas near margins of pine rocklands. This species also occurs in sunny edges and gaps in pine rocklands, rockland hammocks, and coastal berms (NatureServe, 2013). This species could occur on HARB and would mainly be associated with existing or restored pine rockland habitat.

Florida Brickell-bush

The endangered Florida brickell-bush (*Brickellia mosieri*) occurs on drier soils of pine rockland habitat. This species is only known from the Miami Rock Ridge in Miami-Dade County (NatureServe, 2013). Although the species could occur in existing or restored pine rockland habitat, due to its limited distribution it is unlikely that this species would occur on HARB.

Small's Milkpea

Small's milkpea (*Galactia smallii*) is a federally endangered plant endemic to the pine rockland habitat occurring in Miami-Dade County. The plant was listed as federally endangered on July 18, 1985 due to the extensive loss of pine rockland habitat. No critical habitat has been designated for the species. Small's milkpea is also listed as endangered in the state of Florida (USFWS, 1999).

Small's milkpea is a small, low-growing plant in the bean family with small flowers. The stems trail along the ground for up to 2 meters (m) (approximately 6.6 feet) and appear grayish in color due to a covering of short hairs. The leaves consist of three leaflets that are broadly ovate to elliptic, 1 to 2.2 centimeters (cm) (approximately 0.4 to 0.9 inch) in length, and occur alternating along the stem. The undersides of the leaves have long, soft, wavy hairs lying almost flat against the surface. The upper surface of the leaves is hairless or has sparse, stiff hairs that lie flat against the surface. The flowers are in clusters of 1 to 5 flowers that are 2 to 6 cm (approximately 0.8 to 2.4 inches) in length. Individual flowers are 11 to 12 mm (approximately 0.4 to 0.5 inch) long and pinkish purple or lavender. The fruit is contained in a narrow hairy pod that is approximately 3 to 4 cm in length and 4 mm in thickness (approximately 1.2 to 1.6 inches by 0.2 inch). Small's milkpea is a perennial plant that will regrow for multiple years in addition to growing from seed (description derived from USFWS, 1999; Bradley and Possley, 2002). A scientific description of the Small's milkpea is included in the PPMP (Appendix E).

Small's milkpea typically flowers during the dry summer months, but may flower throughout the year. Small's milkpea may produce fruit throughout the year, and seeds are dispersed from an explosive, spontaneous opening of seed pods. Most flowers do not produce fruit. Flowering may be intensified and synchronized following a burn, and seeds germinate in response to fire. Three species of bees, one species of wasp, and the Cassius blue butterfly (*Leptotes cassius theonus*) are the primary pollinators of the Small's milkpea (USFWS, 1999; Bradley and Possley, 2002).

The preferred pine rockland habitat of Small's milkpea is characterized by a slash pine canopy with a saw palmetto, wax myrtle (*Myrica cerifera*), poisonwood, and willow bustic (*Sideroxylon salicifolium*) shrub layer. Small's milkpea may also be found with crimson bluestem (*Schizachyrium sanguineum* var. *sanguineum*), wire bluestem (*Andropogon gracilis*), scaleleaf aster (*Symphyotrichum adnatum*), and bastard copperleaf (*Acalypha chamaedrifolia*). Small's milkpea is more abundant in Cardsound rock outcrop complex soils with little quartz sand and prefers open sun with little shade (USFWS, 1999; Bradley and Possley, 2002). This species has been observed on HARB and is also known to occur in maintained areas planted with zoysia. Zoysia is a non-native, low-maintenance grass that is drought tolerant and has a low growth habit. Zoysia is widely used in landscaping at HARB and throughout south Florida.

Sand Flax

Sand flax (*Linum arenicola*) is a federal candidate species and a state endangered species endemic to Miami-Dade and Monroe Counties in south Florida. Sand flax occurs in pine rockland, disturbed pine rockland, marl prairie, and roadsides on rocky soils. The plant is threatened primarily by extensive development, exotic invasive plants, and lack of controlled fire (Bradley and Gann, 1999).

Sand flax is a perennial herbaceous plant with smooth stems and small yellow flowers. The flowers open early in the day and typically have withered by mid-morning. The stems are wiry and grow to 35 to 53 cm (approximately 13.8 to 20.9 inches). The leaves are narrow and unlobed, 7 to 10 mm (approximately 0.3 to 0.4 inch) in length and 0.6 to 1 mm (approximately 0.02 to 0.04 inch) wide. The leaves typically alternate along the stem and may have minute glands along their edges. The stipules are glandular and reddish. The flowers occur in generally flat-topped clusters with the central flowers opening in advance of the peripheral flowers on short (2 mm [approximately 0.08 inch]) slender, spreading or ascending branches. The yellow flower petals are larger near their end and the petals are 4.5 to 5.5 mm (approximately 0.18 to 0.22 inch) in length. The small fruits are pear-shaped, 2.1 to 2.5 mm by 2 to 2.3 mm (approximately 0.08 to 0.10 by 0.08 to 0.09 inch), and separate into 10 segments when mature (description derived from Bradley and Gann, 1999). A scientific description of the sand flax is included in the PPMP (Appendix E).

Sand flax typically flowers and produces fruit from March through November. The petals fall shortly after the flowers open in the morning (FNAI, 2000). Sand flax grows on oolitic limestone formations in pine rockland, marl prairie, and disturbed areas. Preferred habitat is characterized by slash pine canopy with a shrub understory of saw palmetto, wax myrtle, poisonwood, and willow bustic. Several palm species including the Florida thatch palm (*Thrinax radiata*), Key thatch palm, and sliver palm (state-threatened) may occur in the shrub understory along with several hardwood species such as locust berry, longstalked stopper, and smooth devilsclaws (*Pisonia rotundata*). Sand flax is often associated with crimson bluestem, wire bluestem, scaleleaf aster, bastard copperleaf, silver dwarf morning-glory (*Evolvulus sericeus*), and eyebright ayenia (*Ayenia euphrasiifolia*). Sand flax may also occur with other rare herbaceous species such as Carter's small-flowered flax, which also is proposed for listing under the ESA), Blodgett's wild-mercury (*Argythamnia blodgettii*), wedge sandmat (*Chamaesyce deltoidea* spp. *serpyllum*), Big Pine partridge pea (*Chamaescrista lineata* var. *keyensis*), and Mexican alvaradoa (*Alvaradoa amorphoides*) (Bradley and Gann, 1999). This species is known to occur on HARB.

Carter's Small-flowered Flax

The endangered Carter's small-flowered flax (*Linum carteri carteri*) typically occurs in disturbed edges of pine rocklands. Only eight populations of this species are known, half of which have likely been extirpated due to urban development. This species is intolerant of shading and of pine litter accumulation and is likely now restricted to human-disturbed areas due to fire suppression (NatureServe, 2013). Although the species could occur in existing or restored pine rockland habitat, due to its limited distribution it is unlikely that this species would occur on HARB.

Garber's Spurge

The threatened Garber's spurge (*Chamaesyce garberi*) typically occurs in dry, sandy soils in ecotones between hammocks and pinelands or coastal hammocks and sea-oat dunes (NatureServe, 2013). It is unlikely that this species would occur on HARB due to a lack of suitable habitat.

Florida Pineland Crabgrass

The candidate species Florida pineland crabgrass (*Digitaria pauciflora*) is only known to occur at one site within the Everglades National Park. The preferred habitat of this species includes pine rocklands and the open ecotone between grassy marl prairie and pine rockland communities (NatureServe, 2013). It is unlikely that this species would occur on HARB, as it has not been observed in pine rockland habitat vegetation surveys on the installation or on adjoining properties.

Deltoid Spurge

The endangered deltoid spurge (*Chamaesyce deltoidea* spp. *deltoidea*) is endemic to a narrow range of pine rocklands on the Miami Ridge (NatureServe, 2013). The species was allegedly identified within HARB in the early 1900s. However, populations have not been mapped within the installation boundaries or on adjoining properties. It is unlikely that the deltoid spurge would occur on HARB.

Okeechobee Gourd

The endangered Okeechobee gourd (*Cucurbita okeechobeensis* spp. *okeechobeenis*) is only known to occur at a few sites on the shore of Lake Okeechobee. Historically this species was found in swampy forests and hammocks on muck soils, and is now restricted to disturbed areas that are not cultivated, such as ditch banks and wet road shoulders (NatureServe, 2013). It is highly unlikely that this species would occur on HARB due to a lack of suitable habitat.

Beach Jacquemontia

The endangered beach jacquemontia (*Jacquemontia reclinata*) typically occurs in pine rocklands and on the crest and lee side of coastal dunes. It is unlikely that this species would occur on HARB, as it has not been observed in pine rockland habitat vegetation surveys on the installation or on adjoining properties.

Tiny Polygala

The endangered tiny polygala (*Polygala smallii*) is endemic to the southern portion of Florida's Atlantic Coastal Ridge and typically occurs in open grassy pineland, sandy pine rockland,

scrubby flatwoods, and sandhill, often in disturbed areas. This species could occur on HARB, though it has not been observed in vegetation surveys in pine rockland habitat.

Crenulate Lead-plant

The endangered crenulate lead-plant (*Amorpha crenulata*) typically occurs in pine rocklands. Only four populations of this species are known (NatureServe, 2013). The species has not been observed on HARB and due to the isolation of its remaining populations, is unlikely to occur on HARB.

Pineland Sandmat

The candidate species pineland sandmat (*Chamaesyce deltoidea pinetorum*) is only known from the southern portion of the Miami Rock Ridge in southern Miami-Dade County. This species only occurs in pine rocklands habitat (NatureServe, 2013). This species could occur on HARB, but would be unlikely as it has not been observed in vegetation surveys in pine rockland habitat.

Cape Sable Thoroughwort

The endangered Cape Sable thoroughwort (*Chromolaena frustrata*) typically occurs on coastal rock barrens and berms and sunny edges of rockland hammocks (NatureServe, 2013). It is highly unlikely that this species would occur on HARB.

Florida Prairie-clover

The candidate species Florida prairie-clover (*Dalea carthagenensis floridana*) typically occurs in pine rocklands, edges of rockland hammocks, coastal uplands, and marl prairie (NatureServe, 2013). This species could occur on HARB within the pine rockland habitat.

Florida Semaphore Cactus

The endangered Florida semaphore cactus (*Consolea corallicola*) has only one known natural and one recently planted population in the Florida Keys. It occurs on bare rocks with a slight covering of humus in hardwood hammocks near sea level (NatureServe, 2013). It is highly unlikely that this species would occur on HARB.

Everglades Bully

The candidate species Everglades bully (*Sideroxylon reclinatum* spp. *austrofloridense*) has a narrow range, occurring in sensitive and highly fragmented pine rocklands of south Florida (NatureServe, 2013). It is unlikely that this species would occur on HARB, as it has not been observed in pine rockland habitat vegetation surveys on the installation or on adjoining properties.

5.4.2 State-Listed Species

In addition to the federally protected species known to occur in Miami-Dade County, the State of Florida also provides protection for other flora in the county. State-listed plants are categorized as endangered, threatened, or commercially exploited, and are protected under the jurisdiction of the Florida Department of Agriculture and Consumer Services (Chapter 5B-40, F.A.C.). There are 88 endangered and 20 threatened state protected species in Miami-Dade County (Appendix E and H).

Of the over 100 state-protected T&E species in Miami-Dade County, 30 have been known to occur or historically known to occur on HARB and generally have been found throughout the

APPENDIX B:

NATIONAL HISTORIC PRESERVATION ACT SECTION 106 CONSULTATION

DEPARTMENT OF THE AIR FORCE
482ND FIGHTER WING
HOMESTEAD AIR RESERVE BASE

March 27, 2024

Lawrence Ventura Jr.
Environmental Flight Chief
482nd Fighter Wing
29350 Westover Street
Building 232
Homestead ARB, FL 33039

Ms. Alissa Slade Lotane
State Historic Preservation Officer
Division of Historical Resources
500 South Bronough Street
Tallahassee, FL 32399

Dear Ms. Lotane:

The United States (U.S.) Air Force Reserve Command (AFRC) is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of installation improvements at Homestead Air Reserve Base (ARB) in Miami-Dade County, Florida (Proposed Action). The proposed installation improvements include two primary activities: 1) construction and operation of a Bomb Assembly Facility (BAF), and 2) expansion and improvement of an existing recreational vehicle (RV) storage area. Homestead ARB is located approximately 5 miles northeast of the city of Homestead and 20 miles southwest of the city of Miami. The Proposed Action would take place at two sites, totaling approximately 6.5 acres of previously disturbed land within Homestead ARB (**Figure 1**). Homestead ARB hosts the 482nd Fighter Wing, which functions as a fully combat-ready unit capable of providing F-16C multi-purpose fighter aircraft, mission-ready pilots, and support personnel for short-notice worldwide deployment. The project is an undertaking subject to review under the National Historic Preservation Act (NHPA) Section 106 process (54 U.S. Code 306108). As mentioned above, a National Environmental Policy Act (NEPA) EA is being prepared to evaluate the environmental impacts resulting from the Proposed Action.

Project Details

Bomb Assembly Facility

Homestead ARB currently lacks the infrastructure needed to conduct bomb assembly training for reservists of the 482nd Fighter Wing. The 482nd Fighter Wing requires a dedicated, on-site BAF at Homestead ARB capable of supporting required training activities. The purpose of this project is to provide personnel at Homestead ARB with a dedicated on-site area for bomb assembly for use during monthly reservist training drills. This component of the undertaking would occur within an approximately 2-acre parcel within the Munitions District at Homestead ARB (**Figure 1**). The existing Munitions Assembly Conveyor (MAC) Pad, which consists of a degraded concrete canopy on concrete columns, would be demolished and replaced with an approximately 8,000-square-foot BAF in its place. Much of the proposed site is currently paved, although several adjacent grassy areas would be paved with concrete to accommodate operation of the BAF. In addition, sewer and water lines would be extended to the new BAF

from Homestead ARB's existing utility infrastructure along an approximately 0.6-mile corridor depicted on **Figure 1**. These utility lines would be installed belowground via trenching. Additionally, approximately 1.5 miles of existing fiber optic cable would be upgraded within the existing duct bank, although no ground disturbance is anticipated to result from the fiber optic cable replacement. Construction access and staging areas would occur entirely on existing paved areas adjacent to the project site. During operation, bombs and other munitions would be assembled at this location during monthly training drills for reservists of the 482nd Fighter Wing.

Recreational Vehicle Storage Improvement and Expansion

Homestead ARB currently lacks sufficient RV storage infrastructure within the installation. The existing RV storage area is insufficient in capacity and the pavement is in poor condition, resulting in RV storage occurring on adjacent, unpaved areas (**Figure 1**). The purpose of this project is to expand and improve the RV storage area within a 4.5-acre parcel to provide better storage conditions. This component of the Proposed Action would involve re-paving the existing, 2.2-acre RV storage area, and grading and installing asphalt on an approximately 2.3-acre adjacent grassy area currently used for spillover storage of RVs.

Steps Taken to Identify the Area of Potential Effects (APE)

The proposed APE for the undertaking (36 Code of Federal Regulations [CFR] 800.16 (d)) consists of the limits of disturbance (LOD) for the construction activities and a 0.25-mile (1,320-foot) radius around the boundary of the LOD to account for visual impacts (**Figure 2**).

Potential for Impacts to Historic Properties

AFRC has conducted multiple cultural resources investigations to identify historic resources at Homestead ARB. The most recent investigation, titled *Historic Building Inventory Report and Eligibility Determinations for Twelve Resources at Homestead Air Force Base* was prepared in 2021. This report was supplied to your office in September 2021 and concurred upon in a letter dated April 5, 2022 (CH2M Hill 2021). There are a total of three (3) standing structures over 45 years of age in the APE (**Table 1** and **Figure 2**). These three (3) standing structures were determined ineligible for listing in the National Register of Historic Places (NRHP). The K-9 Cemetery (9DA12863) was determined eligible for the NRHP in 2022 under Criterion A, and is located within the APE (**Figure 2**). The project as planned is located 190 meters (626 feet) from the K-9 Cemetery (9DA12863) and will not impact this resource.

Table 1. Ineligible Resources

Facility Number	Name	FMSF Number	Build Date
292	Water Pump Station	DA19552	1974
312	Vehicle Maintenance Facility	DA19554	1975
359	Base Fitness Center Facility	DA19555	1974

Regarding the potential for encountering intact archaeological resources within the LOD, the BAF project site is located west of the runway and is surrounded by support facilities and associated roads. The RV Vehicle Storage Improvement and Expansion project site is located north of the helicopter pad and is surrounded by support facilities and associated roads. The sewer and water line extensions take place in areas within existing rights-of-way and already paved areas west of the runway. The United States Department of Agriculture (USDA) has mapped the soils in the BAF as Orthodents, limestone substratum-Urban land complex. According to the USDA the RV Vehicle Storage Improvement and Expansion

contains Urban land and Cardsound marly silty clay loam-rock outcrop-Urban land complex soils (USDA 2024). The Integrated Cultural Resources Management Plan outlines that the only archaeologically sensitive areas on the base are the areas of pine flatwoods or natural limestone marl, which are outside the LOD (AFRC 2017).

Determination of Effects

Based on the information presented above, we request your concurrence on the proposed APE and a determination of "no historic properties affected" as described in 36 CFR § 800.4(d)(1) because the location has been surveyed for historic standing structures and contains disturbed Urban land complex soils for archaeology.

Due to the nature and scope of this undertaking, in accordance with 36 CFR 800.2(c), the AFRC is sending duplicate information to American Indian Tribal stakeholders. The AFRC will address any comments or concerns therefrom. Please provide your response to Mr. Josh Friers, Cultural and Natural Resources Manager, Homestead ARB within 30 days of receipt of this letter by email to: joshua.friers.2@us.af.mil; or by mail to: Josh Friers, 29350 Westover Street, Bldg 232, Homestead ARB, FL 33039.

Sincerely,

LAWRENCE VENTURA, JR.,
Chief, Environmental Flight

Attachment:
1. Figure 1: Proposed Site for BAF Construction and RV Expansion
2. Figure 2: Project Area of Potential Effects (APE)

Figure 1: Proposed Site for BAF Construction and RV Expansion

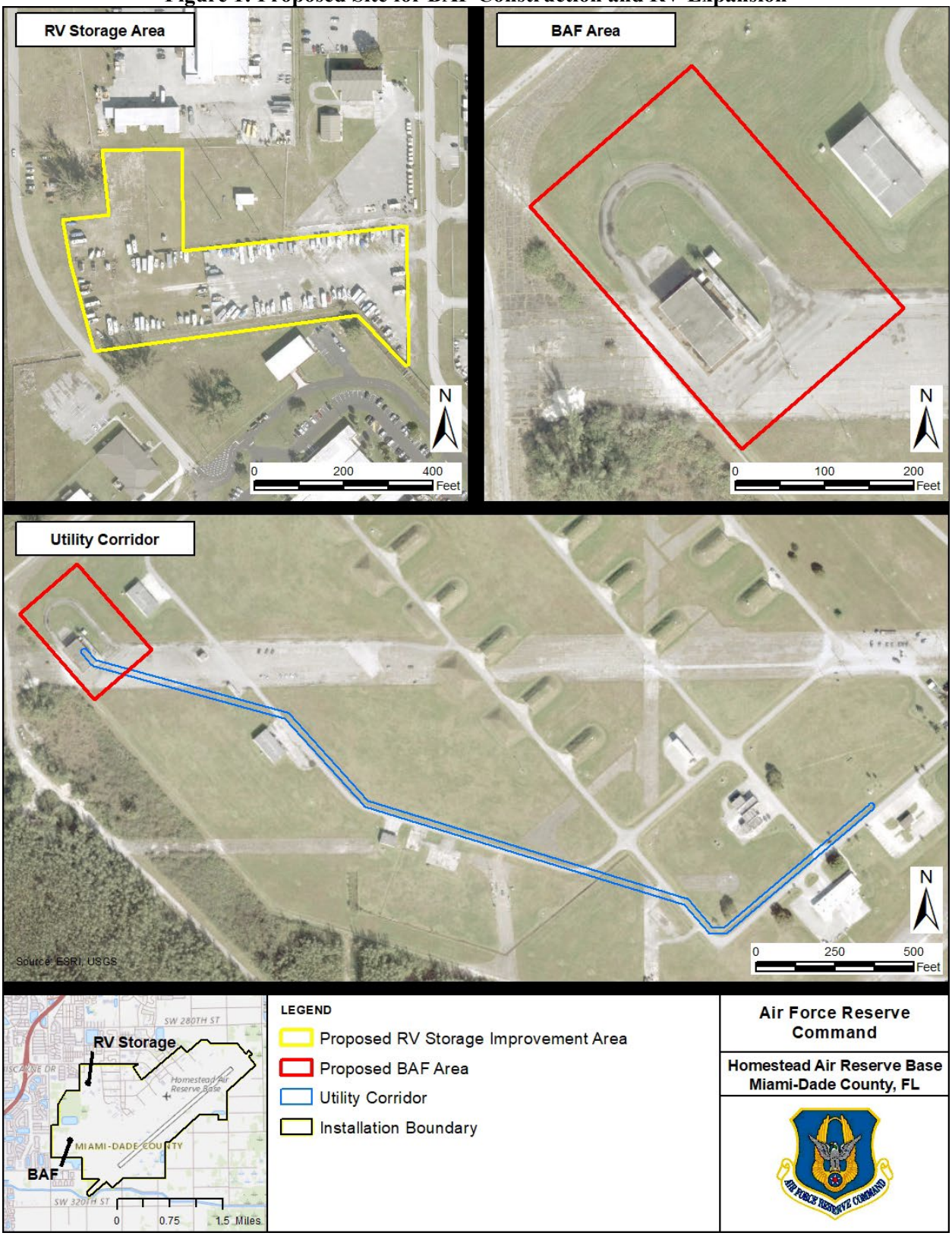

Figure 2: Project Area of Potential Effects (APE)

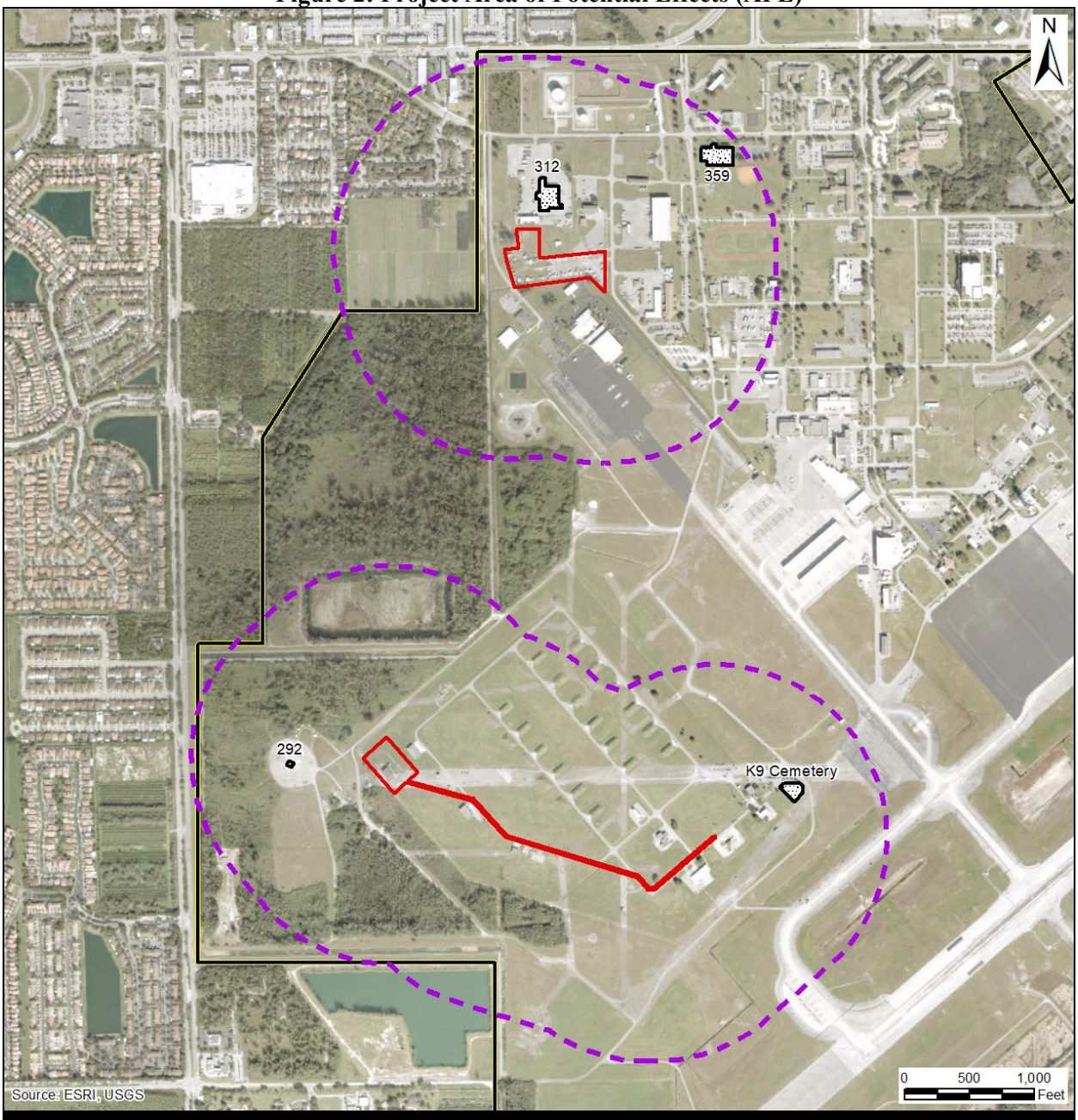

FIGURE 2

- Cultural Resources
- LOD
- APE
- Installation Boundary

Air Force Reserve Command

Homestead Air Reserve Base
Miami-Dade County, FL

References

Air Force Reserve Command (AFRC)
2017 *Homestead Integrated Cultural Resources Management Plan*.

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2021 *Historic Building Inventory Report Homestead Air Reserve Base*. CH2M Hill, Tampa, Florida.

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United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS)
2024 Web Soil Survey. Electronic resource, http://websoilsurvey.nrcs.usda.gov/app/, accessed March 6, 2024.

DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

July 12, 2024

Lawrence Ventura Jr.
Environmental Flight Chief
482nd Fighter Wing
29350 Westover Street
Building 232
Homestead ARB, FL 33039

Ms. Alissa Slade Lotane
State Historic Preservation Officer
Division of Historical Resources
500 South Bronough Street
Tallahassee, FL 32399

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Project Details

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1.5 miles of existing fiber optic cable would be upgraded within the existing duct bank, although no ground disturbance is anticipated to result from the fiber optic cable replacement. Construction access and staging areas would occur entirely on existing paved areas adjacent to the project site. During operation, bombs and other munitions would be assembled at this location during monthly training drills for reservists of the 482nd Fighter Wing.

Recreational Vehicle Storage Improvement and Expansion

Homestead ARB currently lacks sufficient RV storage infrastructure within the installation. The existing RV storage area is insufficient in capacity and the pavement is in poor condition, resulting in RV storage occurring on adjacent, unpaved areas (**Figure 1**). The purpose of this project is to expand and improve the RV storage area within a 4.5-acre parcel to provide better storage conditions. This component of the Proposed Action would involve re-paving the existing, 2.2-acre RV storage area, and grading and installing asphalt on an approximately 2.3-acre adjacent grassy area currently used for spillover storage of RVs.

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Table 1. Ineligible Resources

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Regarding the potential for encountering intact archaeological resources within the LOD, the BAF project site is located west of the runway and is surrounded by support facilities and associated roads. The RV Vehicle Storage Improvement and Expansion project site is located north of the helicopter pad and is surrounded by support facilities and associated roads. The sewer, water, and electrical line extensions take place in areas within existing rights-of-way and already paved areas west of the runway. The United States Department of Agriculture (USDA) has mapped the soils in the BAF as Orthodents, limestone substratum-Urban land complex. According to the USDA the RV Vehicle Storage Improvement and Expansion contains Urban land and Cardsound marly silty clay loam-rock outcrop-Urban land complex soils (USDA 2024). The Integrated Cultural Resources Management Plan outlines that the only archaeologically

sensitive areas on the base are the areas of pine flatwoods or natural limestone marl, which are outside the LOD (AFRC 2017).

Determination of Effects

Based on the information presented above, we request your concurrence on the proposed APE and a determination of "no historic properties affected" as described in 36 CFR § 800.4(d)(1) because the location has been surveyed for historic standing structures and contains disturbed Urban land complex soils for archaeology.

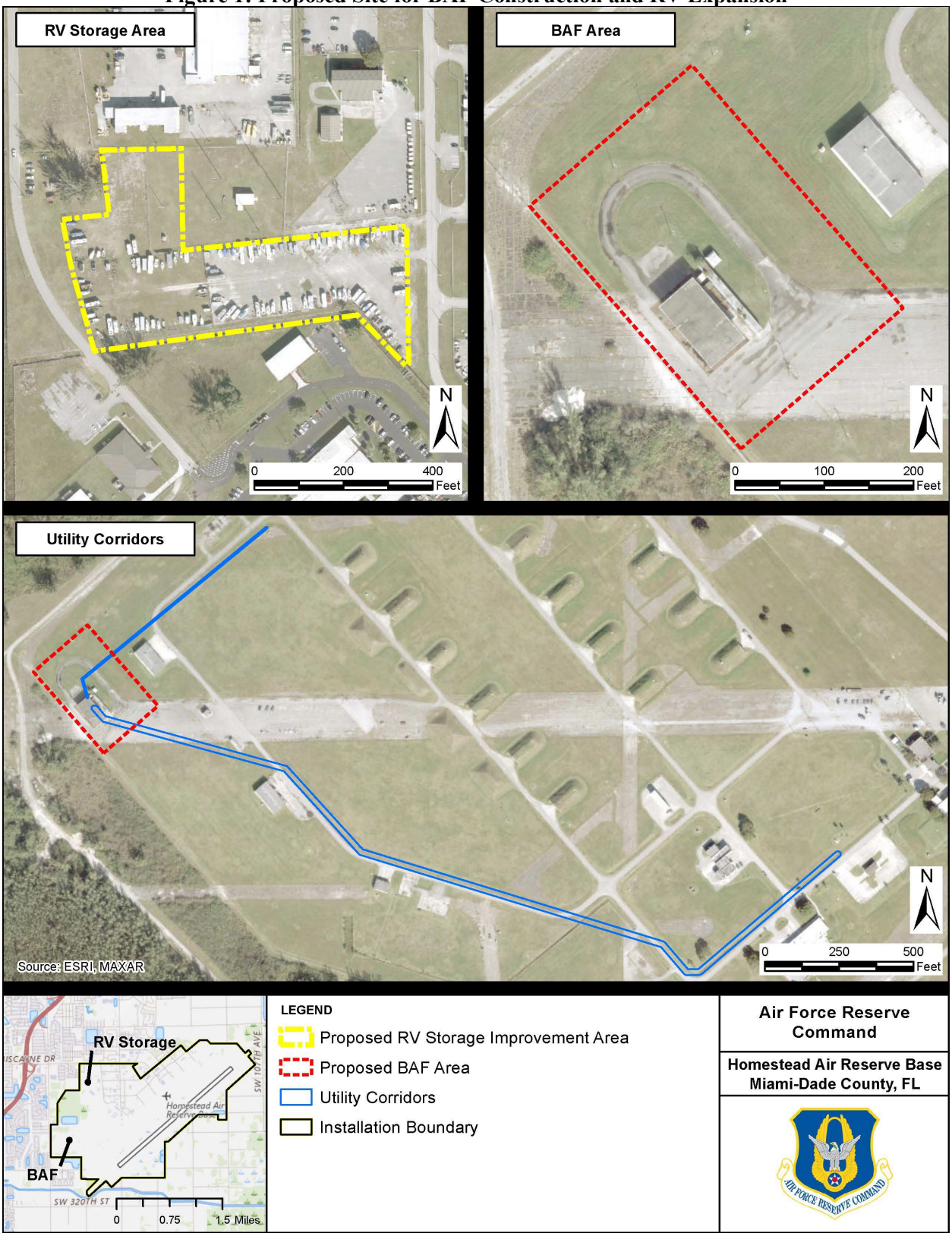
Due to the nature and scope of this undertaking, in accordance with 36 CFR 800.2(c), the AFRC is sending duplicate information to American Indian Tribal stakeholders. The AFRC will address any comments or concerns therefrom. Please provide your response to Mr. Josh Friers, Cultural and Natural Resources Manager, Homestead ARB within 30 days of receipt of this letter by email to: joshua.friers.2@us.af.mil; or by mail to: Josh Friers, 29350 Westover Street, Bldg 232, Homestead ARB, FL 33039.

Sincerely,

Lawrence Ventura Jr.
Chief, Environmental Flight

Attachment:
1. Figure 1: Proposed Site for BAF Construction and RV Expansion
2. Figure 2: Project Area of Potential Effects (APE)

Figure 1: Proposed Site for BAF Construction and RV Expansion



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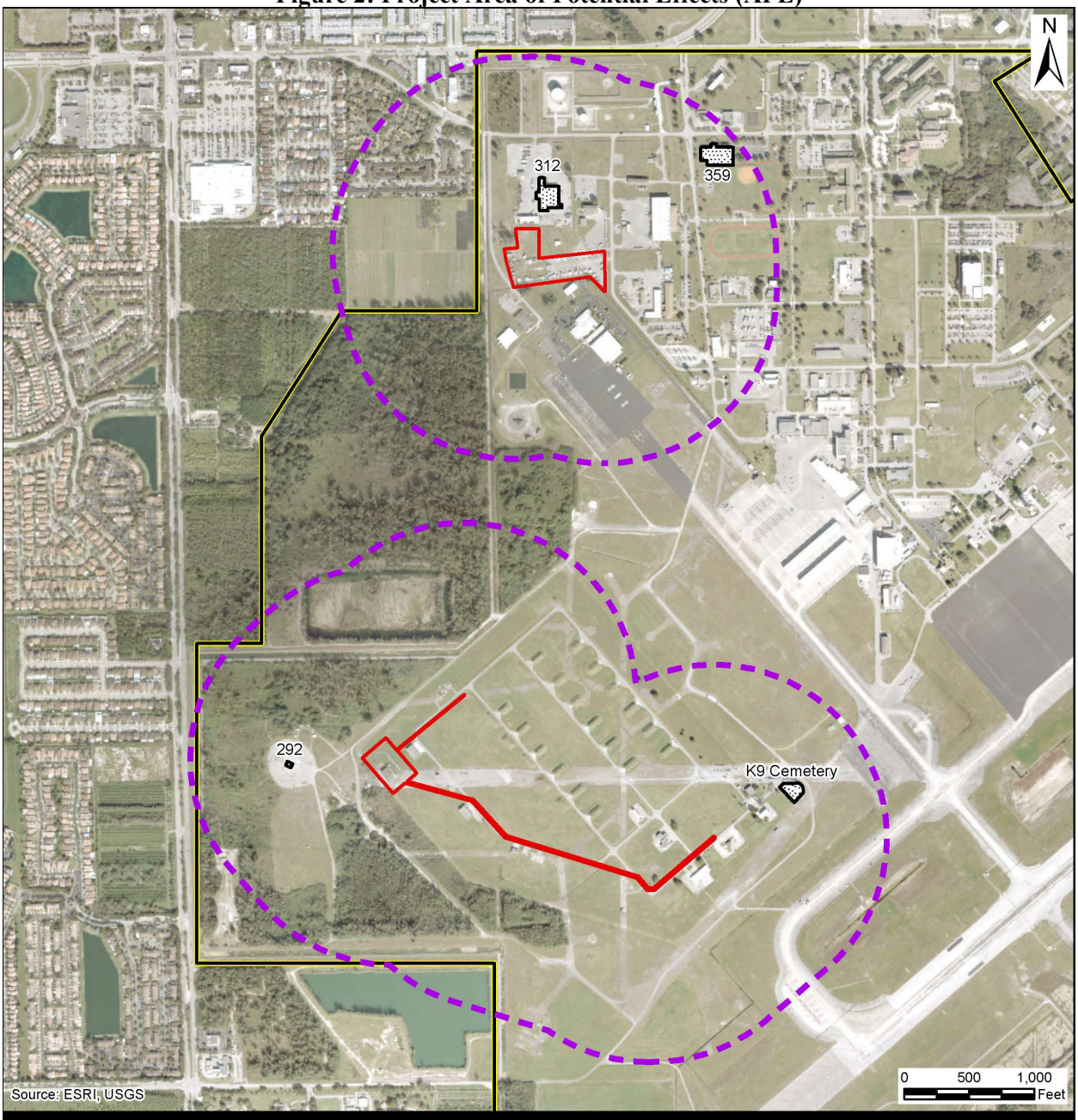


FIGURE 2

- Cultural Resources
- LOD
- APE
- Installation Boundary

Air Force Reserve Command

Homestead Air Reserve Base
Miami-Dade County, FL

References

Air Force Reserve Command (AFRC)
2017 *Homestead Integrated Cultural Resources Management Plan*.

CH2M Hill
2021 *Historic Building Inventory Report Homestead Air Reserve Base*. CH2M Hill, Tampa, Florida.

Google Earth
2024 Google Earth. Electronic resource, https://earth.google.com/web/@0,0,0a,22251762.77375655d,35y,0h,0t,0r, accessed March 6, 2024.

United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS)
2024 Web Soil Survey. Electronic resource, http://websoilsurvey.nrcs.usda.gov/app/, accessed March 6, 2024.

FLORIDA DEPARTMENT of STATE

RON DESANTIS
Governor

CORD BYRD
Secretary of State

Lawrence Ventura Jr.
Environmental Flight Chief
482nd Fighter Wing
29350 Westover Street
Building 232
Homestead ARB, FL 33039

August 16, 2024

Re: DHR Project File No.: 2024-4667
Proposed Environmental Assessment for Construction and Operation of Installation Improvements at Homestead Air Reserve Base – *Construction/Operation of a Bomb Assembly Facility (BAF) and the Expansion/Improvement of an Existing Recreational Vehicle (RV) Storage Area*
Homestead Air Reserve Base, Miami-Dade County

Dear Mr. Ventura:

The Florida State Historic Preservation Officer reviewed the information for the referenced projects in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended, and its implementing regulations in *36 CFR Part 800: Protection of Historic Properties.*

We reviewed Section 3.7 (Cultural Resources) of the above referenced draft environmental assessment. It is the opinion of this office that the Department of the Air Force has adequately addressed cultural resources. Therefore, based on the information provided and the conditions outlined in the document concerning fortuitous finds or unexpected archaeological discoveries, the proposed undertaking should have no effect on historic properties.

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservationist, by electronic mail *scott.edwards@dos.myflorida.com*, or at 850.245.6333 or 800.847.7278.

Sincerely,

Alissa Slade Lotane, SHPO

Alissa Slade Lotane
Director, Division of Historical Resources
and State Historic Preservation Officer

APPENDIX C:

NATIVE AMERICAN CONSULTATION

DEPARTMENT OF THE AIR FORCE
482ND FIGHTER WING
HOMESTEAD AIR RESERVE BASE

March 27, 2024

Lawrence Ventura Jr.
Environmental Flight Chief
482nd Maintenance Squadron
29350 Westover Street
Building 232
Homestead ARB, FL 33039

Dear Tribal Stakeholder:

The United States (U.S.) Air Force Reserve Command (AFRC) is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of installation improvements at Homestead Air Reserve Base (ARB) in Miami-Dade County, Florida (Proposed Action). The proposed installation improvements include two primary activities: 1) construction and operation of a Bomb Assembly Facility (BAF), and 2) expansion and improvement of an existing recreational vehicle (RV) storage area. Homestead ARB is located approximately 5 miles northeast of the city of Homestead and 20 miles southwest of the city of Miami. The Proposed Action would take place at two sites, totaling approximately 6.5 acres of previously disturbed land within Homestead ARB (**Figure 1**). Homestead ARB hosts the 482nd Fighter Wing, which functions as a fully combat-ready unit capable of providing F-16C multi-purpose fighter aircraft, mission-ready pilots, and support personnel for short-notice worldwide deployment. The project is an undertaking subject to review under the National Historic Preservation Act (NHPA) Section 106 process (54 U.S. Code 306108). As mentioned above, a National Environmental Policy Act (NEPA) EA is being prepared to evaluate the environmental impacts resulting from the Proposed Action.

Project Details

Bomb Assembly Facility

Homestead ARB currently lacks the infrastructure needed to conduct bomb assembly training for reservists of the 482nd Fighter Wing. The 482nd Fighter Wing requires a dedicated, on-site BAF at Homestead ARB capable of supporting required training activities. The purpose of this project is to provide personnel at Homestead ARB with a dedicated on-site area for bomb assembly for use during monthly reservist training drills. This component of the undertaking would occur within an approximately 2-acre parcel within the Munitions District at Homestead ARB (**Figure 1**). The existing Munitions Assembly Conveyor (MAC) Pad, which consists of a degraded concrete canopy on concrete columns, would be demolished and replaced with an approximately 8,000-square-foot BAF in its place. Much of the proposed site is currently paved, although several adjacent grassy areas would be paved with concrete to accommodate operation of the BAF. In addition, sewer and water lines would be extended to the new BAF from Homestead ARB's existing utility infrastructure along an approximately 0.6-mile corridor depicted on **Figure 1**. These utility lines would be installed belowground via trenching. Additionally, approximately 1.5 miles of existing fiber optic cable would be upgraded within the existing duct bank, although no ground disturbance is anticipated to result from the fiber optic cable replacement. Construction access and staging

areas would occur entirely on existing paved areas adjacent to the project site. During operation, bombs and other munitions would be assembled at this location during monthly training drills for reservists of the 482nd Fighter Wing.

Recreational Vehicle Storage Improvement and Expansion

Homestead ARB currently lacks sufficient RV storage infrastructure within the installation. The existing RV storage area is insufficient in capacity and the pavement is in poor condition, resulting in RV storage occurring on adjacent, unpaved areas (**Figure 1**). The purpose of this project is to expand and improve the RV storage area within a 4.5-acre parcel to provide better storage conditions. This component of the Proposed Action would involve re-paving the existing, 2.2-acre RV storage area, and grading and installing asphalt on an approximately 2.3-acre adjacent grassy area currently used for spillover storage of RVs.

Steps Taken to Identify the Area of Potential Effects (APE)

AFRC has conducted multiple cultural resources investigations to identify historic resources at Homestead ARB. The most recent investigation, titled *Historic Building Inventory Report and Eligibility Determinations for Twelve Resources at Homestead Air Force Base* was prepared in 2021. This report was supplied to the Florida State Historic Preservation Office (SHPO) in September 2021 and concurred upon in a letter dated April 5, 2022 (CH2M Hill 2021). There are a total of three (3) standing structures over 45 years of age in the APE (**Table 1** and **Figure 2**). These three (3) standing structures were determined ineligible for listing in the National Register of Historic Places (NRHP). The K-9 Cemetery (9DA12863) was determined eligible for the NRHP in 2022 under Criterion A, and is located within the APE (**Figure 2**). The project as planned is located 190 meters (626 feet) from the K-9 Cemetery (9DA12863) and will not impact this resource.

Table 1. Ineligible Resources

Facility Number	Name	FMSF Number	Build Date
292	Water Pump Station	DA19552	1974
312	Vehicle Maintenance Facility	DA19554	1975
359	Base Fitness Center Facility	DA19555	1974

Regarding the potential for encountering intact archaeological resources within the LOD, the BAF project site is located west of the runway and is surrounded by support facilities and associated roads. The RV Vehicle Storage Improvement and Expansion project site is located north of the helicopter pad and is surrounded by support facilities and associated roads. The sewer and water line extensions take place in areas within existing rights-of-way and already paved areas west of the runway. The United States Department of Agriculture (USDA) has mapped the soils in the BAF as Orthodents, limestone substratum-Urban land complex. According to the USDA the RV Vehicle Storage Improvement and Expansion contains Urban land and Cardsound marly silty clay loam-rock outcrop-Urban land complex soils (USDA 2024). The Integrated Cultural Resources Management Plan outlines that the only archaeologically sensitive areas on the base are the areas of pine flatwoods or natural limestone marl, which are outside the LOD (AFRC 2017).

Determination of Effects

Based on the information presented above, we request your comments on the proposed APE and a determination of "no historic properties affected" as described in 36 CFR § 800.4(d)(1) because the location

has been surveyed for historic standing structures and is previously disturbed for archaeology. In accordance with 36 CFR 800.2(c), the AFRC is also consulting the Florida SHPO. This proposed undertaking is associated with a NEPA environmental assessment. Should your tribe wish to be consulted also under the NEPA planning process, please notify us on that matter.

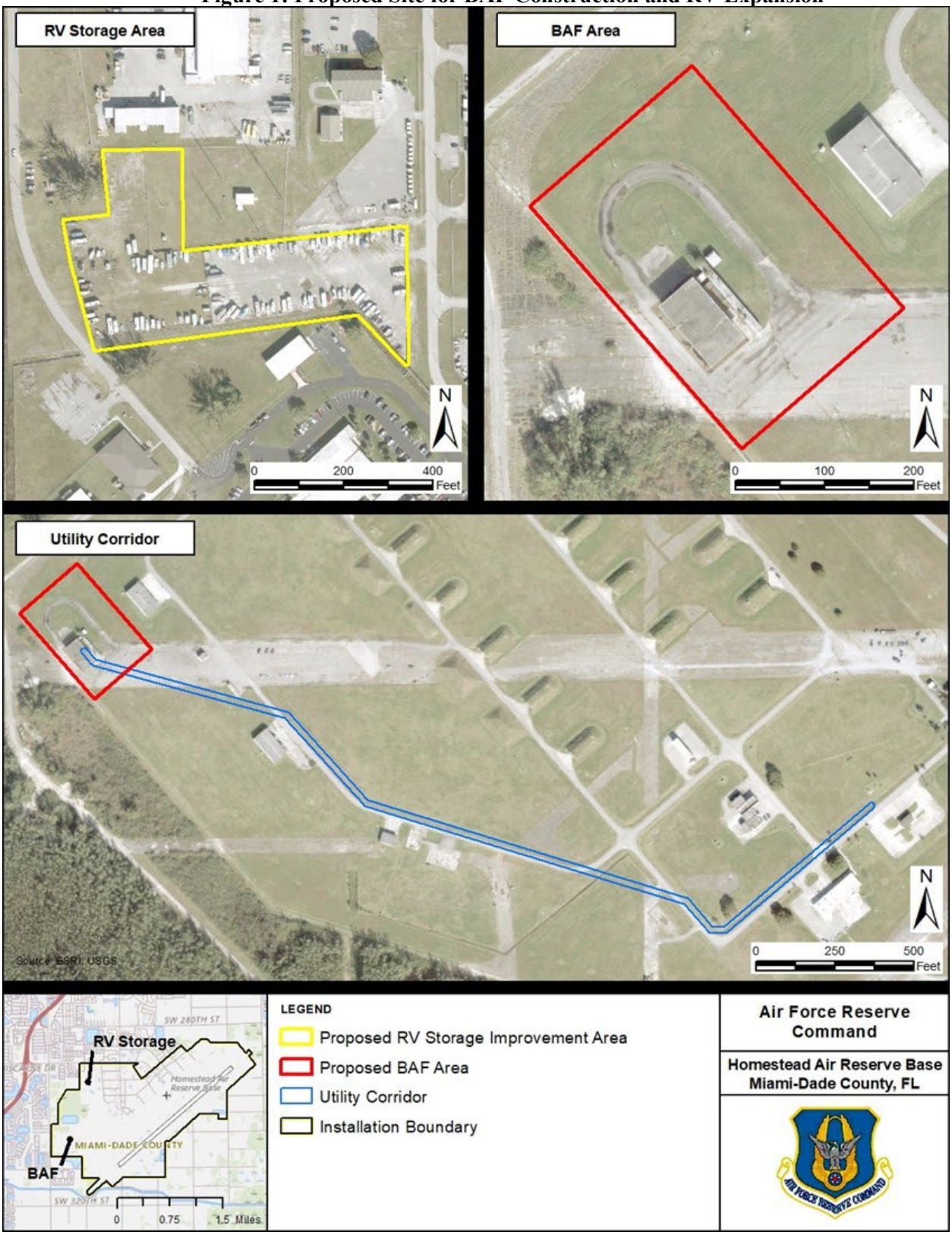
Please provide your response to Mr. Josh Friers, Cultural and Natural Resources Manager, Homestead ARB within 30 days of receipt of this letter by email to: joshua.friers.2@us.af.mil; or by mail to: Josh Friers, 29350 Westover Street, Bldg 232, Homestead ARB, FL 33039.

Sincerely,

LAWRENCE VENTURA, JR.,
Chief, Environmental Flight

Attachment:
1. Figure 1: Proposed Site for BAF Construction and RV Expansion
2. Figure 2: Project Area of Potential Effects (APE)

Figure 1: Proposed Site for BAF Construction and RV Expansion



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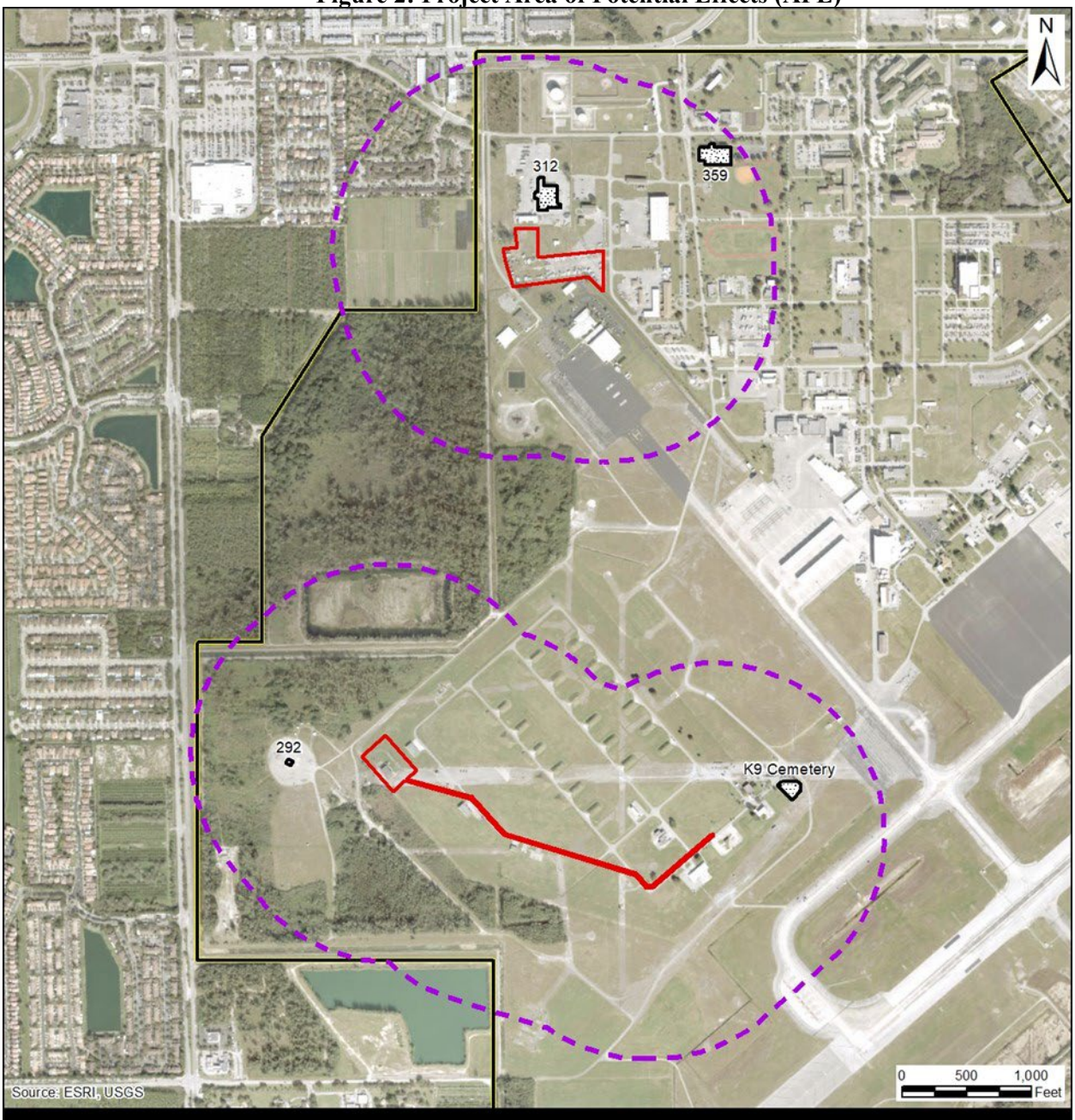

FIGURE 2

Cultural Resources

LOD

APE

Installation Boundary

Air Force Reserve Command

Homestead Air Reserve Base
Miami-Dade County, FL

References

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DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

SAMPLE

July 12, 2024

Lawrence Ventura Jr.
Environmental Flight Chief
482nd Maintenance Squadron
29350 Westover Street
Building 232
Homestead ARB, FL 33039

Turner Hunt
THPO
Muskogee (Creek) Nation of Oklahoma
P.O. Box 580
Okmulgee, OK 74447

Dear Mr. Hunt:

The United States (U.S.) Air Force Reserve Command (AFRC) is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the construction and operation of installation improvements at Homestead Air Reserve Base (ARB) in Miami-Dade County, Florida (Proposed Action). The proposed installation improvements include two primary activities: 1) construction and operation of a Bomb Assembly Facility (BAF), and 2) expansion and improvement of an existing recreational vehicle (RV) storage area. Homestead ARB is located approximately 5 miles northeast of the city of Homestead and 20 miles southwest of the city of Miami. The Proposed Action would take place at two sites, including two utility corridors, totaling approximately 7.9 acres of previously disturbed land within Homestead ARB (**Figure 1**). Homestead ARB hosts the 482nd Fighter Wing, which functions as a fully combat-ready unit capable of providing F-16C multi-purpose fighter aircraft, mission-ready pilots, and support personnel for short-notice worldwide deployment. The project is an undertaking subject to review under the National Historic Preservation Act (NHPA) Section 106 process (54 U.S. Code 306108). As mentioned above, a National Environmental Policy Act (NEPA) EA is being prepared to evaluate the environmental impacts resulting from the Proposed Action.

Project Details

Bomb Assembly Facility

Homestead ARB currently lacks the infrastructure needed to conduct bomb assembly training for reservists of the 482nd Fighter Wing. The 482nd Fighter Wing requires a dedicated, on-site BAF at Homestead ARB capable of supporting required training activities. The purpose of this project is to provide personnel at Homestead ARB with a dedicated on-site area for bomb assembly for use during monthly reservist training drills. This component of the undertaking would occur within an approximately 2-acre parcel within the Munitions District at Homestead ARB (**Figure 1**). The existing Munitions Assembly Conveyor (MAC) Pad, which consists of a degraded concrete canopy on concrete columns, would be demolished and replaced with an approximately 8,000-square-foot BAF in its place. Much of the proposed site is currently paved, although several adjacent grassy areas would be paved with concrete to

SAMPLE

accommodate operation of the BAF. In addition, sewer and water lines would be extended to the new BAF from Homestead ARB's existing utility infrastructure along an approximately 0.6-mile corridor, and underground electrical lines would be extended to the site along an 870-foot corridor, both depicted on **Figure 1**. These utility lines would be installed belowground via trenching. Additionally, approximately 1.5 miles of existing fiber optic cable would be upgraded within the existing duct bank, although no ground disturbance is anticipated to result from the fiber optic cable replacement. Construction access and staging areas would occur entirely on existing paved areas adjacent to the project site. During operation, bombs and other munitions would be assembled at this location during monthly training drills for reservists of the 482nd Fighter Wing.

Recreational Vehicle Storage Improvement and Expansion

Homestead ARB currently lacks sufficient RV storage infrastructure within the installation. The existing RV storage area is insufficient in capacity and the pavement is in poor condition, resulting in RV storage occurring on adjacent, unpaved areas (**Figure 1**). The purpose of this project is to expand and improve the RV storage area within a 4.5-acre parcel to provide better storage conditions. This component of the Proposed Action would involve re-paving the existing, 2.2-acre RV storage area, and grading and installing asphalt on an approximately 2.3-acre adjacent grassy area currently used for spillover storage of RVs.

Steps Taken to Identify the Area of Potential Effects (APE)

The proposed APE for the undertaking (36 Code of Federal Regulations [CFR] 800.16 (d)) consists of the limits of disturbance (LOD) for the construction activities and a 0.25-mile (1,320-foot) radius around the boundary of the LOD to account for visual impacts (**Figure 2**).

Potential for Impacts to Historic Properties

AFRC has conducted multiple cultural resources investigations to identify historic resources at Homestead ARB. The most recent investigation, titled *Historic Building Inventory Report and Eligibility Determinations for Twelve Resources at Homestead Air Force Base* was prepared in 2021. This report was supplied to the Florida State Historic Preservation Office (SHPO) in September 2021 and concurred upon in a letter dated April 5, 2022 (CH2M Hill 2021). There are a total of three (3) standing structures over 45 years of age in the APE (**Table 1** and **Figure 2**). These three (3) standing structures were determined ineligible for listing in the National Register of Historic Places (NRHP). The K-9 Cemetery (9DA12863) was determined eligible for the NRHP in 2022 under Criterion A, and is located within the APE (**Figure 2**). The project as planned is located 190 meters (626 feet) from the K-9 Cemetery (9DA12863) and will not impact this resource.

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SAMPLE

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Sincerely,

LAWRENCE VENTURA, JR.,
Chief, Environmental Flight

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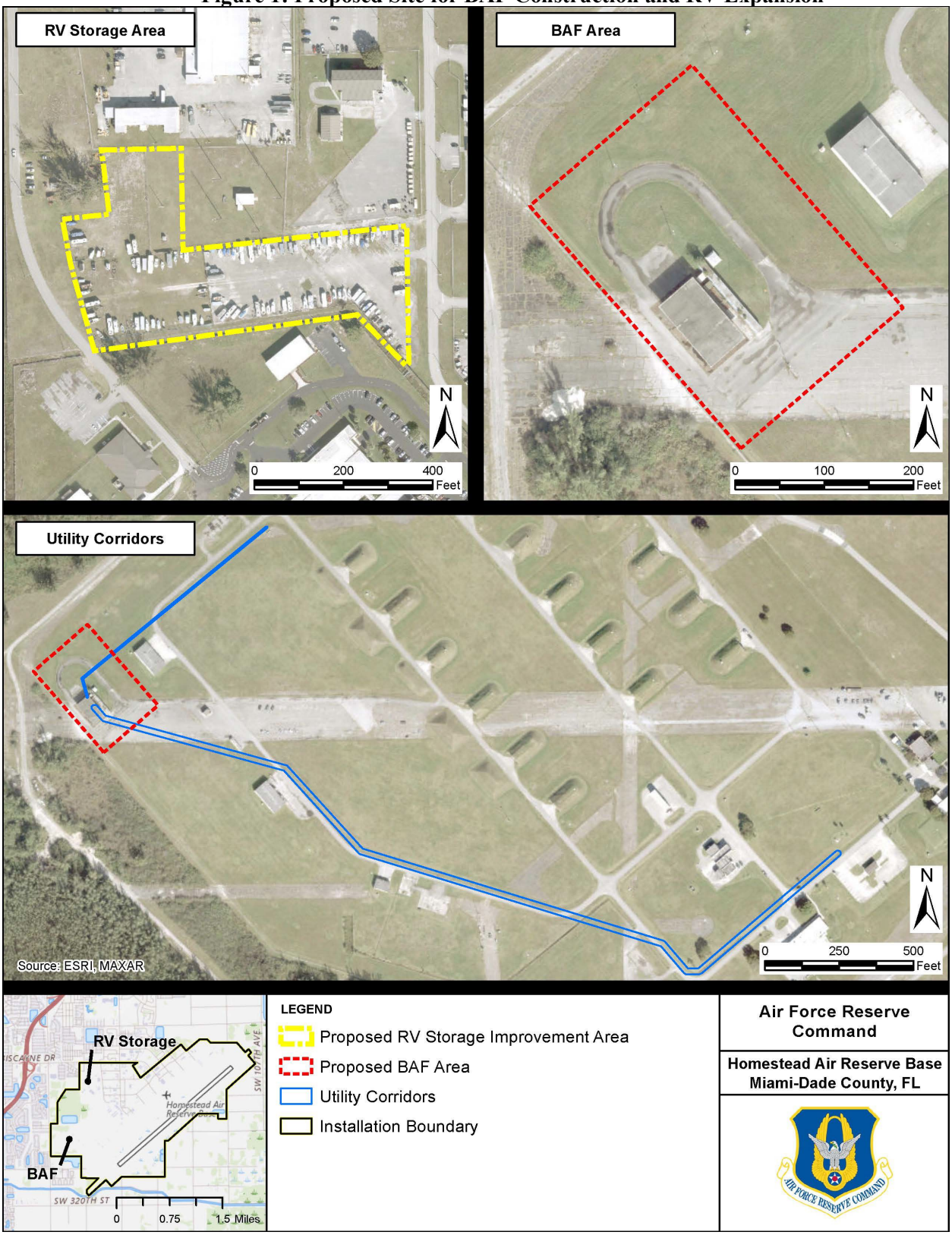

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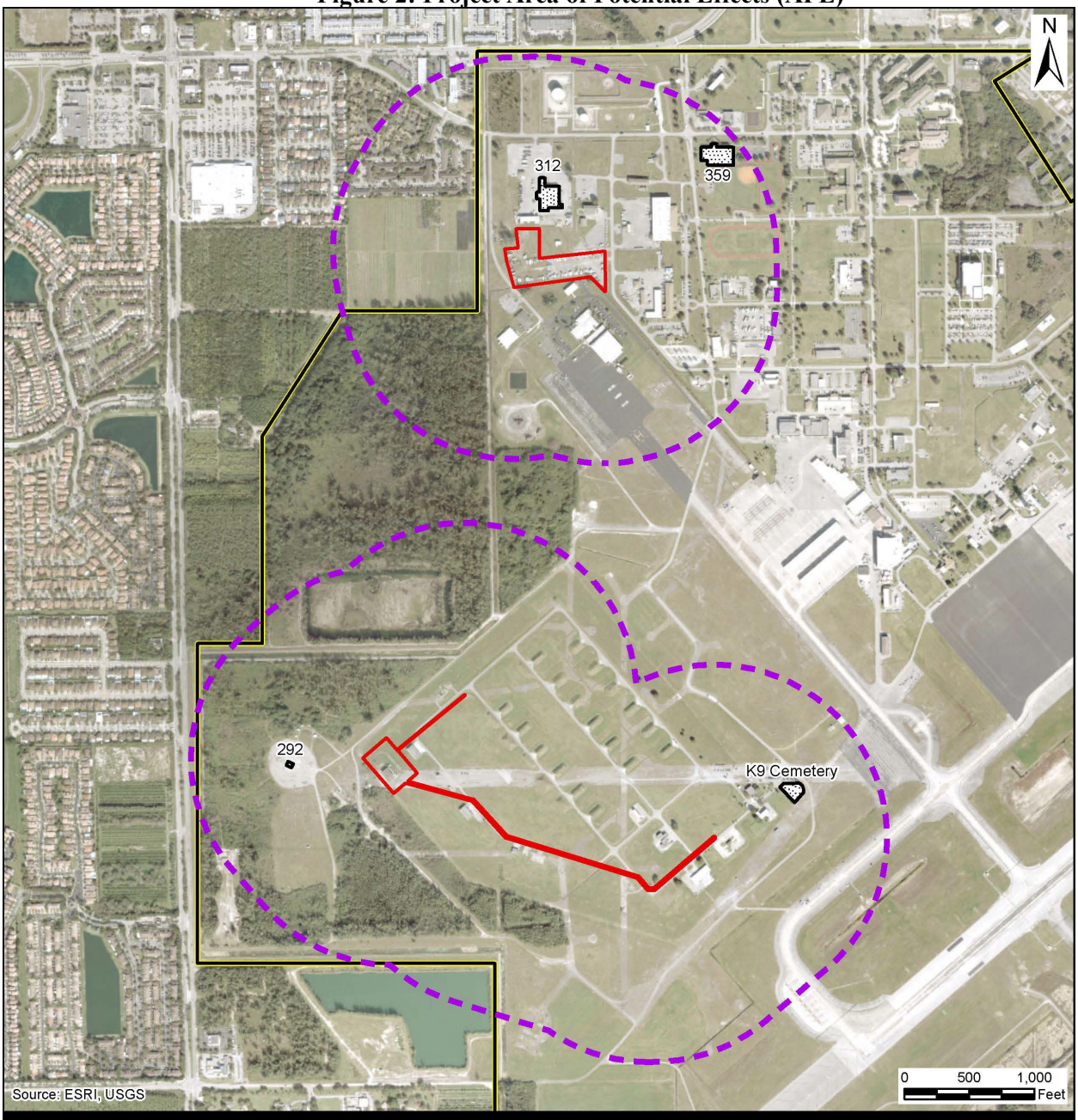

FIGURE 2

Cultural Resources

LOD

APE

Installation Boundary

Air Force Reserve Command

Homestead Air Reserve Base
Miami-Dade County, FL

SAMPLE

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United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS)
2024 Web Soil Survey. Electronic resource, http://websoilsurvey.nrcs.usda.gov/app/, accessed March 6, 2024.

Obenland, Benjamin

Subject: RE: Homestead ARB, Florida

From: Jeffery Harjo <harjo.je@sno-nsn.gov>
Sent: Tuesday, June 18, 2024 2:38 PM
To: FRIERS, JOSHUA W CIV USAF AFRC 482 MSG/CEV <joshua.friers.2@us.af.mil>
Subject: [Non-DoD Source] Homestead ARB, Florida

> You don't often get email from harjo.je@sno-nsn.gov. Learn why this is important

I received your letter and I am now the point of contact for Seminole Nation of Oklahoma. Mr. Yahola is no longer here. Please send me a link to the website listed in the letter.
Generally we designate the Seminole Tribe of Florida as lead on any discussion or consultations. But, we also want to be informed of any findings and/or discoveries.
Thank you,

Jeff Harjo, BA History
Director of Historic Preservation Office
Seminole Nation of Oklahoma

Mobile #: 405.788.5913
Email: harjo.je@sno-nsn.gov

APPENDIX D:

AIR CONFORMITY APPLICABILITY MODEL REPORTS

AIR CONFORMITY APPLICABILITY MODEL REPORT
GREENHOUSE GAS (GHG) EMISSIONS

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to estimate GHG emissions and assess the theoretical Social Cost of Greenhouse Gases (SC GHG) 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); and the USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide. This report provides a summary of GHG emissions and SC GHG analysis.

Report generated with ACAM version: 5.0.23a

a. Action Location:

Base: HOMESTEAD JARB
State: Florida
County(s): Miami-Dade
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Construction and Operation of Installation Improvements at Homestead Air Reserve Base

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2025

e. Action Description:

1) Construct Bomb Assembly Facility (BAF):
- Total Project Site - 2 acres
- Demolish existing 8,000-SF Munitions Assembly Conveyor pad located at the site of the proposed BAF
- Construct new 8,000- square foot (SF) Bomb Assembly Facility (reinforced concrete foundation and floor slab, steel frame, sloped metal roof) on the southwest portion of Homestead ARB
- Pave 0.23 acre (10,019 SF / 1,113 square yards [SY]) of grassy area adjacent to BAF site (concrete)
- Relocate two light poles
- Install 1,180 linnear feet (LF) of perimter fencing
- Install various utilities in two parallel trenches along an approximate 0.6-mile corridor
- Install 1.5 miles of fiber optic cable in existing duct bank (no new excavation)
- Perform minor upgrades to electrical grid (e.g., transformer replacement)
- Minor surface grading (1.5 acres / 65,340 SF) for paving subgrade and to redirect stormwater to existing drainage system. Reuse removed topsoil onsite for grading.
- Install two culverts under driveways
- Construction staging will use existing paved surfaces

2) Recreational Vehicle Storage Improvement and Expansion
- Total project site - 4.5 acres
- Remove 2.2 acres of existing asphalt pavement
- Repave existing RV storage 2.2-acre site
- Pave additional 2.3 acre grassy areas adjacent to existing RV storage area
- Construction staging will use existing paved surfaces

f. Point of Contact:

Name: Paul Sanford
Title: Environmental Planner
Organization: AECOM
Email: paul.sanford@aecom.com
Phone Number: 813-675-6843

AIR CONFORMITY APPLICABILITY MODEL REPORT
GREENHOUSE GAS (GHG) EMISSIONS

2. Analysis: Total combined direct and indirect GHG emissions associated with the action were estimated through ACAM on a calendar-year basis from the action start through the expected life cycle of the action. The life cycle for Air Force actions with "steady state" emissions (SS, net gain/loss in emission stabilized and the action is fully implemented) is assumed to be 10 years beyond the SS emissions year or 20 years beyond SS emissions year for aircraft operations related actions.

GHG Emissions Analysis Summary:

GHGs produced by fossil-fuel combustion are primarily carbon dioxide (CO2), methane (CH4), and nitrous oxide (NO2). These three GHGs represent more than 97 percent of all U.S. GHG emissions. Emissions of GHGs are typically quantified and regulated in units of CO2 equivalents (CO2e). The CO2e takes into account the global warming potential (GWP) of each GHG. The GWP is the measure of a particular GHG's ability to absorb solar radiation as well as its residence time within the atmosphere. The GWP allows comparison of global warming impacts between different gases; the higher the GWP, the more that gas contributes to climate change in comparison to CO2. All GHG emissions estimates were derived from various emission sources using the methods, algorithms, emission factors, and GWPs from the most current Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and/or Air Emissions Guide for Air Force Transitory Sources.

The Air Force has adopted the Prevention of Significant Deterioration (PSD) threshold for GHG of 75,000 ton per year (ton/yr) of CO2e (or 68,039 metric ton per year, mton/yr) as an indicator or "threshold of insignificance" for NEPA air quality impacts in all areas. This indicator does not define a significant impact; however, it provides a threshold to identify actions that are insignificant (de minimis, too trivial or minor to merit consideration). Actions with a net change in GHG (CO2e) emissions below the insignificance indicator (threshold) are considered too insignificant on a global scale to warrant any further analysis. Note that actions with a net change in GHG (CO2e) emissions above the insignificance indicator (threshold) are only considered potentially significant and require further assessment to determine if the action poses a significant impact. For further detail on insignificance indicators see Level II, Air Quality Quantitative Assessment, Insignificance Indicators (April 2023).

The following table summarizes the action-related GHG emissions on a calendar-year basis through the projected life cycle of the action.

Action-Related Annual GHG Emissions (mton/yr)						
YEAR	**CO2**	**CH4**	**N2O**	**CO2e**	**Threshold**	**Exceedance**
2025	206	0.00730742	0.00676384	208	68,039	No
2026	15	0.00060503	0.00022711	16	68,039	No
2027 [SS Year]	0	0	0	0	68,039	No

The following U.S. and State's GHG emissions estimates (next two tables) are based on a five-year average (2016 through 2020) of individual state-reported GHG emissions (Reference: State Climate Summaries 2022, NOAA National Centers for Environmental Information, National Oceanic and Atmospheric Administration. https://statesummaries.ncics.org/downloads/).

State's Annual GHG Emissions (mton/yr)				
YEAR	**CO2**	**CH4**	**N2O**	**CO2e**
2025	227,404,647	552,428	58,049	228,015,124
2026	227,404,647	552,428	58,049	228,015,124
2027 [SS Year]	0	0	0	0

U.S. Annual GHG Emissions (mton/yr)				
YEAR	**CO2**	**CH4**	**N2O**	**CO2e**
2025	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2026	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2027 [SS Year]	0	0	0	0

AIR CONFORMITY APPLICABILITY MODEL REPORT
GREENHOUSE GAS (GHG) EMISSIONS

GHG Relative Significance Assessment:

A Relative Significance Assessment uses the rule of reason and the concept of proportionality along with the consideration of the affected area (yGba.e., global, national, and regional) and the degree (intensity) of the proposed action's effects. The Relative Significance Assessment provides real-world context and allows for a reasoned choice against alternatives through a relative comparison analysis. The analysis weighs each alternative's annual net change in GHG emissions proportionally against (or relative to) global, national, and regional emissions.

The action's surroundings, circumstances, environment, and background (context associated with an action) provide the setting for evaluating the GHG intensity (impact significance). From an air quality perspective, context of an action is the local area's ambient air quality relative to meeting the NAAQSs, expressed as attainment, nonattainment, or maintenance areas (this designation is considered the attainment status). GHGs are non-hazardous to health at normal ambient concentrations and, at a cumulative global scale, action-related GHG emissions can only potentially cause warming of the climatic system. Therefore, the action-related GHGs generally have an insignificant impact to local air quality.

However, the affected area (context) of GHG/climate change is global. Therefore, the intensity or degree of the proposed action's GHG/climate change effects are gauged through the quantity of GHG associated with the action as compared to a baseline of the state, U.S., and global GHG inventories. Each action (or alternative) has significance, based on their annual net change in GHG emissions, in relation to or proportionally to the global, national, and regional annual GHG emissions.

To provide real-world context to the GHG and climate change effects on a global scale, an action's net change in GHG emissions is compared relative to the state (where action will occur) and U.S. annual emissions. The following table provides a relative comparison of an action's net change in GHG emissions vs. state and U.S. projected GHG emissions for the same time period.

Total GHG Relative Significance (mton)					
		CO2	CH4	N2O	CO2e
2025-2037	State Total	454,809,294	1,104,855	116,098	456,030,247
2025-2037	U.S. Total	10,272,908,358	51,253,823	3,001,415	10,327,163,597
2025-2037	Action	222	0.007912	0.006991	224
Percent of State Totals		0.00004874%	0.00000072%	0.00000602%	0.00004911%
Percent of U.S. Totals		0.00000216%	0.00000002%	0.00000023%	0.00000217%

From a global context, the action's total GHG percentage of total global GHG for the same time period is: 0.00000029%.*

* Global value based on the U.S. emits 13.4% of all global GHG annual emissions (2018 Emissions Data, Center for Climate and Energy Solutions, accessed 7-6-2023, https://www.c2es.org/content/international-emissions).

Climate Change Assessment (as SC GHG):

On a global scale, the potential climate change effects of an action are indirectly addressed and put into context through providing the theoretical SC GHG associated with an action. The SC GHG is an administrative and theoretical tool intended to provide additional context to a GHG's potential impacts through approximating the long-term monetary damage that may result from GHG emissions affect on climate change. It is important to note that the SC GHG is a monetary quantification, in 2020 U.S. dollars, of the theoretical economic damages that could result from emitting GHGs into the atmosphere.

AIR CONFORMITY APPLICABILITY MODEL REPORT
GREENHOUSE GAS (GHG) EMISSIONS

The SC GHG estimates are derived using the methodology and discount factors in the "Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990," released by the Interagency Working Group on Social Cost of Greenhouse Gases (IWG SC GHGs) in February 2021.

The speciated IWG Annual SC GHG Emission associated with an action (or alternative) are first estimated as annual unit cost (cost per metric ton, $/mton). Results of the annual IWG Annual SC GHG Emission Assessments are tabulated in the IWG Annual SC GHG Cost per Metric Ton Table below:

IWG SC GHG Discount Factor: 2.5%

IWG Annual SC GHG Cost per Metric Ton ($/mton [In 2020 $])			
YEAR	**CO2**	**CH4**	**N2O**
2025	$83.00	$2,200.00	$30,000.00
2026	$84.00	$2,300.00	$30,000.00
2027 [SS Year]	$86.00	$2,300.00	$31,000.00

Action-related SC GHG were estimated by calendar-year for the projected action's lifecycle. Annual estimates were found by multiplying the annual emission for a given year by the corresponding IWG Annual SC GHG Emission value (see table above).

Action-Related Annual SC GHG ($K/yr [In 2020 $])				
YEAR	**CO2**	**CH4**	**N2O**	**GHG**
2025	$17.12	$0.02	$0.20	$17.34
2026	$1.30	$0.00	$0.01	$1.31
2027 [SS Year]	$0.00	$0.00	$0.00	$0.00

The following two tables summarize the U.S. and State's Annual SC GHG by calendar-year. The U.S. and State's Annual SC GHG are in 2020 dollars and were estimated by each year for the projected action lifecycle. Annual SC GHG estimates were found by multiplying the U.S. and State's annual five-year average GHG emissions for a given year by the corresponding IWG Annual SC GHG Cost per Metric Ton value.

State's Annual SC GHG ($K/yr [In 2020 $])				
YEAR	**CO2**	**CH4**	**N2O**	**GHG**
2025	$18,874,585.70	$1,215,340.97	$1,741,465.95	$21,831,392.62
2026	$19,101,990.35	$1,270,583.74	$1,741,465.95	$22,114,040.04
2027 [SS Year]	$0.00	$0.00	$0.00	$0.00

U.S. Annual SC GHG ($K/yr [In 2020 $])				
YEAR	**CO2**	**CH4**	**N2O**	**GHG**
2025	$426,325,696.86	$56,379,205.70	$45,021,229.08	$527,726,131.63
2026	$431,462,151.04	$58,941,896.86	$45,021,229.08	$535,425,276.98
2027 [SS Year]	$0.00	$0.00	$0.00	$0.00

Relative Comparison of SC GHG:

To provide additional real-world context to the potential climate change impact associate with an action, a Relative Comparison of SC GHG Assessment is also performed. While the SC GHG estimates capture an indirect approximation of global climate damages, the Relative Comparison of SC GHG Assessment provides a better perspective from a regional and global scale.

The Relative Comparison of SC GHG Assessment uses the rule of reason and the concept of proportionality along with the consideration of the affected area (yGba.e., global, national, and regional) and the SC GHG as the degree

AIR CONFORMITY APPLICABILITY MODEL REPORT
GREENHOUSE GAS (GHG) EMISSIONS

(intensity) of the proposed action's effects. The Relative Comparison Assessment provides real-world context and allows for a reasoned choice among alternatives through a relative contrast analysis which weighs each alternative's SC GHG proportionally against (or relative to) existing global, national, and regional SC GHG. The below table provides a relative comparison between an action's SC GHG vs. state and U.S. projected SC GHG for the same time period:

Total SC-GHG ($K [In 2020 $])					
		CO2	**CH4**	**N2O**	**GHG**
2025-2037	State Total	$37,976,576.06	$2,485,924.71	$3,482,931.90	$43,945,432.66
2025-2037	U.S. Total	$857,787,847.89	$115,321,102.56	$90,042,458.16	$1,063,151,408.61
2025-2037	Action	$18.41	$0.02	$0.21	$18.64
Percent of State Totals		0.00004849%	0.00000070%	0.00000602%	0.00004242%
Percent of U.S. Totals		0.00000215%	0.00000002%	0.00000023%	0.00000175%

From a global context, the action's total SC GHG percentage of total global SC GHG for the same time period is: 0.00000023%.*

* Global value based on the U.S. emits 13.4% of all global GHG annual emissions (2018 Emissions Data, Center for Climate and Energy Solutions, accessed 7-6-2023, https://www.c2es.org/content/international-emissions).

Paul Sanford, Environmental Planner — Apr 16 2024

Name, Title — **Date**

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform 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.

Report generated with ACAM version: 5.0.23a

a. Action Location:

Base: HOMESTEAD JARB
State: Florida
County(s): Miami-Dade
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Construction and Operation of Installation Improvements at Homestead Air Reserve Base

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2025

e. Action Description:

1) Construct Bomb Assembly Facility (BAF):
- Total Project Site - 2 acres
- Demolish existing 8,000-SF Munitions Assembly Conveyor pad located at the site of the proposed BAF
- Construct new 8,000- square foot (SF) Bomb Assembly Facility (reinforced concrete foundation and floor slab, steel frame, sloped metal roof) on the southwest portion of Homestead ARB
- Pave 0.23 acre (10,019 SF / 1,113 square yards [SY]) of grassy area adjacent to BAF site (concrete)
- Relocate two light poles
- Install 1,180 linnear feet (LF) of perimter fencing
- Install various utilities in two parallel trenches along an approximate 0.6-mile corridor
- Install 1.5 miles of fiber optic cable in existing duct bank (no new excavation)
- Perform minor upgrades to electrical grid (e.g., transformer replacement)
- Minor surface grading (1.5 acres / 65,340 SF) for paving subgrade and to redirect stormwater to existing drainage system. Reuse removed topsoil onsite for grading.
- Install two culverts under driveways
- Construction staging will use existing paved surfaces

2) Recreational Vehicle Storage Improvement and Expansion
- Total project site - 4.5 acres
- Remove 2.2 acres of existing asphalt pavement
- Repave existing RV storage 2.2-acre site
- Pave additional 2.3 acre grassy areas adjacent to existing RV storage area
- Construction staging will use existing paved surfaces

f. Point of Contact:

Name: Paul Sanford
Title: Environmental Planner
Organization: AECOM
Email: paul.sanford@aecom.com
Phone Number: 813-675-6843

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the 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	0.095	250	No
NOx	0.838	250	No
CO	1.179	250	No
SOx	0.002	250	No
PM 10	9.814	250	No
PM 2.5	0.030	250	No
Pb	0.000	25	No
NH3	0.004	250	No

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.101	250	No
NOx	0.068	250	No
CO	0.092	250	No
SOx	0.000	250	No
PM 10	0.123	250	No
PM 2.5	0.003	250	No
Pb	0.000	25	No
NH3	0.000	250	No

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

2027 - (Steady State)

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

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.

Paul Sanford, Environmental Planner — Apr 16 2024

Name, Title — **Date**

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APPENDIX E:

COASTAL ZONE MANAGEMENT ACT FEDERAL CONSISTENCY DETERMINATION

DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

August 21, 2024

Ms. Ann Lazar
Florida Coastal Management Program
3900 Commonwealth Boulevard
Tallahassee, FL 32399

SUBJECT: Federal Consistency Determination
Construction and Operation of Installation Improvements at Homestead Air Reserve Base

Dear Ms. Lazar,

The United States (US) Air Force Reserve Command (AFRC) proposes to construct and operate two installation improvements, including a new bomb assembly facility (BAF) and an improved and expanded recreational vehicle (RV) storage area, at Homestead Air Reserve Base (ARB) in Miami-Dade County, Florida (Proposed Action). AFRC submits the enclosed Federal Consistency Determination for the installation improvements in accordance with the Coastal Zone Management Act (CZMA) and Florida's Coastal Management Program (FCMP).

Homestead ARB is located approximately 5 miles northeast of the City of Homestead and 20 miles southwest of the City of Miami. Homestead ARB hosts the 482nd Fighter Wing (FW), which functions as a fully combat-ready unit. Homestead ARB currently lacks the infrastructure needed to conduct bomb assembly training for reservists of the 482nd FW. The 482nd FW requires a dedicated, on-site BAF at Homestead ARB capable of supporting required training activities. Additionally, Homestead ARB currently lacks sufficient RV and trailered boat storage infrastructure within the installation. The existing RV storage area is insufficient in capacity and the pavement is in poor condition, resulting in RV storage occurring on adjacent, unpaved areas. Homestead ARB requires improved and expanded paved storage areas to accommodate RVs and trailered boats.

The proposed location at Homestead ARB is located within the State of Florida's coastal zone. Therefore, AFRC has prepared this Federal Consistency Determination to evaluate the Proposed Action's effects on coastal resources and its consistency with the enforceable policies of the federally approved FCMP. Based on the analysis presented in the enclosed Federal Consistency Determination, AFRC has determined that the Proposed Action would be consistent to the maximum extent practicable with the enforceable policies of the FCMP.

AFRC respectfully requests your response within **60 days** from the receipt of this document, pursuant to 15 Code of Federal Regulations (CFR) 930.14, to concur or object to this consistency determination, or to request an extension under Section 930.41(b). Your concurrence will be presumed if a response is not received on the 60th day from receipt of this determination. Please direct your response or requests for additional information to Mr. Josh Friers, Cultural and Natural Resources Manager, Homestead ARB, by email to: joshua.friers.2@us.af.mil; or by mail to: Josh Friers, 29350 Westover Street, Bldg 232, Homestead ARB, FL 33039.

FEDERAL CONSISTENCY DETERMINATION
CONSTRUCTION AND OPERATION OF INSTALLATION IMPROVEMENTS AT HOMESTEAD AIR RESERVE BASE,
MIAMI-DADE COUNTY, FLORIDA

Introduction

The United States (US) Air Force Reserve Command (AFRC) proposes to construct and operate two installation improvements, including a new bomb assembly facility (BAF) and an improved and expanded recreational vehicle (RV) storage area, at Homestead Air Reserve Base (ARB) in Miami-Dade County, Florida (Proposed Action).

Homestead ARB is located approximately 5 miles northeast of the City of Homestead and 20 miles southwest of the City of Miami, which is located within the State of Florida's coastal zone. Therefore, the Proposed Action could have reasonably foreseeable effects on coastal zone resources and must be consistent with the enforceable policies of the federally approved Florida Coastal Management Program (FCMP). AFRC has prepared this Federal Consistency Determination in accordance with Section 307(d) of the Coastal Zone Management Act (CZMA) of 1972 and 15 Code of Federal Regulations (CFR) Part 930, Subpart C, to evaluate the Proposed Action's effects on Florida's coastal resources and enforceable policies. AFRC has determined that the Proposed Action would be consistent to the maximum extent practicable with the enforceable policies of the FCMP.

The analysis presented here is drawn from the more detailed analysis presented in the Environmental Assessment (EA) that AFRC has prepared to analyze the Proposed Action's potential impacts in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] §§ 4321 et seq.); the Council on Environmental Quality (CEQ) *Regulations Implementing the Procedural Provisions of NEPA* (40 CFR Parts 1500-1508); and the Air Force Environmental Impact Analysis Process (EIAP) (32 CFR Part 989).

Project Background

Homestead ARB is home to the 482nd Fighter Wing (FW), a fully combat-ready unit capable of providing F-16C multi-purpose fighter aircraft, mission-ready pilots, and support personnel for short-notice worldwide deployment. The 482nd Maintenance Group, a unit of the 482nd FW, is responsible for all organizational level maintenance and logistics support for all assigned aircraft. The 482nd Maintenance Squadron Munitions Flight (MXS/MXMW), is responsible for assembling, disassembling, and performing maintenance and testing of munitions, as well as conducting monthly training drills to support operational requirements. Homestead ARB currently lacks the infrastructure needed to conduct bomb assembly training for reservists of the 482nd Fighter Wing. The 482nd Fighter Wing requires a dedicated, on-site BAF at Homestead ARB capable of supporting required training activities. Additionally, Homestead ARB currently lacks sufficient RV storage infrastructure within the installation. The existing RV storage area is insufficient in capacity and the pavement is in poor condition, resulting in RV storage occurring on adjacent, unpaved areas.

Purpose and Need

<u>Bomb Assembly Facility Construction and Operation</u>

The *purpose* of this component of the Proposed Action is to provide personnel at Homestead ARB with a dedicated, on-site, indoor area for munitions activities, including training, operational, and administrative functions.

This component of the Proposed Action is *needed* because there is currently no single, dedicated, indoor space to conduct required munitions activities.

<u>Recreational Vehicle Storage Improvement and Expansion</u>

The *purpose* of this component of the Proposed Action is to improve and expand the existing RV storage area.

This component of the Proposed Action is *needed* because the existing RV storage area is insufficient.

Proposed Action

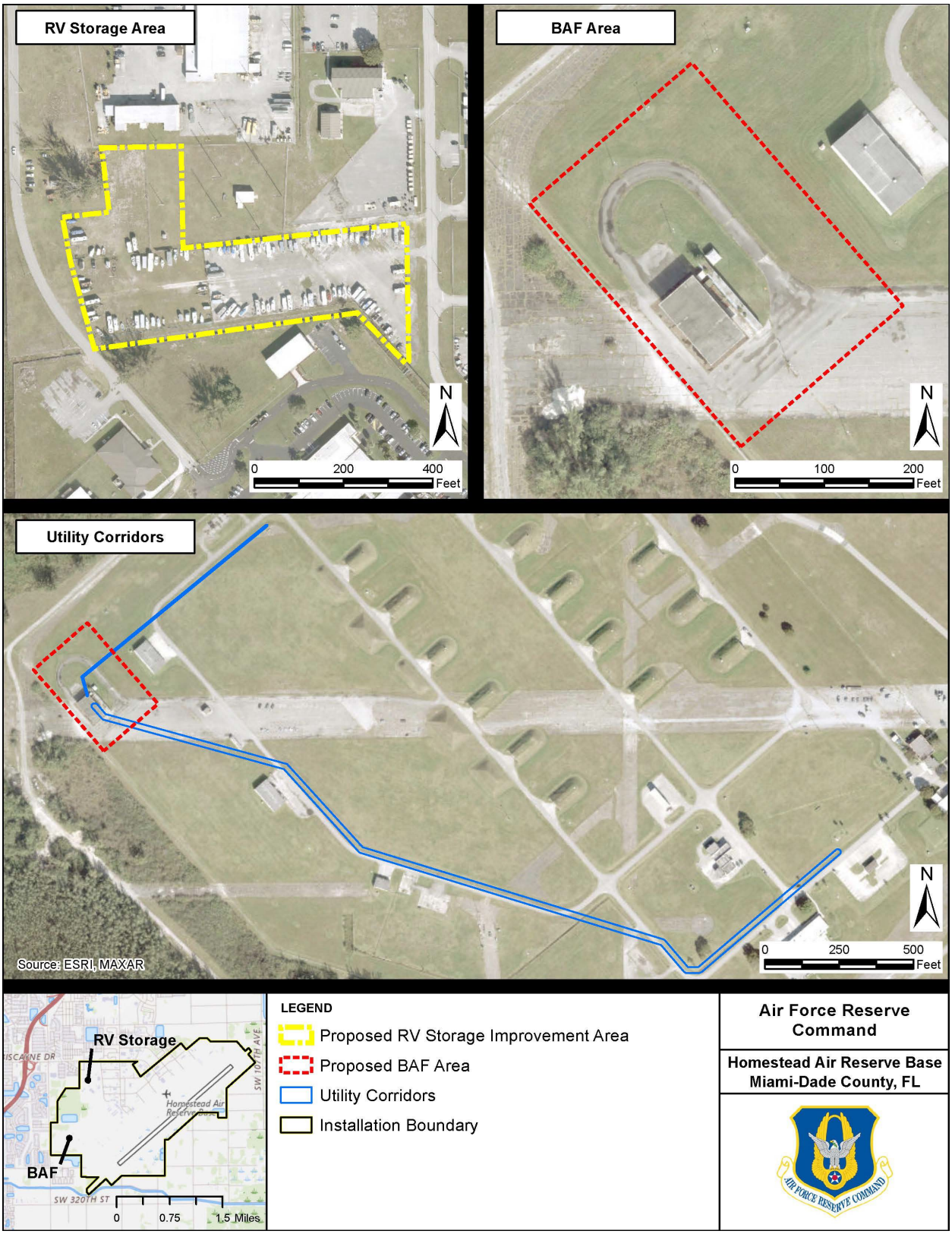
Bomb Assembly Facility Construction and Operation

This component of the Proposed Action would occur within an approximately 2-acre parcel within the Munitions District at Homestead ARB (see **Figure 1**). The existing Munitions Assembly Conveyor (MAC) Pad, which consists of a degraded concrete canopy on concrete columns, would be demolished and replaced with an approximately 8,000-square-foot BAF. Much of the proposed site is currently paved, although several adjacent grassy areas would be paved with concrete to accommodate operation of the proposed BAF. In addition, sewer and water lines would be extended to the proposed BAF from Homestead ARB's existing utility infrastructure along an approximately 0.6-mile corridor. The existing electrical system would be upgraded and extended along an 870-foot corridor from connections to the east of the proposed BAF. These utility lines would be installed belowground via trenching. Approximately 1.5 miles of existing fiber optic cable extending to the site would be upgraded within the existing duct bank, although no ground disturbance is anticipated to result from the fiber optic cable replacement. Construction access and staging areas would occur entirely on existing paved areas adjacent to the proposed site. During operation, bombs and other munitions would be assembled at this location during monthly training drills for reservists of the 482nd FW. There would be no change to the type of munitions training activities or the number of personnel conducting munitions assembly training at Homestead ARB.

Recreational Vehicle Storage Improvement and Expansion

This component of the Proposed Action would involve re-paving the existing, 2.2-acre RV storage area, and grading and installing asphalt on an approximately 2.3-acre adjacent grassy area currently used for spillover storage of RVs (see **Figure 1**). No new lighting or access points would be installed. Once operational, the paved areas would be maintained by Homestead ARB's public works, which would be responsible for clearing the paved area of debris and maintaining pavement markings. There would be no change in the way RVs are stored at Homestead ARB.

Figure 1: Proposed Sites for BAF and RV Storage



Enforceable Policies

The State of Florida's federally approved FCMP is administered by the Florida Department of Environmental Protection (FDEP) through the Office of Resilience and Coastal Protection. The FDEP manages and implements the FCMP, in conjunction with nine state agencies and five water management districts. The FCMP consists of a network of 22 Florida Statutes which comprise the enforceable policies. The Florida Statutes pertaining to the coastal zone include the following:

- Beach and Shore Preservation
- Intergovernmental Programs
- State and Regional Planning
- Emergency Management
- State Lands
- State Parks and Preserves
- Land Acquisitions for Conservation or Recreation
- Historical Resources
- Commercial Development and Capital Improvements
- Transportation Finance and Planning
- Water Resources
- Outdoor Recreation and Conservation Lands
- Pollutant Discharge Prevention and Removal
- Energy Resources
- Fish and Wildlife Conservation
- Land and Water Management
- Public Health
- Mosquito Control
- Environmental Control
- Building Construction Standards
- Soil and Water Conservation
- Aquaculture

Table 1 summarizes the applicability of Florida's enforceable policies and the Proposed Action's consistency with the applicable policies. A summary analysis of the Proposed Action's consistency with the applicable enforceable policies is presented below.

Florida Statute (FS) Chapter 258, State Parks and Preserves

Part II: Aquatic Preserves

Homestead ARB is approximately 2 miles from Biscayne Bay National Park and Aquatic Preserve. Part 258.397 prohibits the discharge of wastes or effluents into the Biscayne Bay Aquatic Preserve. Currently, during periods of heavy rainfall, runoff from Homestead ARB discharges into the on-base canal system, which runs within and along the perimeter of the installation, and is eventually pumped into Military Canal, which connects to Biscayne Bay. Proposed construction activities would involve soil disturbance that could result in increased runoff without proper erosion and sediment control measures. Since both components of the Proposed Action would disturb more than one acre of land, AFRC would obtain a National Pollutant Discharge Elimination System (NPDES) permit and develop a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would identify potential sources of pollutants and establish erosion and sediment control to manage stormwater discharges and minimize sedimentation to the extent practicable. Construction crews would adhere to best management practices (BMPs) outlined in the SWPPP, and the erosion and sediment controls would be implemented prior to land disturbing activities and maintained in good working order for the duration of construction.

The project would also comply with applicable requirements of Section 438 of the Energy Independence and Security Act (EISA), which requires federal projects to incorporate, to the maximum extent technically feasible, low impact development (LID) measures to maintain the pre-development hydrology of a site. For example, paving activities included in the Proposed Action would include installing pavement in a manner that would allow precipitation to drain and infiltrate into the surrounding adjacent grassy areas. The Proposed Action would not result in the use of or discharges from pump-out facilities, and the Proposed Action does not involve any ships which may discharge oil or other pollutants. With the implementation of appropriate BMPs to address stormwater discharge into Biscayne Bay, the Proposed Action would be consistent to the maximum extent practicable with this enforceable policy.

FS Chapter 267, Historical Resources

AFRC has conducted multiple cultural resources investigations to identify historic resources at Homestead ARB. The most recent investigation was conducted in 2021 and identified four historical resources within 0.25 miles of the Project Sites. These resources include three standing structures: Buildings 292 (a water pump station), Building 312 (a vehicle maintenance facility), and Building 359 (the base fitness center facility). All three were determined ineligible for listing in the National Register of Historic Places (NRHP). The 2021 investigation also identified the base K-9 Cemetery, which was determined eligible for the NRHP in 2022 and is located 190 meters (626 feet) from the closest proposed utility corridor, 850 meters (2,790 feet) from the proposed BAF, and 1,231 meters (4,040 feet) from the proposed RV storage area. The Proposed Action would have no effects on historic properties.

AFRC has consulted with the Florida State Historic Preservation Office (SHPO) in accordance with Section 106 of the National Historic Preservation Act, as well as with federally recognized Native American Tribes that are historically affiliated with the geographic region. On August 14, 2024, the SHPO concurred via letter that the Proposed Action would have no effect on historic properties. In the event archaeological deposits are inadvertently discovered during the Proposed Action, ground-disturbing activities would stop immediately, and AFRC would notify the Florida SHPO and any Tribes which have elected to act as consulting parties. With the implementation of appropriate BMPs, the Proposed Action would be consistent to the maximum extent practicable with this enforceable policy.

FS Chapter 373, Water Resources

<u>Part IV: Management and Storage of Surface Waters</u>

While there are no surface waters at the Project Sites, portions of the on-base canal system are located nearby and would collect stormwater runoff. Proposed construction activities would involve up to 7.9 acres of soil disturbance that could result in increased runoff without proper erosion and sediment control measures. AFRC would obtain a NPDES permit and adhere to the existing SWPPP that would identify erosion and sediment control measures to manage stormwater discharges and minimize runoff to the extent practicable. Construction crews would adhere to the BMPs outlined in the SWPPP (e.g., minimizing exposed soils, maintaining silt fences, etc.), and the erosion and sediment controls would be implemented prior to land disturbing activities and maintained in good working order for the duration of construction.

The Proposed Action would also comply with applicable requirements of Section 438 of the EISA and would restore the Project Sites to their pre-development hydrology to the maximum extent technically feasible. Enforceable policies contained within this section that address restoration priority areas within the South Florida Water Management District, Miami-Dade County, the Lake Belt, other water management districts, the Everglades, Florida Bay, Alligator Alley, Lake Apopka, the Wekiva River System, the Geneva Freshwater Lens, Heartland headwaters, and the Harris Chain of Lakes are not applicable to this Proposed Action. The Proposed Action is consistent to the maximum extent practicable with the applicable enforceable policies.

FS Chapter 376, Pollutant Discharge Prevention and Removal

Hazardous materials and other pollutants, such as petroleum products, would not willfully be dumped or discharged onto the surrounding land or into nearby waters during either construction or operation. Construction of the proposed BAF and RV storage area, including the operation of equipment and vehicles, would create the potential for accidental discharges or spills from commonly used products such as diesel fuel, gasoline, oil, antifreeze, and lubricants. During operational activities, petroleum product storage and waste generation may also occur.

The US Environmental Protection Agency (USEPA) added Homestead ARB to the Superfund National Priorities List in 1990. Two Installation Restoration Program (IRP) sites are located near the Project Sites, Operable Unit (OU)-13, and OU-4. OU-13, the site of a former hazardous materials storage building, is located approximately 150 feet northwest of the existing MAC Pad paved driveway and would not be impacted by the Proposed Action. OU-4, the site of a motor pool oil leak, is located immediately adjacent to the northernmost edge of the proposed RV storage area. A Record of Decision specifying a remedy of land use controls was issued in 1995. Contaminant levels were found to be within allowable levels in 1996, and a removal action was conducted in 2001, in which remaining contaminated soils were excavated from nearby drainage ditches and disposed of off-site. Soils within the proposed RV storage area are not anticipated to be contaminated from the motor pool oil leak. The proposed RV storage area would be constructed to minimize impacts to OU-4 and to minimize the need for soil removal. If during final design it is determined that soil excavation and removal is required, AFRC would adhere to its established procedures for soil re-use at Homestead ARB and, as a last resort, dispose of soil off-site in accordance with the Miami-Dade County Soil Re-Use Policy. Construction activities would not impact the land use controls associated with OU-4 nor would result in the spread of pollutants from OU-4.

All potential pollutants (i.e., oils, gasoline, lubricants) used during the demolition of the MAC Pad or the construction and operation of the proposed BAF and RV storage area would be handled, contained, and disposed of in accordance with Homestead ARB's Hazardous Waste Management Plan (HWMP) and all applicable local, state, and federal regulations. Motor oil contamination at OU-4 is not anticipated to migrate into the proposed RV storage area, nor would proposed construction activities discharge additional pollutants to OU-4. Implementation of standard construction BMPs, such as performing routine inspections of equipment to check for leaks and maintaining spill-containment materials at the Project Sites, would reduce the potential for accidental pollutant discharge. The enforceable policies contained within this chapter that address vessels, terminal facilities, agriculture, and brownfields are not applicable. Therefore, the Proposed Action is consistent to the maximum extent practicable with these enforceable policies.

FS Chapter 379, Fish and Wildlife Conservation

Part I: General Provisions

The only applicable enforceable policy contained within this part is 379.2291, also known as the "Florida Endangered and Threatened Species Act." A survey of the Project Sites in June 2024 identified three state-listed threatened plant species at the RV storage are:, Christmasberry (*Crossopetalum ilicifolium*), Everglades greenbrier (*Smilax havanensis*), and Bahama ladder brake (*Pteris bahamensis*). No state-threatened plant species were observed at the proposed BAF site. Homestead ARB maintains an Integrated Natural Resources Management Plan (INRMP) that contains measures to address and minimize potential impacts of AFRC operations on state-listed threatened and endangered species that may be present on the base. Potential adverse impacts to any state-listed species, if present, would not result in substantially diminished populations, nor would result in a substantial reduction in habitat availability.

AFRC has also identified 35 federally listed threatened, endangered, proposed endangered, and candidate species with the potential to occur at the Project Site. Thirteen of these species are covered under a Biological Opinion (BO) issued by the United States Fish and Wildlife Service (USFWS) in 2019. Under this BO, ongoing and future activities at Homestead ARB may affect, but are not likely to adversely affect, the

following species: American alligator (*Alligator mississippiensis*), American crocodile (*Crocodylus acutus*), wood stork (*Mycteria americana*), Everglade snail kite (*Rostrhamus sociabilis plubeus*), Bartram's scrub hairstreak butterfly (*Strymon acis bartrami*), Blodgett's silverbrush (*Argythamnia blodgettii*), Carter's small-flowered flax (*Linum carteri carteri*), eastern indigo snake (*Drymarchon corais couperi*), Everglades bully (*Sideroxylon reclinatum* spp. *austrofloridense*), Florida brickell bush (*Brickellia mosieri*), Florida leafwing butterfly (*Anaea troglodyte floridalis*), Florida prairie-clover (*Dalea carthagenensis floridana*), and tiny polygala (*Polygala smallii*).

In addition, the 2019 BO determined that three federally listed species may be adversely affected by operations at Homestead ARB: Florida bonneted bat (*Eumops floridanus*); sand flax (*Linum arenicola*); and Small's milkpea (*Galactia smallii*). In accordance with minimization and conservation measures established as part of the BO, a qualified biologist will visually inspect the MAC Pad canopy for Florida bonneted bats prior to beginning proposed demolition activities. If the visual inspection identifies the presence of roosting bats, AFRC will coordinate with USFWS on how to proceed with demolition. The proposed RV storage improvements are anticipated to have no effect on the Florida bonneted bat.

Additionally, a qualified biologist surveyed both Project Sites for sand flax and Small's milkpea in June 2024. At the RV storage area, 329 sand flax individuals were documented. No Small's milkpea were observed at the proposed RV storage area. A total of 2,770 Small's milkpea occurrences were documented at the proposed BAF site and two associated utility corridors. No sand flax was observed at the proposed BAF site and associated utility corridors. No other federally listed species were observed at these sites. The AFRC would comply with Homestead ARB's Protected Plant Management Plan in order to address potential impacts to sand flax and Small's milkpea.

The remaining 19 federally listed species with potential presence are not covered under the 2019 BO. Of these, 12 species are identified in Homestead ARB's INRMP as either not occurring, or being unlikely to occur on Homestead ARB: Florida panther (*Felis concolor coryi*), Puma (*Felis concolor*), green sea turtle (*Chelonia mydas*), hawksbill sea turtle (*Eretmochelys imbricata*), leatherback sea turtle (*Dermochelys coriacea*), loggerhead sea turtle (*Caretta caretta*), Miami blue butterfly (*Cyclargus (Hemiargus) thomasi bethunebakeri*), Cape Sable thoroughwort (*Chromolaena frustrata*), crenulate lead-plant (*Amorpha crenulata*), deltoid spurge (*Chamaesyce deltoidei* spp. *deltoidea*), Florida pineland crabgrass (*Digitaria pauciflora*), and Florida semaphore cactus (*Consolea corallicola*). The Proposed Action would have no effect on these species due to either not occurring, or being unlikely to occur on the Proposed Action Area.

Five federally listed threatened or endangered species with potential presence, the eastern black rail (*Laterallus jamaicensis ssp. jamaicensis*), Gulf sturgeon (*Acipenser oxyrinchus),* beach jacquemontia (*Jacquemontia reclinata*), Carter's mustard (*Warea carteri)*, and pineland sandmat (*Chamaesyce deltoidei pinetorum)*; one proposed endangered species, tricolored bat (*Perimyotis subflavus*); and one candidate species, monarch butterfly (*Danaus plexippus*), have not been addressed in the 2019 BO nor in Homestead ARB's INRMP. AFRC has determined that these species either have no potential to occur at the Project Sites due to a lack of suitable habitat, or in the case of the tricolored bat, would be protected by conservation measures identified above for the Florida bonneted bat. Therefore, no effects on these species are anticipated.

AFRC is consulting with the USFWS regarding these listed species and potential impacts. No response has been received.

Bald eagles (*Haliaeetus leucocephalus*) are periodically observed at Homestead ARB; however, no nests occur within or in the immediate vicinity. The nearest documented bald eagle nest is located approximately 2.5 miles northeast of the installation, and potential impacts to this species would therefore be negligible. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Part II: Marine Life

The only applicable enforceable policy contained within this part is 379.2431, also known as the "Marine Turtle Protection Act." Four federally listed threatened and endangered sea turtles are potentially present in the vicinity of the Project Sites: green sea turtle, hawksbill sea turtle, leatherback sea turtle, and loggerhead sea turtle. However, AFRC has determined that no suitable habitat for these species is present at Homestead ARB, and these species have no potential to occur at the Project Sites. Therefore, the Proposed Action would have no effect on these species. The Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Part III: Freshwater Aquatic Life

A freshwater system of canals runs within and along the perimeter of Homestead ARB. During periods of heavy rainfall, runoff from both Project Sites discharges into the on-base canal system. Part 379.29 prohibits the discharge of deleterious substances into freshwater systems in quantities sufficient to injure, stupefy, or kill fish. Part 379.295 additionally prohibits the use or disposal of explosives in and around freshwater systems. A survey of the on-base canal system in 2012 identified 128 euryhaline fish species that are known to travel through Homestead ARB's on-base canal system. Although not observed in the 2012 survey, the federally threatened Gulf sturgeon may also travel through the canal system. However, the Proposed Action would not involve the intentional discharge or disposal of dyestuff, coal tar, oil, sawdust, poison, explosives, or any other deleterious substance into freshwater systems.

The Proposed Action would not result in the contamination of the on-base canal system with deleterious contaminants, nor would explosives from the BAF be placed or disposed of into the canal system. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

FS Chapter 380, Land and Water Management

Part I: Environmental Land and Water Management

Pursuant to the enforceable policies located at 380.04, the proposed paving activities, demolition of the MAC Pad, and the establishment of the permanent BAF are all considered to be "developments." However, per 380.0651, this military installation would be exempt from the requirements applicable to developments of regional impact that are detailed throughout this section. In addition, the Project Sites are not located within an area of critical state concern, so enforceable policies addressing those areas are not applicable. The Proposed Action is consistent to the maximum extent practicable with these enforceable policies.

Part II: Coastal Planning and Management

The Project Sites are located within Florida's coastal zone, and the Proposed Action constitutes a federal development project with AFRC serving as the federal proponent. In accordance with the requirements of the CZMA and the FCMP, AFRC has evaluated the potential impacts on Florida's coastal zone and has completed this Federal Consistency Determination to demonstrate compliance with the enforceable policies of the FCMP. Therefore, the Proposed Action is consistent to the maximum extent practicable with these enforceable policies.

FS Chapter 403, Environmental Control

Part I: Pollution Control

Pollutants generated during construction and operation of the Proposed Action would have the potential to impact the surrounding land, water, and air resources. Prior to demolishing the MAC Pad, AFRC would conduct a survey to identify the potential presence of other hazardous materials (e.g., lead-based paints, polychlorinated biphenyls [PCBs], mercury) and incorporate disposal procedures into the project phasing. Demolition of the MAC Pad would not result in a release of asbestos-containing material (ACM) as the existing structure does not contain any ACM. During demolition and construction activities, efforts would be

made to minimize accidental releases of contaminants, and contractors would adhere to Homestead ARB's HWMP. In the event of a spill or release that constitutes an environmental emergency, AFRC would notify the FDEP and submit a report to USEPA Region IV in addition to implementing standard clean-up procedures.

Runoff and sedimentation from the Project Sites may affect nearby water quality. AFRC would obtain a NPDES permit, and comply with the provisions included in Homestead ARB's SWPPP to minimize impacts to surface waters during construction. Soil disturbance and construction vehicles may result in fugitive dust and exhaust emissions, potentially impacting local air quality, but these impacts would be temporary. Any such emissions would be managed with appropriate BMPs, including applying water or using other stabilization measures on areas of bare soil or soil piles and covering dump trucks that transport materials that could become airborne. Additionally, contractors would be required to maintain construction equipment in accordance with manufacturers' specifications to reduce exhaust emissions.

Additionally, remedial investigations for per- and polyfluoroalkyl substance (PFAS) contamination at Homestead ARB are currently ongoing. A known PFAS site is located directly north of the proposed RV storage area (overlapping OU-4). Soil and groundwater sampling surrounding Building 307 indicate PFAS levels above screening levels in groundwater, but below screening levels in soil. Delineation of this PFAS site is still ongoing, although soils within the proposed RV storage area are not anticipated to be contaminated. The proposed RV storage area would be constructed to minimize impacts to the PFAS site and to minimize the need for soil removal from the proposed RV storage area. Further, construction activities are not anticipated to encounter the potentially PFAS-contaminated groundwater plume due to the shallow grading required. Following construction of the proposed RV storage area, groundwater monitoring wells may be installed to facilitate the ongoing PFAS investigations; the presence of the proposed RV storage area would not impede these investigations or potential future cleanup efforts. There is no known PFAS or perfluoro-octane sulfonic acid (PFOS) soil contamination at the existing MAC Pad. Operation of the RV storage area or BAF would not release PFAS or PFOS.

Operation of the proposed BAF or RV storage area would not result in any direct discharges to surface water or groundwater. Wastewater generated at the site would be conveyed to the sanitary sewer collection system and to the South District Wastewater Treatment Plant. No intentional dumping or littering of any kind would occur at any point during either construction or operation of the Proposed Action; construction and municipal wastes would be removed from the site and disposed of appropriately, or recycled when possible. During operation, the proposed BAF and RV storage area would not qualify as major source emitters with regard to air quality. Therefore, the Proposed Action is consistent to the maximum extent practicable with these enforceable policies.

Part IV: Resource Recovery and Management

Hazardous and solid wastes, as defined in Chapter 403, could be generated during construction and operation of the Proposed Action. In particular, hazardous wastes would have the potential to be created during the demolition of the MAC Pad. As stated previously, AFRC would conduct a survey to identify the potential presence of other hazardous materials (e.g., lead-based paints, PCBs, mercury) prior to demolishing the MAC Pad and incorporate disposal procedures into the project phasing. The demolition of the MAC Pad would not result in a release of ACM as the existing structure does not contain any ACM. The construction of the proposed RV storage area would be designed to minimize impacts to the known PFAS site and the presence of the proposed RV storage area would not impede investigations or cleanup efforts regarding the PFAS site. During demolition and construction activities, efforts would be made to minimize accidental releases of contaminants, and contractors would adhere to Homestead ARB's HWMP. In the event of a release of hazardous wastes that constitutes an environmental emergency, AFRC would notify the FDEP and submit a report to USEPA Region IV in addition to implementing standard clean-up procedures.

During operation of the Proposed Action, petroleum, oil, and lubricant storage and waste generation would occur. All hazardous materials, substances, and wastes discovered, generated, or used during the

demolition of the MAC Pad or the construction and operation of the proposed BAF and RV storage area would be handled, contained, and disposed of in accordance with Homestead ARB's HWMP and all applicable local, state, and federal regulations.

The Proposed Action would also create solid wastes as a result of demolition, construction, and operational activities. In particular, demolition of the MAC Pad would result in a temporary, marginal increase in solid waste. Homestead ARB employs a private contractor for the collection and disposal of solid waste, and also implements a solid waste recycling and disposal program that meets Air Force goals for diversion from landfills. AFRC would dispose of non-recyclable demolition debris at an offsite permitted landfill facility. Therefore, the Proposed Action is consistent to the maximum extent practicable with these enforceable policies.

FS Chapter 553, Building Construction Standards

Part IV: Florida Building Code

The proposed BAF and RV storage area would be designed and constructed in accordance with applicable Department of Defense United Facilities Criteria and other applicable building codes, including the Florida Building Code. AFRC would obtain the appropriate permit or permit exemption in order to construct the proposed facility. The Proposed Action is consistent to the maximum extent practicable with these enforceable policies.

FS Chapter 582, Soil and Water Conservation

Proposed construction activities would disturb up to 7.9 acres of soils that could result in increased runoff without proper erosion and sediment control measures. Since both components of the Proposed Action would impact over one acre of land, AFRC would obtain a NPDES permit to manage stormwater runoff and erosion at the Project Sites, and comply with the provisions included in its SWPPP. The SWPPP would establish erosion and sediment control to manage stormwater discharges and minimize sedimentation to the extent practicable. Construction crews would adhere to the BMPs outlined in the SWPPP, and the erosion and sediment controls would be implemented prior to land disturbing activities and maintained in good working order for the duration of construction.

Once operational, potential future erosion and sedimentation would also be minimized through compliance with the applicable requirements of Section 438 of the EISA, which would aim to maintain the pre-development hydrology of the Project Sites to the maximum extent technically feasible. The Preferred Alternative would permanently create up to 2.53 acres (0.23 acres for BAF and 2.3 acres for RV storage improvements) of new impervious surfaces, which could increase the amount of runoff in the ROI. Stormwater at the Project Sites would sheet flow across pavement into adjacent pervious areas where it would either infiltrate or travel into Homestead ARB's existing canal system. Overall, the Proposed Action would not meaningfully affect stormwater capacity of the canal systems on base and downstream. Implementation of standard BMPs during construction (e.g., maintaining erosion and sediment controls in good working order) would control stormwater discharges and protect soil and water resources at and around the Project Sites. Therefore, the Proposed Action is consistent to the maximum extent practicable with these enforceable policies.

Conclusion

Table 1 summarizes the Proposed Action's consistency with or applicability to the enforceable policies of the FCMP. AFRC has determined that the Proposed Action, which would include appropriate BMPs and minimization measures, would be consistent to the maximum extent practicable with the enforceable policies and coastal resources of Florida's federally approved FCMP, pursuant to the CZMA of 1972, as amended, and in accordance with 15 CFR Part 930, Subpart C.

Table 1: Florida's Enforceable Policies

Chapter	Policy Title	Policy References[1]	Applicability or Consistency[2]
161	**Beach and Shore Preservation**		
Part I	Regulation of Construction, Reconstruction, and Other Physical Activity	Florida Statutes (FS) XI, Chapter 161.021, .041, .042, .051, .052, .053, .0531, .0535, .054, .055, .061, .081, .082, .085, .088, .101, .131, .141, .142, .143, .151, .161, .191, .201, .211, .212, .242	Not Applicable (NA)
Part II	Beach and Shore Preservation Districts	FS XI, Chapter 161.36, .41	NA
Part III	Coastal Zone Protection	FS XI, Chapter 161.54, .55, .551, .56, .58	NA
Part IV	Oceans and Coastal Resources Act	FS XI, Chapter 161.71	NA
163	**Intergovernmental Programs**		
Part II	Growth Policy; County and Municipal Planning; Land Development Regulation	FS XI, Chapter 163.3161, .3164, .3177, .3178, .3180(2), .3184, .3187, .3194(1)(a), .3202(2)(a-h), 32051, .3220(2)(3)	NA
186	**State and Regional Planning**		
	State and Regional Planning	FS XIII, Chapter 186.001, .002, .003, .004, .006, .007, .008, .009, .021, .031, .501, .502, .503, .504, .506, .507, .508, .509, .511, .515, .801, .803,	NA
252	**Emergency Management**		
Part I	General Provisions	FS XVII, Chapter 252.31, .311, .32, .33, .34, .35, .351, .355, .356, .3568, .357, .358, .36, .363, .365, .37, .371, .372, .373, .38, .385, .39, .40, .41, .42, .43, .44, .45, .46, .47, .50, .51, .52, .55, .60, .61	NA
Part II	Community Right-to-Know Act	FS XVII, Chapter 252.81, .82, .83, .84, .85, .86, .87, .88, .89, .90	NA
Part III	Emergency Management Assistance Compact	FS XVII, Chapter 252.922, .923, .924, .925, .926, .927, .928, .929, .931, .932, .933	NA
Part IV	Accidental Release Prevention and Risk Management Planning	FS XVII, Chapter 252.934, .935, .936, .937, .938, .939, .940, .941, .942, .943, .944, .946	NA
253	**State Lands**		

Chapter	Policy Title	Policy References[1]	Applicability or Consistency[2]
	State Lands	FS XVIII, Chapter 253.001, .002, .02, .025, .03, .0325, .033, .0341, .0345, .0346, .0347, .035, .036, .037, .04, .05, .111, .115, .12, .121, .1221, .1241, .1252, .126, .127, .128, .1281, .129, .135, .14, .141, .21, .29, .34, .36, 37, .38, .381, .382, .39, .40, .41, .42, .43, .431, .44, .45, .451, .47, .51, .512, .52, .53, .54, .55, .56, .57, .571, .60, .61, .62, .66, .665, .67, .68, .69, .70, .71, .72, .73, .74, .75, .763, .77, .781, .782, .7821, .7822, .7823, .7825, .7827, .783, .784, .785, .80, .81, .82, .83, .86	NA
258	**State Parks and Preserves**		
Part I	Parks	FS XVIII, Chapter 258.007, .008, .037, .08, .083, .10, .156, .157	NA
Part II	Aquatic Preserves	FS XVIII, Chapter 258.37, .39, .391, .392, .3925, .393, .394, .395, .396, .397, .399, .3991, .40, .41, .42, .44, .45	**Consistent**
Part III	Wild and Scenic Rivers	FS XVIII, Chapter 258.501	NA
259	**Land Acquisitions for Conservation or Recreation**		
	Land Acquisitions for Conservation or Recreation	FS XVIII, Chapter 259.04, .06, .105	NA
267	**Historical Resources**		
	Historical Resources	FS XVIII, Chapter 267.021, .031, .061, .11, .115, .12, .13, .135, .14	**Consistent**
288	**Commercial Development and Capital Improvements**		
Part XI	Defense Conversion and Transition	FS XII, Chapter 288.972, .975	NA
339	**Transportation Finance and Planning**		
	Transportation Finance and Planning	FS XXVI, Chapter 339.175, .241	NA
373	**Water Resources**		

Chapter	Policy Title	Policy References[1]	Applicability or Consistency[2]
Part I	State Water Resource Plan	FS XXVIII, Chapter 373.012, .013, .016, .019, .023, .026, .033, 0.36, .0363, .0397, .042, .0421, .043, .046, .047, .056, .069, .0691, .0693, .0695, .0697, .0698, .073, .076, .079, .083, .084, .085, .086, .087, .088, .089, .093, .096, .099, .106, .107, .109, .113, .1131, .114, .116, .117, .1175, .118, .119, .123, .129, .136, .139, .1391, .1395, .1401, .145, .146, .149, .1501, .1502, .1725, .175, .185, .187, .199, .200	NA
Part II	Permitting of Consumptive Uses of Water	FS XXVIII, Chapter 373.203, .206, .207, .209, .213, .216, .217, .219, .223, .2234, .2235, .224, .226, .227, .228, .229, .2295, .22951,.232, .233, .236, .239, .243, .244, .249, .250	NA
Part III	Regulation of Wells	FS XXVIII, Chapter 373.302, .303, .306, .309, .313, .314, .316, .319, .323, .324, .325, .326, .329, .333, .335, .336, .337, .342	NA
Part IV	Management and Storage of Surface Waters	FS XXVIII, Chapter 373.403, .406, .407, .409, .413, .4131, .4132, .4133, .4134, .4135, .4136, .4137, .4138, .4139, .414, .4141, .4142, .4145, .4149, .41492, .41495, .415, .416, .417, .418, .4185, .419, .421, .4211, .422, .423, .426, .427, .4271, .4275, .428, .429, .430, .433, .436, .439, .441, .4415, .443, .451, .453, .4591, .4592, .45922, .45924, .45926, .4593, .45931, .4595, .4596, .4597, .461, .468	**Consistent**
Part V	Finance and Taxation	FS XXVIII, Chapter 373.470, .501, .503, .506, .5071, .539, .543, .546, .553, .559, .563, .566, .569, .573, .576, .579, .583, .586, .591	NA
Part VI	Miscellaneous Provisions	FS XXVIII, Chapter 373.603, .604, .605, .6055, .607, .608, .609, .610, .611, .613, .614, .616, .6161, .617, .618, .619, .62, .621, .63, .69	NA
Part VII	Water Supply Policy, Planning, Production, and Funding	FS XXVIII, Chapter 373.705, .707, .709, .711, .713, .715	NA

Chapter	Policy Title	Policy References[1]	Applicability or Consistency[2]
Part VIII	Florida Springs and Aquifer Protection Act	FS XXVIII, Chapter 373.801, .802, .803, .805, .807, .811	NA
375	**Outdoor Recreation and Conservation Lands**		
	Outdoor Recreation and Conservation Lands	FS XXVIII, Chapter 375.011, .021, .032, .051, .061, .065, .251, .311, .312, .313, .314	NA
376	**Pollutant Discharge Prevention and Removal**		
	Pollutant Discharge Prevention and Removal	FS XXVIII, Chapter 376.021, .031, .041, .051, .065, .07, .0705, .071, .09, .10, .11, .12, .121, .123, .13, .14, .16, .165, .19, .20, .205, .207, .21, .25, .30, .301, .302, .303, .304, .305, .306, .307, .30701, .30702, . 3071, .30713, .30714, .30715, .30716, .3072, .3077, .3078, .30781, .3079, .308, .309, .311, .313, .315, .320, .321, .322, .323, .324, .325, .326, .40, .60, .70, .71, .75, .77, .78, .79, .80, .81, .82, .83, .84, .85	**Consistent**
377	**Energy Resources**		
Part I	Regulation of Oil and Gas Resources	FS XXVIII, Chapter 377.01, .03, .04, .07, .075, .10, .18, .19, .20, .23, .24, .2407, .2408, .2409, .241, .2411, .242, .2421, .2424, .2425, .2426, .243, .2431, .2432, .2433, .244, .245, .247, .25, .26, .27, .28, .29, .30, .31, .32, .33, .34, .35, .36, .37, .371, .38, .39, .40, .41, .42	NA
Part II	Planning and Development	FS XXVIII, Chapter 377.601, .602, .603, .604, .605, .606, .607, .608, .701, .703, .704, .705, .709, .71, .711, .712	NA
Part III	Renewable Energy and Green Government Programs	FS XXVIII, Chapter 377.816	NA
379	**Fish and Wildlife Conservation**		

Chapter	Policy Title	Policy References[1]	Applicability or Consistency[2]
Part I	General Provisions	FS XXVIII, Chapter 379.101, .102, .1025, .10255, .103, .104, .105, .106, .201, .203, .204, .205, .208, .209, .211, .2201, .2203, .2213, .2222, .2223, .2224, .2225, .224, .2252, .2253, .2254, .2257, .2258, .2259, .226, .2271, .2272, .2281, .2282, .2291, .2292, .23, .231, .232, .233, 2341, .2342, .2351, .2352, .236, .237	**Consistent**
Part II	Marine Life	FS XXVIII, Chapter 379.2401, .2402, .2411, .2412, .2413, .2421, .2422, .2423, .2424, .2425, .2426, .2431, .2432, .244, .245, .246, .247, .248, .249, .2495, .25, .2511, .2512, .2521, .2522, .2523, .2525, .26	**Consistent**
Part III	Freshwater Aquatic Life	FS XXVIII, Chapter 379.28, .29, .295	**Consistent**
Part IV	Wild Animal Life	FS XXVIII, Chapter 379.3001, .3002, .3003, .3004, .3012, .3014, .3015, .302, .303, .304, .305	NA
Part V	Law Enforcement	FS XXVIII, Chapter 379.33, .3311, .3312, .3313, .332, .333, .334, .335, .336, .337, .338, .3381, .339, .3395, .341, .342, .343	NA
Part VI	Licenses for Recreational Activities	FS XXVIII, Chapter 379.35, .3501, .3502, .3503, .3504, .3511, .3512, .352, .353, .354, .356, .357, .3581, .3582	NA
Part VII	Nonrecreational Licenses	FS XXVIII, Chapter 379.361, .363, .364, .365, .366, .367, .3671, .368, .369, .3711, .3712, .372, .373, .374, .3751, .3752, .3761, .3762, .377	NA
Part VIII	Penalties	FS XXVIII, Chapter 379.401, .4015, .402, .404, .405, .406, .407, .408, .409, .411, .4115, .412, .413, .414, .501, .502, .503, .504	NA
380	**Land and Water Management**		

Chapter	Policy Title	Policy References[1]	Applicability or Consistency[2]
Part I	Environmental Land and Water Management	FS XXVIII, Chapter 380.012, .021, .031, .032, .04, .045, .05, .051, .055, .0551, .0552, .0555, .06, .061, .0651, .0655, .0657, .0661, .0662, .0663, .0664, .0665, .0668, .0669, .0671, .0672, .0673, .0674, .0675, .0685, .07, .08, .085, .11, .115, .12	**Consistent**
Part II	Coastal Planning and Management	FS XXVIII, Chapter 380.20, .205, .21, .22, .23, .24, .25, .26, .27, .276, .285	**Consistent**
Part III	Florida Communities Trust	FS XXVIII, Chapter 380.501, .502, .503, .504, .505, .506, .508, .510, .5105, .512, .513, .514, .515	NA
381	**Public Health**		
	Public Health: General Provisions	FS XXIX, Chapter 381.001, .0011, .0012, .006, .0061, .0065, .00651, .0066, .0067	NA
388	**Mosquito Control**		
	Mosquito Control	FS XXIX, Chapter 388.0101, .011, .021, .101, .111, .121, .131, .141, .151, .161, .162, .171, .181, .201, .211, .221, .231, .241, .251, .281, .291, .301, .311, .321, .322, .323, .341, .351, .361, .3711, .381, .391, .401, .4111, .43, .45, .46	NA
403	**Environmental Control**		
Part I	Pollution Control	FS XXIX, Chapter 403.011, .021, .031, .051, .061, .0611, .0615, .062, .0623, .0625, .063, .064, .0643, .0645, .067, .072, .073, .074, .075, .0752, .077, .081, .085, .0855, .086, .0862, .087, .0871, .0872, .0873, .08735, .0875, .0876, .0877, .088, .0881, .0882, .0885, .08852, .0891, .0893, .0896, .091, .092, .111, .121, .131, .135, .141, .151, .161, .1655, .1815, .182, .1834, .1835, .1837, .1838, .191, .201, .231, .251, .281, .291, .301, .311, .321, .331, .341, .351, .361, .371, .381, .391, .401, .411, .412, .413, .4131, .41315, .4132, .4133, .4135, .415, .4151, .4153, .4154, .4155	**Consistent**

Chapter	Policy Title	Policy References[1]	Applicability or Consistency[2]
Part II	Electrical Power Plant and Transmission Line Siting	FS XXIX, Chapter 403.501, .502, .503, .504, .5055, .506, .5063, .5064, .5065, .5066, .50665, .507, .508, .509, .5095, .510, .511, .5112, .5113, .5115, .5116, .512, .513, .514, .515, .516, .517, .5175, .518, .5185, .519, .52, .521, .522, .523, .524, .525, .5251, .5252, .526, .527, .5271, .5272, .5275, .528, .529, .531, .5312, .5315, .5317, .532, .533, .536, .5363, .5365, .537, .539	NA
Part III	Interstate Environmental Control Compact	FS XXIX, Chapter 403.60	NA
Part IV	Resource Recovery and Management	FS XXIX, Chapter 403.702, .703, .7031, .7032, .7033, .704, .7043, .7045, .7046, .7047, .7049, .705, .7055, .706, .70605, .7061, .7063, .7065, .707, .7071, .70715, .7072, .708, .712, .7125, .713, .714, .7145, .715, .716, .717, .718, .7185, .71851, .71852, .7186, .7191, .7192, .7193, .72, .721, .7211, .7215, .722, .7222, .7223, .7225, .7226, .723, .7234, .7236, .7238, .724, .7255, .726, .7265, .727, .728, .74, .75, .751, .753, .7531, .754, .7545, .757, .758, .759, .760, .761, .767, .769, .7721	**Consistent**
Part V	Environmental Regulation	FS XXIX, Chapter 403.801, .802, .803, .804, .8051, .8052, .809, .811, .812, .813, .8135, .814, .8141, .815, .816, .8163	NA
Part VI	Water Supply; Water Treatment Plants	FS XXIX, Chapter 403.850, .851, .852, .853, .8532, .8533, .8535, .854, .855, .856, .857, .858, .859, .860, .861, .8615, .862, .863, .8635, .864, .8645, .865, .866, .867, .868, .869, .872, .875, .876, .88, .890, .891	NA
Part VII	Miscellaneous Provisions	FS XXIX, Chapter 403.90, .905, .927, .9321, .9322, .9323, .9324, .9325, .9326, .9327, .93271, .9328, .9329, .9331, .9332, .9333, .9334, .93345, .9335, .9336, .9337, .9338	NA

Chapter	Policy Title	Policy References[1]	Applicability or Consistency[2]
Part VIII	Natural Gas Transmission Pipeline Siting	FS XXIX, Chapter 403.9401, .9402, .9403, .9404, .9405, .94055, .9406, .9407, .9408, .9409, .9411, .9412, .9413, .9414, .9415, .9416, .9417, .9418, .9419, .942, .9421, .9422, .9423, .9424, .9425	NA
Part IX	Expedited Permitting	FS XXIX, Chapter 403.973	NA
553	**Building Construction Standards**		
Part IV	Florida Building Code	FS XXXIII, Chapter 553.79	**Consistent**
582	**Soil and Water Conservation**		
	Soil and Water Conservation	FS XXXV, Chapter 582.01, .02, .10, .11, .12, .13, .14, .15, .16, .18, .19, .20, .28, .29, .30, .31	**Consistent**
597	**Aquaculture**		
	Aquaculture	FS XXXV, Chapter 597.0015, .002, .003, .004, .0041, .010, .020	NA

Source:
Florida Department of Environmental Protection. 2024. *Florida Coastal Management Program Guide*. Updated April 30, 2024.

Notes:
1. Policy references indicate the enforceable policies of the Florida Coastal Management Program and their location within the 2023 Florida Statutes.
2. "Consistent" indicates consistent, to the maximum extent practicable.

APPENDIX F:

BIOLOGICAL OPINION FOR ONGOING AND PROPOSED BASE OPERATIONS AT HOMESTEAD ARB

United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

September 24, 2019

Colonel David A. Piffarerio
Commander, 482d Fighter Wing
29050 Coral Sea Blvd, Bldg. 360
Homestead Air Reserve Base, FL 33039-1299

Service Consultation Code: 04EF2000-2017-F-0892
Service CPA Code: 04EF2000-2016-CPA-0051
Date Received: May 7, 2018
Consultation Initiation Date: May 7, 2018
Project: Homestead Air Reserve Base - Base Operations
County: Miami-Dade

Dear Colonel Piffarerio:

The U.S. Fish and Wildlife Service (Service) has received the Department of the Air Force's (USAF) request for consultation dated May 7, 2018 for the Homestead Air Reserve Base (Homestead ARB) Ongoing and Future Military and Non-Military Operations at Homestead ARB (Project). This document transmits the Service's biological opinion based on our review of the proposed Project located in Miami-Dade, Florida and its effects on Florida bonneted bat (*Eumops floridanus*), Sand Flax (*Polygala smallii*), and Small's Milkpea (*Galactia smallii*). It also includes and summarizes our concurrences for the USAF's determinations for American Alligator (*Alligator mississippiensis*), American Crocodile (*Crocodylus acutus*), Bartram's Scrub Hairstreak Butterfly (*Strymon acis bartrami*), Blodgett's Silverbush (*Argythamnia blodgettii*), Carter's Small-flowered Flax (*Linum carteri carteri*), Eastern Indigo Snake (*Drymarchon corais couperi*), Everglades Bully (*Sideroxylon reclinatum* ssp. *austrofloridense*), Everglade Snail Kite (*Rostrhamus sociabilis plumbeus*), Florida Brickell-bush (*Brickellia mosieri*), Florida Leafwing Butterfly (*Anaea troglodyta floridalis*), Florida Prairie-clover (*Dalea carthagenensis floridana*), Least Tern (*Sterna antillarum*), Piping Plover (*Charadrius melodus*), Red Knot (*Calidris canutus rufa*), Roseate Tern (*Sterna dougallii*), Tiny Polygala (*Polygala smallii*), West Indian Manatee (*Trichechus manatus*), and Wood Stork (*Mycteria americana*). This document is submitted in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*).

This biological opinion is based on information provided in the March 2018 Programmatic Biological Assessment for Homestead ARB (BA), emails, and other sources of information. A complete record of this consultation is on file at the South Florida Ecological Services Office in Vero Beach, Florida.

Consultation history

On February 23, 2017, the USFWS signed the Integrated Natural Resource Management Plan (INRMP) for HARB and acknowledged the protection and enhancement of natural resources using ecosystem management, consistent with the military mission on HARB in a concurrence letter. In this letter, the USFWS recommended that Homestead ARB continue to coordinate with the USFWS and initiate consultation for these base operation activities as a result of a dead Florida bonneted bat that was found on the airfield in 2015.

On October 5, 2017, a meeting was held with representatives from USAF, HARB, Leidos and USFWS at the South Florida Ecological Service Office at Vero Beach, Florida. The focus of the meeting was to discuss any open concerns not resolved through the 2016 INRMP process. During this meeting, the USAF committed to preparing a BA to initiate formal Section 7 Consultation for the proposed action.

On May 7, 2018, a Programmatic Biological Assessment dated May 2018 (prepared by Leidos Engineering, Inc.) was submitted to the Service along with a letter requesting formal consultation on the Florida bonneted bat, sand flax, and Small's milkpea.

BIOLOGICAL OPINION

This Biological Opinion provides the Service's opinion as to whether the proposed Project is likely to jeopardize the continued existence of the Florida bonneted bat (FBB), Sand Flax, and Small's Milkpea. There is no designated critical habitat for the FBB, Sand Flax, or Small's Milkpea; therefore, this Biological Opinion will not address destruction or adverse modification of critical habitat.

ANALYTICAL FRAMEWORK FOR THE JEOPARDY

Jeopardy determination

Section 7(a)(2) of the Act requires that Federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. "Jeopardize the continued existence of" means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR § 402.02).

The jeopardy analysis in this Biological Opinion relies on four components: (1) the Status of the Species, which describes the range-wide condition of the species, the factors responsible for that condition, and its survival and recovery needs; (2) the Environmental Baseline, which analyzes the condition of the species in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species; (3) the Effects of the Action, which determine the direct and indirect impacts of the proposed Federal action and the effects of any interrelated or interdependent activities on the species; and (4) the Cumulative

Effects, which evaluate the effects of future, non-federal activities in the action area on the species.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed federal action in the context of the current status of the species, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of both the survival and recovery of the species in the wild.

DESCRIPTION OF THE PROPOSED ACTION

The proposed action is anticipated to occur on Homestead ARB from 2018 to 2028. Homestead ARB is located in unincorporated southern Miami-Dade County, directly east of Ronald Reagan Turnpike on Biscayne Drive at Latitude 25.489173°and Longitude -80.396311°. The purpose of the proposed action is to implement current and future operations that include: 1) daily activities and operations and maintenance (e.g., ground maintenance and landscaping such as mowing, trimming, maintaining drainage ditches, etc., and storm water management); 2) airfield and aircraft operations (both fixed wing and rotary); 3) planned facilities demolition, renovation, development and construction to support military-related activities; and 4) natural resource management.

- *Daily Activities and Operation and Maintenance* - Similar to any small city, a variety of activities occur on the installation every day. These activities include personnel driving, walking or biking to and from buildings, working in buildings and using area roads or paths to access different buildings on the base. The Homestead ARB Security Forces and Fire Department provide security and first responder services to all areas on the installation. The BCE Squadron is responsible for the maintenance of infrastructure (sidewalks, roads, sewers, outdoor lighting), buildings (painting, tuck pointing, roof replacement, etc.) and grounds maintenance. Grounds maintenance activities include mowing, trimming, edging, operating irrigation systems, maintaining drainage ditches, pruning shrubs, hedges and other plants, removing debris and litter as necessary, removing leaves and palm fronds and conducting pest and weed control.

  Homestead ARB maintains and operates a number of facilities and conducts activities associated with operating a military installation, including but not limited to:

  - Operation and maintenance of a liquid fuel storage area (Fuel Farm) contained in two (one 20,000 gallon and one 55,000 gallon) above-ground storage tanks;
  - Collection of solid waste, and disposal primarily at the local county landfills;
  - Maintenance of the network of roads, most of which are primary or collector streets in the Administrative and Industrial Support Area;
  - Recycling Center;
  - Maintenance of a perimeter security fence and an associated road adjacent to the fence;
  - Operation of a main gate to the installation on Westover Street;
  - Oversight of a ground maintenance contract for all land maintenance activities.

The contract is for the Administrative and Industrial Support Area and all other areas on base;
- Distribution and use of electricity;
- Distribution, storage, and use of vehicle and aircraft fuels;
- Operation of a Hazardous Material Pharmacy; and
- Operation of a Hazardous Waste Storage Facility.

- *Airfield and Aircraft Operations* - Homestead ARB is an active Air Force Reserve base with a variety of different flying missions. The airfield and runway at Homestead ARB comprise approximately 940 acres of the installation. Homestead ARB has one bi-directional runway, Runway 06/24 that is 11,200 ft long by 300 ft wide. The approach to Runway 06 is on the southwestern side of the airfield and the approach to Runway 24 is on the northeastern side of the airfield. The Mako Ramp is located on the west side of the airfield and a substantial aircraft parking apron is located along the entire west side of the runway. Aircraft depart and land to the northeast on Runway 06 and to the southwest on Runway 24. The FANG operate F-15C aircraft out of a secure complex at the north end of the runway where they are provided ready access to the runway via a dedicated taxiway. Support facilities including the Air Traffic Control Tower, a navigational aids building, an airfield operations building, an airfield fire and rescue station, hangars, and storage buildings are located on the northwest side of the airfield.

The various tenants at Homestead ARB that fly aircraft (both fixed wing and rotary) use the airfield in slightly different ways depending on the aircraft being used and the types of operations that are being flown. Actual operations can vary somewhat depending on specific training missions or need at any given time. An operation represents a single movement or individual flight at Homestead ARB. For example, one aircraft departing and returning would represent two airfield flight operations. The following types of airfield operations occur at Homestead ARB:

Departure. This involves an aircraft taking off, and equates to one operation.
Arrival. This involves aircraft returning and landing, and equates to one operation.
Closed Patterns. A closed pattern consists of two portions, a take-off/departure and an approach/landing, which equates to two operations. The basic types of closed patterns are:
Visual Touch-and-Go. Primarily training for fixed wing aircraft this training occurs when an aircraft lands and takes off on a runway without coming to a full stop. After landing, the pilot executes another take-off with minimal delay without taxiing clear of the runway.
Ground-controlled Approach. In this training event, air traffic controllers guide pilots to practice landings under adverse conditions.

A training event at Homestead ARB might include the following operations: a departure/takeoff from the airfield; climb to altitude for additional training; practice landings (closed pattern work); and then accomplish a final landing. For aircraft conducting an assigned mission (e.g. conducting a border patrol), the operations would

still include a takeoff and landing but differ from a training event in that the mission is usually conducted away from the airfield.

Airport traffic patterns are developed to ensure that air traffic is flown into and out of the installation safely. The simplest of these patterns is an enlarged rectangle with one of the longer legs of the rectangle lining up with the runway (Figure 1). Military aircraft use somewhat more involved patterns (Figure 2) and flight profiles to practice takeoffs and landings similar to what would occur in combat.

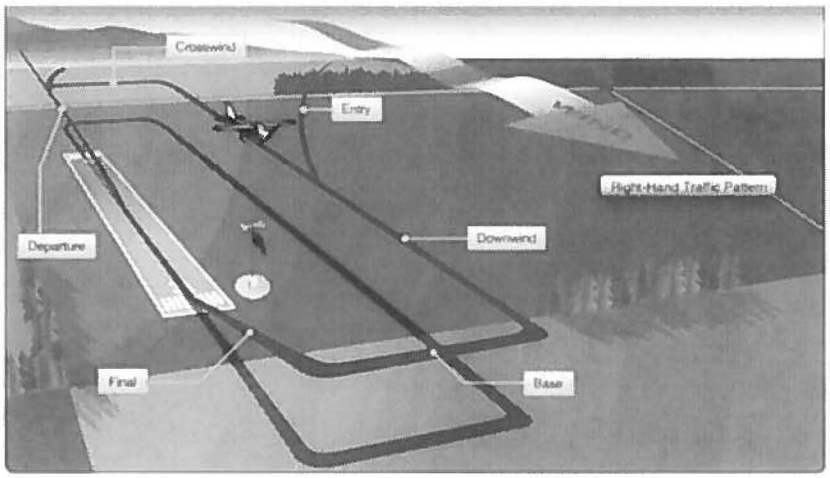


Figure 1 – Typical Aircraft Traffic Pattern

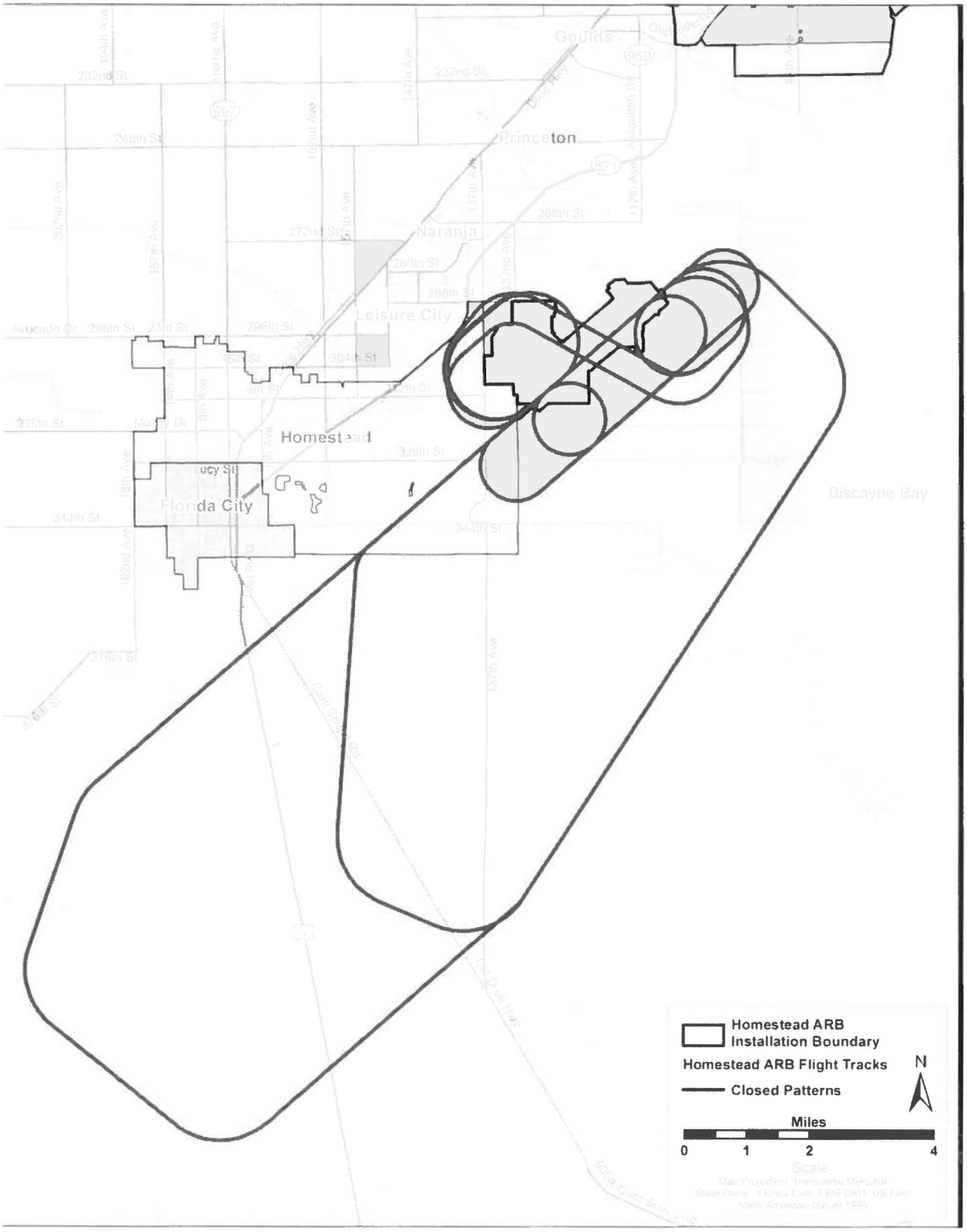


Figure 2 – Aircraft Traffic Patterns at Homestead ARB

The flight profile for an aircraft flying in the pattern or for aircraft flying on a flight track in the vicinity of Homestead ARB requires specific flight parameters (power settings and altitudes) for that aircraft. Figure 3-5 shows a representative flight profile for an F-16 aircraft conducting a landing approach, and Figure 3-6 shows the flight profile for an F-16 conducting a departure from the airfield.

As Figure 3-5 shows, F-16 pilots typically start their approach to Homestead ARB from the southwest to land on Runway 06. Figure 3-6 shows a typical F-16 departure with a quick "right turn" away from the installation and a rapid ascent to 20,000 ft above ground level (AGL) near the shoreline.

Rotary wing aircraft also practice departure, arrivals, and closed patterns at Homestead ARB. Rotary wing aircraft are more flexible in their approach and departure paths and have less defined flight tracks at the installation.

This PBA addresses the flight operations that occur in the vicinity of the airfield. This would include operations such as arrivals, departures, and closed patterns. Pilots operating both fixed- and rotary wing aircraft at Homestead ARB conducted 38,517 aircraft operations (i.e., any takeoff or landing) in 2017. Table 1 includes a total of these operations by organization. Transient aircraft comprise the highest number of total operations (37.9 percent), followed by the 482 FW (27.1 percent).

Table 1 - Annual Aircraft Operations by Organization at Homestead ARB

Organization	Fixed Wing Operations	Rotary Wing Operations	Total Operations	Percent of Total Operations
482 FW	10,428	0	10,428	27.1%
FANG	455	0	455	1.2%
CBP	4,380	3,242	7,622	19.8%
Golden Knights	4,608	0	4,608	12.0%
SOCSOUTH	788	0	788	2.0%
Other (transients)	13,980	636	14,616	37.9%
TOTAL	**34,639**	**3,878**	**38,517**	**100.00%**

Although Homestead ARB is open 7 days per week, the airfield closes at 11:00 P.M. every night except when weather contingencies or special exercises cause operations to occur after 11:00 P.M. The times of aircraft operations at Homestead ARB are listed in Table 2.

Table 2 - Aircraft Operation Times at Homestead

Time	Start and Stop Times	Percent of Aircraft Operations	Number of Aircraft Operations
Morning	5:00 A.M. to 9:00 A.M.	3%	1,156
Day	9:01 A.M. to 3:00 P.M.	75%	28,888
Evening	3:01 P.M. to 10:00 P.M.	20%	7,703
Night (when required)	10:01 P.M. to 4:59 A.M.	2%	770

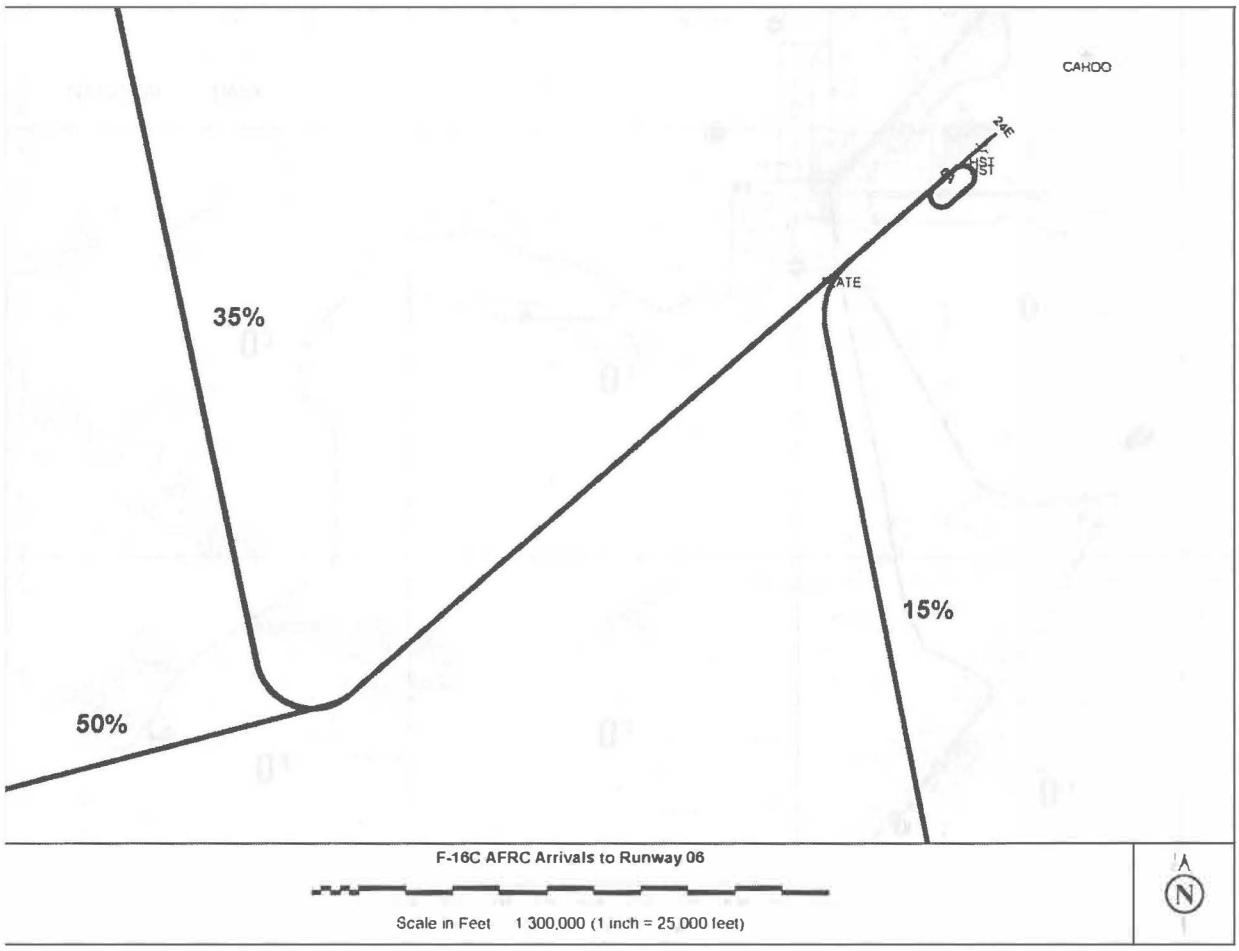


Figure 3 – Representative F–16 Arrival Flight Profile

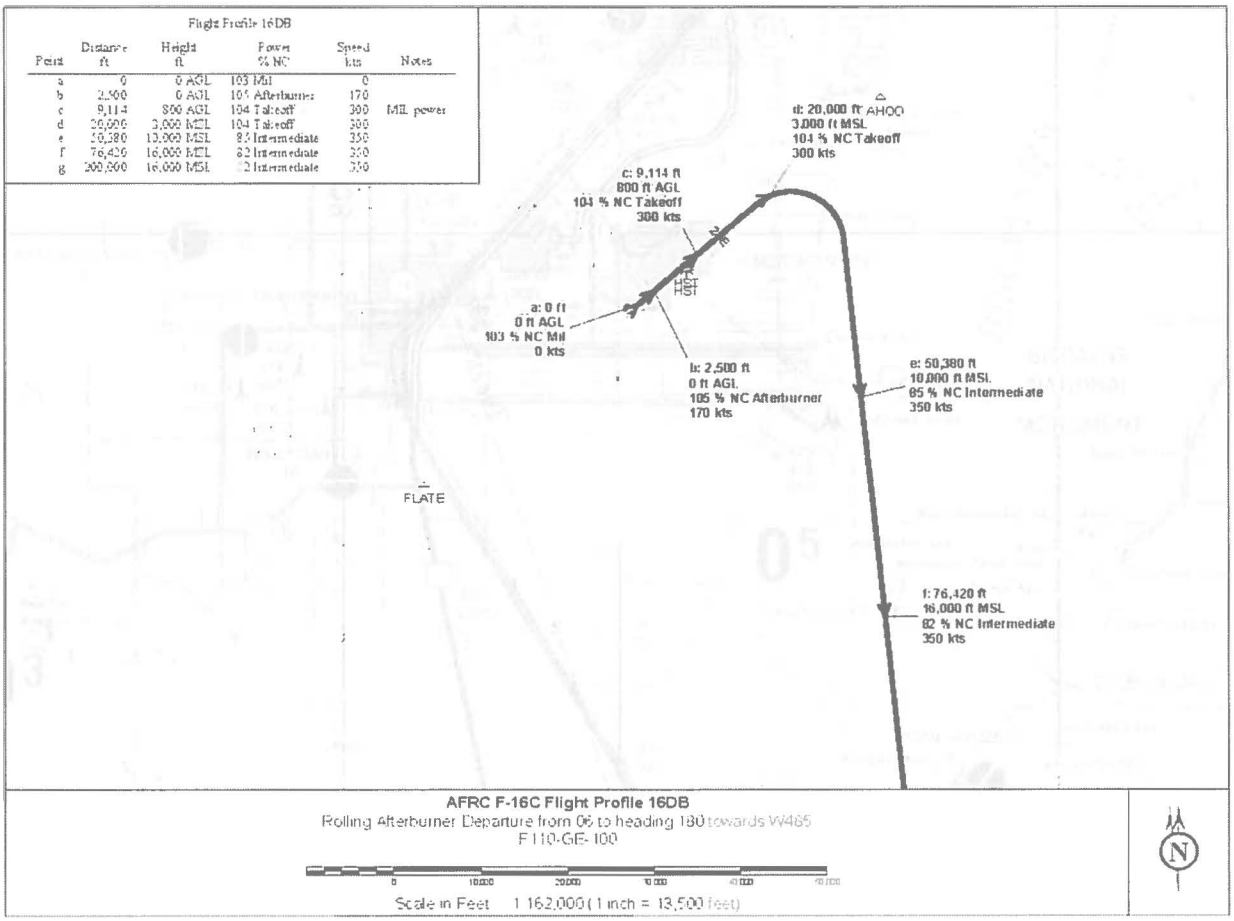


Figure 4 – Representative F-16 Departure Flight Profile

- *Planned Facilities Demolition, Renovation, Development and Construction* - Planned renovation, construction and demolition of facilities and development projects support mission-related activities. Future military construction projects normally occur throughout the installation within compatible land use areas. Facilities development projects include Military Construction (MILCON) USAF project upgrades, renovations, additions, demolitions, alterations or improvements to existing buildings. All projects completed on Homestead ARB are evaluated in the early planning stages to determine the potential effects on federally listed species.

  The future transportation plan includes the construction of a new entry control complex for which an Environmental Assessment (EA) and Biological Evaluation (BE) were recently completed. The entry control project includes road re-alignments near the new gate. In addition, the future transportation plan includes the re-alignment of Turner Road and the construction of a new parking lot with access from Westover Street.

  The Homestead ARB future land use plan primarily focuses on development on the flightline where a new F-16 hangar, a corrosion control facility, an Aerospace Ground Equipment (AGE) building and a weapons load training facility would be constructed.

Additional projects on the flightline include a live ordnance load area (LOLA) which would include a six-ship LOLA area adjacent to taxiway Papa. In addition to the flightline facilities, the future land use plan also includes the construction of a new fitness facility, enclosing the CATM range, and constructing a Munitions Conveyer (MAC) pad in the MSA (Figure 3-7).

All future development projects are listed below and have been categorized into short-, medium-, and long-term future projects (Figure 5). Projects shown below are the current priorities for Homestead ARB. These priorities may change as some projects receive funding or as mission priorities change on the base. The projects and priorities listed below represent a snapshot of Homestead ARB's planned development at the time of this PBA.

Short-term future projects include:

- Addition to Building 200
- Construct a wash rack
- Construct a corrosion control facility
- Construct a new maintenance hangar
- Construct a weapons loading training facility
- Construct a new AGE facility
- Add a second story to Building 191
- Construct a new Privately Owned Vehicle (POV) parking lot with access from Westover Street

Medium-term future projects include:

- Addition to Building 178
- Addition to Building 180

Long-term future projects include:

- Construct a consolidated operations facility
- Re-alignment of Turner Road
- Construct a new flight simulator facility next to Building 596

In addition to construction, the future land use plan includes the demolition of Buildings 208, 700, 702, 704, 705, and 707 (Figure 5). Some of these buildings are very small and all of them have been determined to no longer be necessary for completion of the mission at Homestead ARB. Table E-1 provides a description of the buildings/structures proposed for demolition as part of the future land use plan in the IDP.

Table 3 – HARB Buildings Proposed for Demolition

Building #	Description
208	This two-story concrete frame building is an aerospace ground maintenance shop.

	The building has a flat roof on the main part of the structure and a pitched roof on the outer structure. Seven open bays are located at the south end of the building
700	This structure is an airfield lighting vault
702	This building is the base operations/airfield management facility
704	This structure is a small utility vault
705	This is a small backup generator building
707	This building is the aerial port training facility

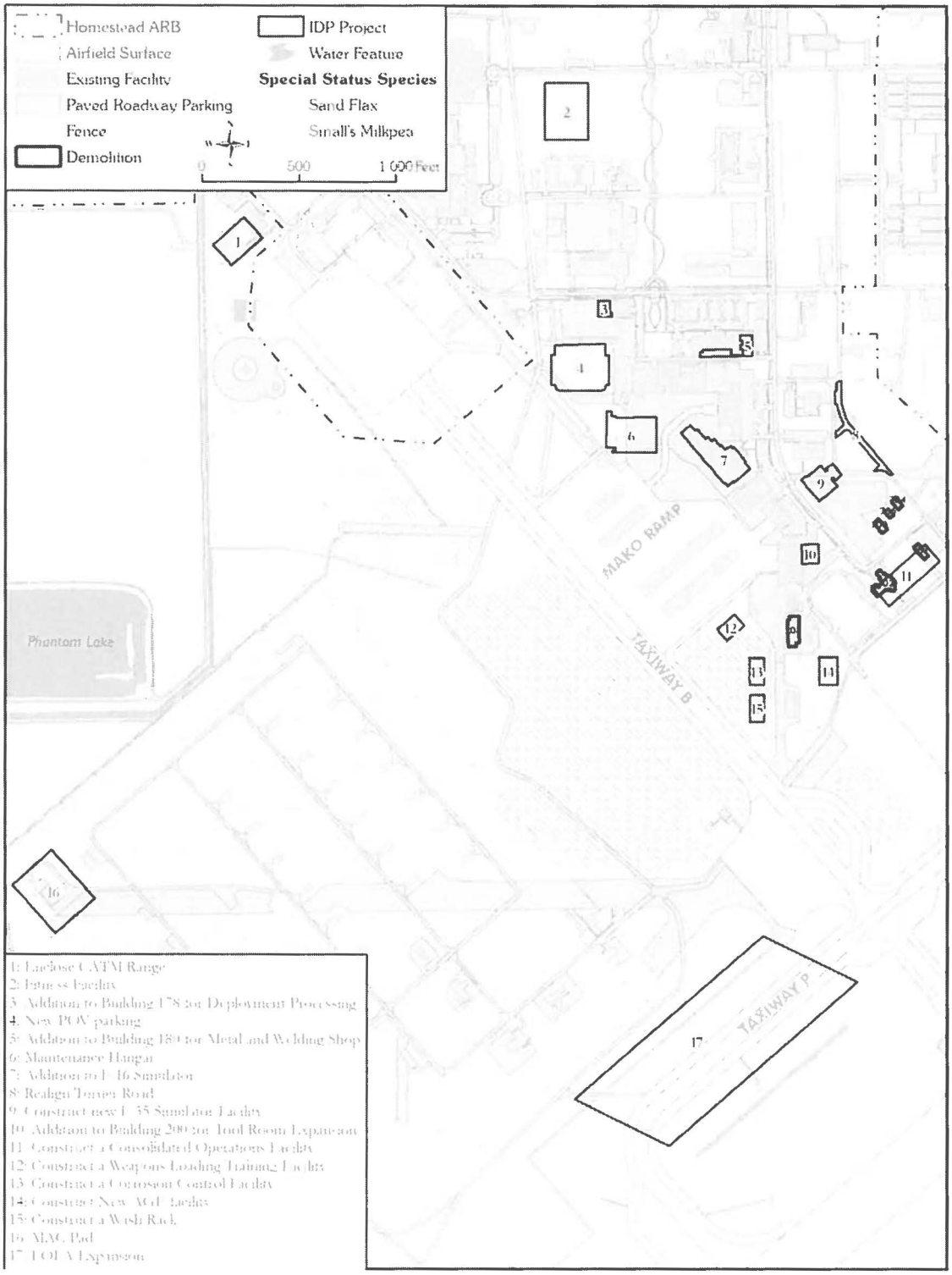


Figure 5 - Future Development Projects at Homestead ARB

- *Quality of Life Facilities for Community Support* - Community support land use includes facilities that support the individual service member and retiree with goods and services that provide aspects of Quality of Life (QOL), such as dining, AAFES, fitness center,

commissary, or club. Community support facilities can be classified as either commercial or service. Community commercial facilities provide goods that can be purchased or rented from an AAFES shoppette or outdoor recreation office. Community service facilities typically include facilities that provide QOL services such as the chapel, fitness center, or education center.

- *Housing* - Lodging facilities accommodate visiting service members on temporary duty or during Unit Training Assembly (UTA) weekends. Four lodging buildings (Buildings 475, 476, 477, and 478) are located at the north end of the installation adjacent to Coral Sea Boulevard. Each of these buildings is being renovated to meet USAF design guidelines. A new lodging facility (Building 401) was recently constructed on the northeast corner of Coral Sea Boulevard and St. Lo Boulevard.

- *Outdoor Recreation* - Natural resources-based outdoor recreational opportunities on Homestead ARB are limited because of the large portion of acreage that is developed and/or restricted due to safety and security requirements, including explosive safety arcs, the restricted airfield, and other restricted land for training. Hunting and fishing are not permitted on the base. There are no permitted recreational areas for off-road vehicle use. Access to the base is limited to active-duty and reserve military personnel assigned to work at the base, their dependents and accompanied guests; federal civilian employees, their dependents, and accompanied guests; and military retirees.

  There are three man-made lakes on Homestead ARB, which are managed for maintenance of a healthy, well-balanced fish and wildlife population. The 14.5-acre Phantom Lake is just north of the MSA along the western boundary of the base. A maintained unpaved road circles the lake and provides access. The Twin Lakes, also referred to as the North and South Flightline Lakes (7.7 and 8.0 acres, respectively), are southeast of the runway. Only the North Lake has a surface water connection to the Boundary Canal system.

  Although there are no bicycle paths on the installation, Homestead ARB has a unique transportation feature: a north/south spine pathway that links the administrative functions at the north end of the installation with the operations and maintenance functions at the south end. This linkage is wide enough to accommodate pedestrians, bicyclists, and electric golf carts simultaneously. The spine consists of a wide, straight golf cart path crisscrossed by a serpentine, pedestrian path. The spine is landscaped with trees to provide shade, and is lighted at night by electricity from solar collectors placed along the path.

- *Natural Resource Management* - The primary goal of the natural resources management program is to integrate the management and conservation of natural resources with the military mission and land use needs of Homestead ARB. Natural resources management practices at Homestead ARB are planned around the military mission requirement for the use of land within the installation boundary. Homestead ARB's land area is used for the military mission, a majority of which includes uses for ESQD arcs, runway primary and transitional surface zones, administrative and industrial support facilities, and airfield

drainage. Therefore, management practices focus largely on ways to enhance the natural environment consistent with military mission requirements, including aircraft operational safety, airfield drainage, maintaining safety clearance zones, wetland management practices and initiatives, and grounds maintenance practices. Also, Homestead ARB does not sponsor or offer any opportunities for agricultural outleasing such as opportunities for livestock grazing and/or growing of crops on the property.

- Vegetation Management - Grasses and woody vegetation surrounding the airfield must be mowed and maintained to a certain height to deter nesting and foraging birds in compliance with the bird/wildlife aircraft strike hazard (BASH) program. All vegetation on the installation is managed per the requirements established in the grounds maintenance Statement of Work (SOW), the Protected Plant Management Plan (PPMP) and the Landscape Management Plan. The USAF establishes contracts with commercial landscape companies to maintain vegetation on the base. Because of the amount of vegetation required to be maintained on the installation and the complexities associated with the protected plants, Homestead ARB maintains a contract with a landscape company. One team of the contractor specifically maintains the airfield area and the MSA and the other team is responsible for maintaining the Administrative and Industrial Support Area, the canals and the perimeter fence. The grounds maintenance SOW is part of the contract and this company is required to comply with all of the requirements contained in the SOW. The grounds maintenance SOW includes a map of all mowed areas on the installation with established mowing heights to maintain the Small's milkpea and sand flax populations. The SOW identifies certain no cut areas to protect the plants and includes maintaining a mow height of 11 to 14 inches and suspending mowing activities between February and June, as long as the flying missions are not impacted. In areas where "weed whacking" occurs, heights of weed whacking have been increased to 6 inches above the ground to avoid cutting protected plants too low.

  Homestead ARB has a dedicated employee that is responsible for checking the mower height on all contractor mowers and checking the mowed vegetation heights throughout the year to maintain these populations. Regarding mowing frequencies, the airfield and the MSA area are mowed every 7 days. The Administrative and Industrial Support Area is mowed every 5 days. In addition to the airfield, MSA and Administrative and Industrial Support Areas, the contractors are required to maintain a path on the inside of the installation perimeter security fence. This path is also mowed and maintained every 14 days.

  In addition to mowing, the contractors use certain approved herbicides as described in the INRMP to reduce invasive species such as Brazilian pepper and Australian pine and maintain vegetation throughout the installation. Herbicides must be on the Armed Forces Pest Management Board (AFPMB) approved list, and the HARB-specific approved list. The contractors use an

airboat to spray herbicides approved for water use to maintain vegetation heights in the wetlands and canals where these areas cannot be accessed via land.

- Fire Management - Wildfire management on Homestead ARB is conducted to reduce wildfire potential, protect property, protect and enhance valuable natural resources, and promote ecosystem management goals (Homestead ARB 2009).

  Three goals and objectives of the Homestead ARB WFMP include:
  1. Safely and effectively protect human life and health (highest priority). The primary objective is to conduct wildland fire operations without human injury or death.
  2. Protect property (both on- and off-base), with the objective of safely protecting all property and as many natural resources as practicable from wildland fire.
  3. Effectively use fire as a tool to manage fuel loads and habitat when resources and environmental conditions permit.

  The Chief of Fire and Emergency Services (Fire Chief) is the Wildland Fire Program Manager (WFPM) for Homestead ARB. The WFPM is authorized by the Installation Commander to certify wildland firefighter professional qualifications, and take all other actions in accordance with AFI 32-7064 and the INRMP. The WFPM can delegate this authority to one or more designees. The Wildland Fire Management organizational structure fits within the installation command structure with other Fire and Emergency Services, and is consistent with National Wildfire Coordinating Group (NWCG) Incident Command System standards.

  Homestead ARB has developed or is developing regional partnerships for wildland fire management support by means of reciprocal agreements with other governmental agencies and local entities to share human, logistical, and operational resources. Emergency assistance and mutual aid agreements will conform to the guidelines stated in Department of Defense Instruction (DoDI) 6055.6, *DoD Fire and Emergency Services Certification Program,* and AFI 32-2001, *Fire Emergency Services Program*.

  A Wildland Fire Management Plan (WFMP) will be developed in accordance with AFI 32-7064. The purpose of the WFMP is to reduce wildfire potential, protect property, protect and enhance valuable natural resources, and implement ecosystem management goals and objectives on Homestead ARB. The WFMP will directly support the military mission and will be consistent with installation emergency operations plans.

- Integrated Pest Management Plan - Homestead ARB maintains an Integrated Pest Management Plan (IPMP) in accordance with AFI 32-1053, *Pest*

Management Program, which implements DoDI 4150.7, *DoD Pest Management Program.* The Homestead ARB IPMP describes pest management requirements, outlines the resources necessary for surveillance and control, and describes the administrative, safety, and environmental requirements of the program. Pests addressed in the plan include weeds and aquatic vegetation, mosquitoes, wasps, crawling insects, nesting birds, and other vertebrate pests such as mice and rats. Homestead ARB uses commercial pest control contractors to control insects, rodents, and unwanted vegetation. The U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) also helps control larger wildlife at Homestead ARB. The Miami-Dade Public Works Department is contracted to control mosquitoes on Homestead ARB. Per Homestead ARB request, Miami-Dade County will bring mosquito spray vehicles on the installation to control mosquito populations. Actions addressing birds or other wildlife on or near the runway are discussed in the base's BASH program, which is contracted to the USDA-APHIS. As part of the BASH program, Homestead ARB has two employees dedicated to addressing birds or other wildlife on or near the runway. These actions are managed through a depredation permit issued by the USFWS.

Preparation and implementation of an invasive species management plan and development and implementation of an invasive species training course for Homestead ARB personnel are projects identified in the INRMP (see Chapter 8, Objectives 1.4 and 3.2). The invasive species management plan addresses initiatives to limit the spread of exotic species and to control or remove invasive species already present on-base. The training courses provide information to the appropriate Homestead ARB personnel on actions that can be taken to reduce the spread of these species.

Homestead ARB has worked with the National Park Service (NPS) on exotic plant and animal control projects, specifically eradication of golden beard grass (*Dichanthium annulatum*) and the Nile monitor lizard (*Varanus stellatus*) populations occurring on the installation. The Everglades Cooperative Invasive Species Management Area (ECISMA) aims to manage exotic species and restore the Everglades National Park. These efforts will improve habitat quality in the area, which will indirectly benefit the natural resources on Homestead ARB.

Homestead ARB recently applied for and received a special purpose permit through FFWCC to capture, hold, and relocate nuisance American alligators. The permit went into effect in July of 2014 and expires in July of 2019.

- Bird/Wildlife Aircraft Strike Hazard - Chapter 7 of AFI 91-202, *The U.S. Air Force Mishap Prevention Program,* and Air Force Pamphlet 91-212, *BASH Management Techniques,* establish procedures and guidelines for the development of the HQ 482 FW BASH Reduction Program Plan. The

purpose of the 482 FW BASH Plan, which is contracted to the USDA-APHIS, is to minimize aircraft exposure to potentially hazardous bird strikes or strikes with other wildlife. The plan is designed to:

- Establish procedures to identify high-hazard situations and to aid supervisors and pilots in altering/discontinuing flying operations when required;
- Establish aircraft and airfield operating procedures to avoid high-hazard conditions;
- Provide for disseminating information to all assigned and transient pilots on bird hazards and procedures for bird avoidance;
- Establish guidelines to decrease airfield attractiveness to birds;
- Provide guidelines for dispersing birds when they occur on the airfield; and
- Establish a Bird Hazard Working Group and designate responsibilities to its members.

MINIMIZATION AND CONSERVATION MEASURES

The conservation measures listed below are summarized and the details of each measure identified in this section are included in Appendix B of the BA. The proposed action will incorporate the following conservation measures to avoid, minimize, and/or compensate for direct adverse effects on federally listed and proposed species:

1. Biological Clearance Surveys and Monitoring Prior to Project Demolition, Development, Construction, and Other Mission Activities - If projects are proposed within areas that have the potential to support suitable habitat for federally listed species, one or more qualified biologist(s), approved by USFWS, will conduct surveys for federally listed species prior to project initiation. The biologist will be available as needed during building demolition, development, construction, and other mission activities.
2. Site Access Restrictions to Minimize Impacts to Sensitive Biological Resources - The project work areas will be accessed using existing roads to the extent possible. Parking, driving, lay-down, stockpiling, and vehicle and equipment storage will be limited to previously compacted and developed areas, or non-sensitive habitat areas. Limits of the demolition and construction areas will be clearly marked with flagging, fencing, or signposts and delineated in the field by a biologist. No unauthorized personnel or equipment (including off-road vehicle access) will be allowed in native habitats outside the construction limits or designated access routes. All project-related activities will occur within the designated construction boundary.
3. Environmental Education Program - All members of the action related crews will participate in an Environmental Education Program to be administered by a Homestead ARB biologist. The Education Program will be conducted during all project phases for crew personnel and will cover the potential presence of federally listed species; the requirements and boundaries of the project; the importance of complying with avoidance, minimization, and compensation measures; and problem reporting and resolution methods.
4. Minimize the Potential for Establishment of Invasive Plant and Wildlife Species - Project

activities will minimize the potential for invasive or nuisance, exotic plant and wildlife species that may adversely affect the health of the ecosystem. The IPMP will be implemented and updated to prevent, detect and monitor invasive species as well as restore invaded habitats.

5. Avoid and Minimize Disturbance and Conserve and Protect Federally Listed Species Habitats - Disturbance to federally listed species habitat will be avoided and minimized to the extent practicable. If appropriate, prior to ground disturbance or construction activities, a site-specific Revegetation and Habitat Restoration Plan (RHRP) will be developed in consultation with USFWS. This plan would include a description of existing conditions in the action area, areas of impact, site preparation and revegetation methods, maintenance and monitoring criteria, performance standards, and adaptive management practices.
6. Develop a Landscape Management Plan and Wildfire Management Plan - A Landscape Management Plan and Wildfire Management Plan (that may incorporate the *Homestead Air Reserve Base Wildlife Management Program*) will be developed as described in the INRMP (Homestead ARB 2015), to promote environmentally sound landscaping practices, reduce water consumption and make maximum use of regionally native plants, avoid invasive and exotic species, reduce chemical use, minimize effects on natural habitats, and reduce maintenance.
7. Soil Stabilization – Where vegetation removal is required, appropriate BMPs and other measures to prevent erosion and sediment transport from projects proposed for HARB will be implemented.

Florida bonneted bat

As described in the INRMP, Homestead ARB has proposed and initiated preliminary acoustic monitoring survey that will determine presence of FBB on the installation and help identify hotspots in bat usage. This study is the initial step in establishing a continued FBB monitoring program and HARB will seek funding and partner support for routine monitoring that will provide a temporal component to FBB usage and behavior on the installation. Data obtained from all future monitoring efforts will inform HARB natural resources staff such that appropriate revisions and adjustments can be made to the existing management plans or future actions as they occur on the base.

During a site inspection it was identified that 3 of the six (Buildings 208, 700, & 702) have metal rooves that could potentially provide roosting habitat for the Florida bonneted bat. The extent of which bats maybe using these buildings as roost sites has not been investigated. In accordance with conservation measure 1 listed above, Homestead ARB will visually inspect the potential roost cavities associated with the metal rooves on buildings 208, 700, and 702 prior to the initiation of proposed demolition activities. If the surveys identify the presence of roosting bats, Homestead ARB will coordinate with the Service on how to proceed with demolition.

Sand flax and Small's milkpea

As described in the PPMP, Homestead ARB will ensure that mowing and weed whacking height recommendations are followed in areas occupied by sand flax and Small's milkpea. Height

recommendations were developed to ensure adequate seed propagation and dispersal to promote stable populations throughout the base. The grounds maintenance SOW identifies certain no cut areas to protect the plants and includes maintaining a mow height of 11 to 14 inches and suspending mowing activities between February and June, as long as the flying missions are not impacted.

Additionally, the PPMP states that Homestead ARB will conduct restoration efforts in the remnant pine rockland area and the grenade range to establish native pine rockland vegetation. As part of the restoration mature sand flax and Small's milkpea seeds will be collected from nearby on-site areas to be distributed within the remnant pine rockland area and grenade range.

The Homestead ARB IPMP describes pest management requirements and includes treatment of invasive exotic plants. The invasive species management plan addresses initiatives to limit the spread of exotic species and to control or remove invasive species already present on-base.

ACTION AREA

The action area for the project is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.

The action area is defined as all areas to be directly or indirectly affected by the proposed action. For the purposes of the analysis the action area encompasses Homestead ARB and immediate surrounding areas in which federally listed species may be affected by the proposed action. The biology and behavior of particular species or groups of species was used to determine the appropriate action area. The action area varies by species because the potential area for indirect impacts to non-mobile species such as plants would be smaller in scale than impacts to more mobile species such as bats or birds. For example, the action area for the Florida bonneted bat (*Eumops perotis*) and the federally listed birds includes lands that extend beyond the boundaries of the lands owned by the USAF. Thus the action area for the Florida bonneted bat and the federally listed birds was defined as the area under the 65-decibel (dB) or greater noise contour resulting from aircraft operations (Figure 6) (2007 Air Installation Compatible Use Zone [AICUZ]). In contrast, the action area for all other species carried forward is defined as the boundaries of Homestead ARB (Figure 7).

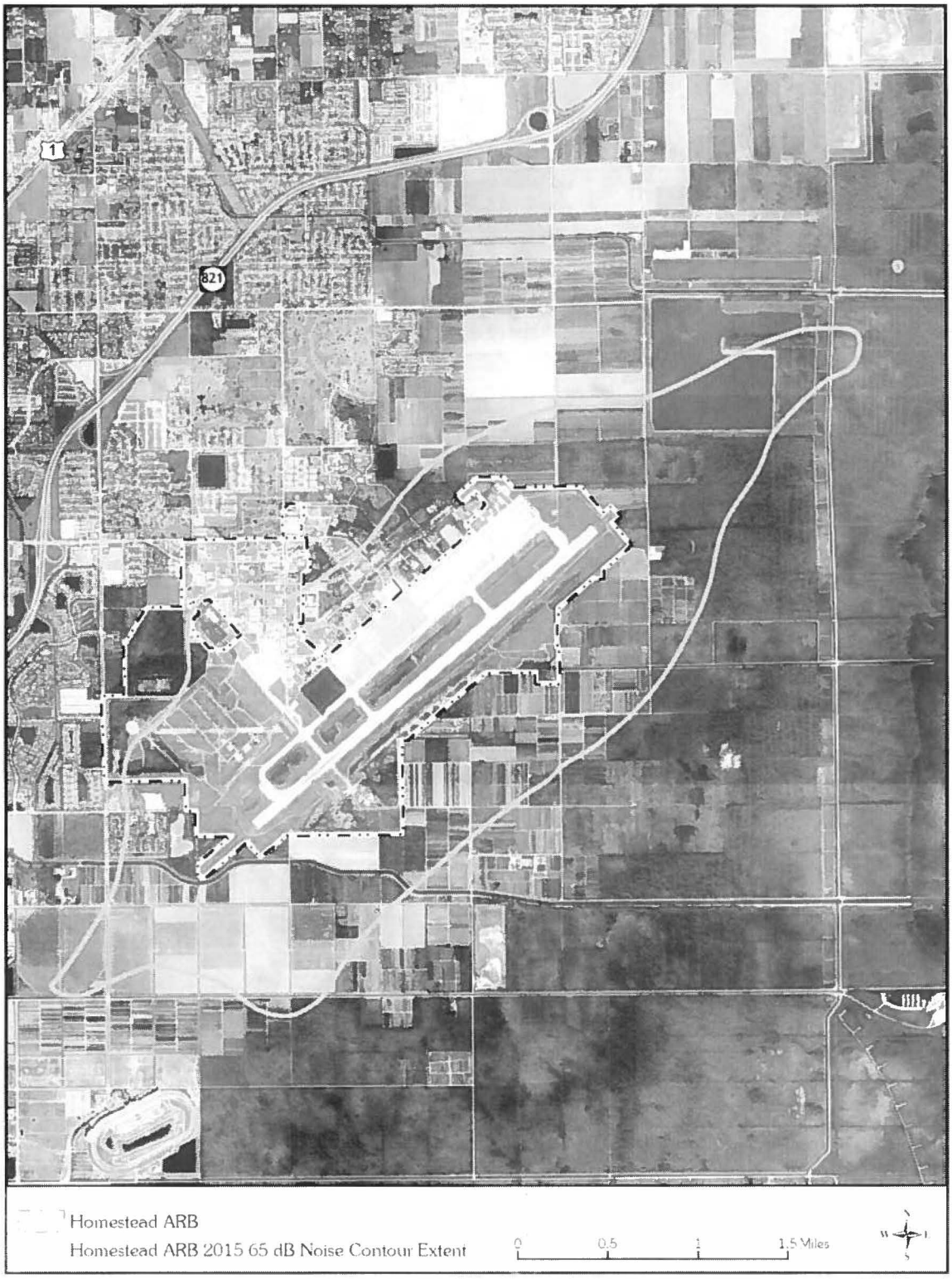


Figure 6 - Action Area for the Florida Bonneted Bat and Federally Listed Birds at Homestead ARB

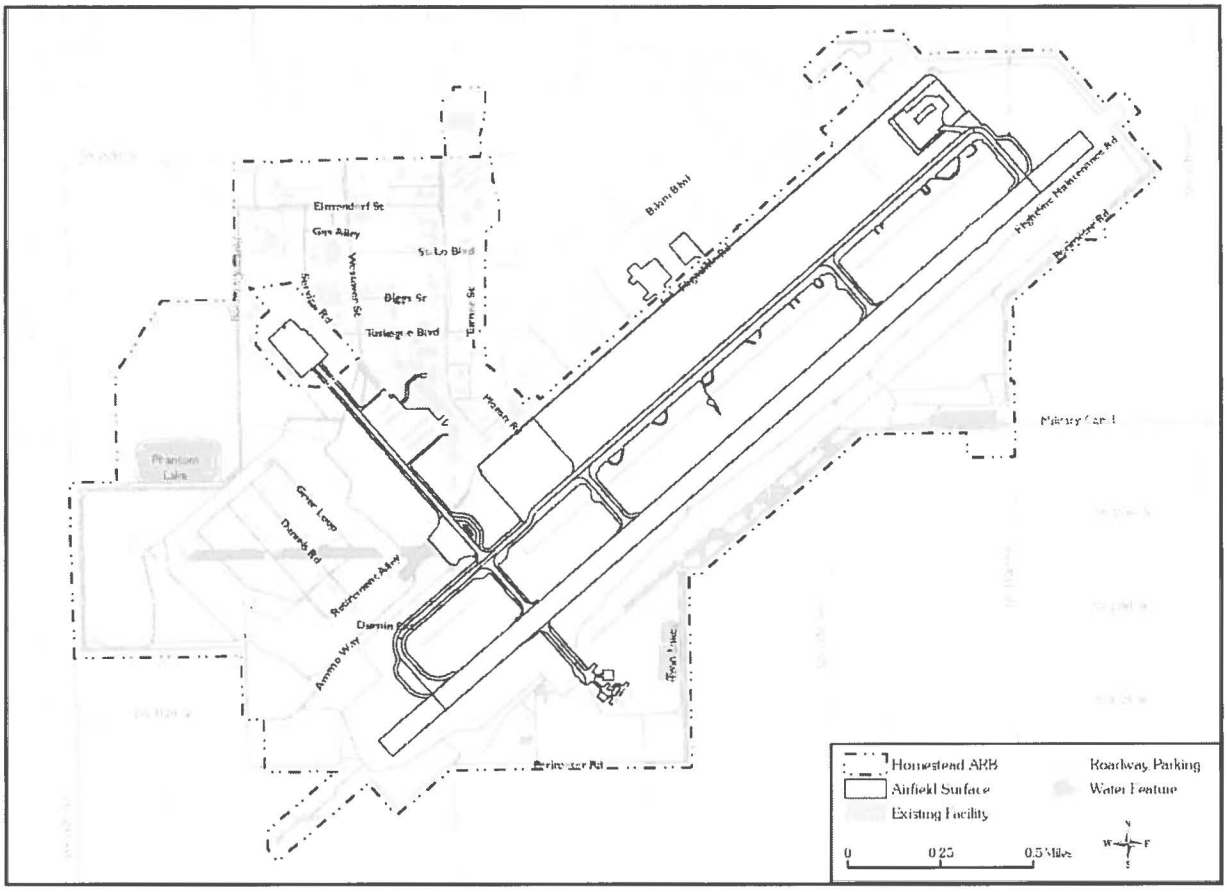


Figure 7 - Action Area for Insect and Plant Species at Homestead ARB

SPECIES NOT LIKELY TO BE ADVERSELY AFFECTED BY THE PROPOSED ACTION

Mammals

West Indian manatee - There have been observations of manatees in and near Black Creek (about 3 miles north of Homestead ARB's Military and Mowry Canals) and Convoy Point (about 2 miles south of Military Canal) near Homestead ARB. Between 1989 and 1984 there were three manatee sightings near Military Canal. Manatees have been observed in the Military Canal and travel as far as the Homestead ARB stormwater pump structure during the winter. However, the stormwater pump structure prevents manatees from accessing the base. USAF determined that due to the restricted access for manatees on the base, the proposed actions *May Affect but is not Likely to Adversely Affect* the West Indian Manatee. The Service concurs with USAF's determination that the Project may affect, but is not likely to adversely affect the West Indian manatee and no further consultation is required.

Birds

Everglades snail kite - The Everglade snail kite has rarely been observed on Homestead ARB and only for short durations. Homestead ARB is not located within the designated USFWS Everglade snail kite consultation area. Both native and non-native species of apple snails are known to occur on Homestead ARB, habitat on the base is limited and not considered high

quality. Direct effects of construction, operation and maintenance activities within suitable foraging habitat could alter potential foraging areas for the Everglade snail kite. Avoiding and minimizing disturbance to foraging habitat (conservation measure 5) will reduce the potential for direct adverse impact to this species habitat. Permanent and temporary indirect adverse impacts could occur in activity-specific vicinities due to the presence of humans, increased noise levels, or visual disturbances. Direct adverse impacts (mortality) to the Everglade snail kite could result from aircraft strikes. Proactive management of BASH issues would continue on Homestead ARB and the BASH Plan would be followed to minimize and avoid direct adverse impacts to Everglade snail kite. Due to the infrequent occurrence of the Everglade snail kite at Homestead ARB, USAF determined that the proposed actions *May Affect but is not Likely to Adversely Affect* the Everglades snail kite. The Service concurs with USAF's determination that the Project may affect, but is not likely to adversely affect the Everglades snail kite and no further consultation is required.

Piping plover - The piping plover has not been detected to date on Homestead ARB; however potential suitable habitat is present. Construction, operation and maintenance activities could result in direct adverse impacts to foraging habitat and indirect impacts due to the introduction of invasive species. Direct adverse impacts could also occur from aircraft strikes. Avoiding and minimizing disturbance to wetlands and waterbodies (conservation measure 5) will reduce potential adverse impacts to the piping plover. Proactive management of BASH issues would continue on Homestead ARB and the BASH Plan would be followed to minimize and avoid direct adverse impacts to piping plover. USAF determined that due to the lack of detection of piping plover at HARB in spite of surveys being conducted the proposed action *May Affect but is not Likely to Adversely Affect* the Piping Plover. The Service concurs with USAF's determination that the Project may affect, but is not likely to adversely affect the piping plover and no further consultation is required.

Red knot - The rufa red knot has only been documented on Homestead ARB one time near the Hush House following a large storm that elevated water levels in the canal system. Construction, operation and maintenance activities could result in direct adverse impacts to foraging habitat and indirect impacts due to the introduction of invasive species. Direct adverse impacts could also occur from aircraft strikes. Avoiding and minimizing disturbance to rufa red knot habitat (conservation measure 5), and implementation of the BASH Plan will reduce potential adverse impacts to the rufa red knot. Due to the infrequent occurrence of the red knot at Homestead ARB, USAF determined that the proposed actions *May Affect but is not Likely to Adversely Affect* the red knot. The Service concurs with USAF's determination that the Project may affect, but is not likely to adversely affect the red knot and no further consultation is required.

Wood stork - Although Homestead ARB is located in the designated USFWS Consultation area for this species, no nesting has been reported on Homestead ARB, likely due to lack of suitable nesting habitat and human disturbance. Homestead ARB is not located with the core foraging area of any known nesting colonies, however the wood stork is known to occur in the shallow wetland areas at Homestead ARB. None of the proposed construction projects will occur in wood stork foraging habitat. Avoiding and minimizing disturbance to wood stork foraging habitat (conservation measure 5), and implementation of the BASH Plan will reduce potential adverse impacts to the wood stork. USAF determined that due to the lack of impacts to foraging

habitat and implementation of the BASH plan the proposed action *May Affect but is not Likely to Adversely Affect* the wood stork. The Service concurs with USAF's determination that the Project may affect, but is not likely to adversely affect the wood stork and no further consultation is required.

Least tern - The least tern occasionally stops at Homestead ARB near some of the standing water areas along Perimeter Road. The least tern has been reported to nest on the base in the past but no documentation of recent nesting activity exists. Construction, operation and maintenance activities could result in direct adverse impacts to foraging habitat and indirect impacts due to the introduction of invasive species. Direct adverse impacts could also occur from aircraft strikes. USAF determined that due to the lack of recent nesting activity and implementation of the BASH plan the proposed action *May Affect but is not Likely to Adversely Affect* the least tern. The Service concurs with USAF's determination that the Project may affect, but is not likely to adversely affect the least tern and no further consultation is required.

Roseate tern - The Roseate tern has not been detected to date on Homestead ARB though potential suitable habitat is present and they could likely occur during migration. Construction, operation and maintenance activities could result in direct adverse impacts to foraging and or nesting habitat and indirect impacts due to the introduction of invasive species. Direct adverse impacts could also occur from aircraft strikes, though unlikely to occur. Avoiding and minimizing disturbance to Roseate tern habitat (conservation measure 5), and implementation of the BASH Plan will reduce potential adverse impacts to the least tern. USAF determined that due to the lack of detection of roseate tern at HARB in spite of surveys being conducted the proposed action *May Affect but is not Likely to Adversely Affect* the roseate tern. The Service concurs with USAF's determination that the Project may affect, but is not likely to adversely affect the roseate tern and no further consultation is required.

Reptiles

American crocodile - A Caiman Removal Feasibility Study was conducted at Homestead ARB in 2012. The study identified two American crocodiles in Phantom and Twin Lakes. The canals and lakes on Homestead ARB provide habitat for the American crocodile and they can access the installation over land areas to gain access to waterbodies on Homestead ARB. Although vehicle traffic on roads and highways has the potential to directly impact this species, posted speed limits on the base do not exceed 25 mph. At these speeds, motorists would be able to slow down and avoid direct adverse impacts to this species. Indirect impacts from reduced water quality and invasive species could occur from project activities that may affect the waterways. Implementation of the SWPPP and BMPs (conservation measure 7) and minimizing disturbance to crocodile habitat (conservation measure 5), will reduce potential direct adverse impacts to the American crocodile. As such USAF determined the proposed action *May Affect but is not Likely to Adversely Affect* the American crocodile. The Service concurs with USAF's determination that the Project may affect, but is not likely to adversely affect the American crocodile and no further consultation is required.

Eastern indigo snake - The Florida Natural Areas Inventory reports indicate that indigo snakes were observed in March 1980 and in January 1981 along the Florida City Canal, approximately 2

miles south of Homestead ARB, and an indigo snake was observed along the berm of Military Canal outside the boundaries of the base in July 1998. Suitable habitat is present along the boundary fringes of Homestead ARB. Construction, operation and maintenance activities could result in direct adverse impacts to habitat and indirect impacts due to the introduction of invasive species. Biological clearance surveys (conservation measure 1) and avoiding and minimizing disturbance to Eastern Indigo snake habitat (conservation measure 5) will reduce potential direct adverse impacts to the Eastern Indigo snake. Due to the infrequent occurrence of the Eastern indigo snake at Homestead ARB, USAF determined that the proposed actions *May Affect but is not Likely to Adversely Affect* the Eastern indigo snake. The Service concurs with USAF's determination that the Project may affect, but is not likely to adversely affect the Eastern indigo snake and no further consultation is required.

Invertebrates

Bartram's scrub hairstreak - The Bartram's scrub hairstreak has not been recorded from Homestead ARB, though their larval host plant is present in the remnant pine rocklands habitat on base. Although short-term disturbance to pine rockland habitat is anticipated in the Phantom Lake and Old Grenade Range Area, long-term beneficial impacts are anticipated to result by preserving known host plant locations and improving pine rockland habitat conditions (conservation measures 5 and 8). Furthermore, implementation of the IPMP (conservation measure 4) will reduce potential adverse impacts to the Bartram's scrub hairstreak. USAF determined that due to the lack of detection of Bartram's scrub hairstreak the proposed action *May Affect but is not Likely to Adversely Affect* the Bartram's scrub hairstreak. The Service concurs with USAF's determination that the Project may affect, but is not likely to adversely affect the Bartram's scrub hairstreak and no further consultation is required.

Florida leafwing butterfly - The Florida leafwing has not been recorded from Homestead ARB, though their larval host plant is present in the remnant pine rocklands habitat on base. Although short-term disturbance to pine rockland habitat is anticipated in the Phantom Lake and Old Grenade Range Area, long-term beneficial impacts are anticipated to result by preserving known host plant locations and improving pine rockland habitat conditions (conservation measures 5 and 8). Furthermore, implementation of the IPMP (conservation measure 4) will reduce potential adverse impacts to the Florida leafwing. USAF determined that due to the lack of detection of Florida leafwing the proposed action *May Affect but is not Likely to Adversely Affect* the Florida leafwing. The Service concurs with USAF's determination that the Project may affect, but is not likely to adversely affect the Florida leafwing and no further consultation is required.

Plants

Bodgett's silverbush, Carter's small flower flax, Everglades bully, Florida brickell-bush, Florida prairie-clover, and Tiny polygala – None of these species has been detected to date on the Homestead ARB, though potential suitable habitat exists. No direct removal or modification of pine rockland habitat provides a benefit to the all of these plant species over the long-term by preserving suitable habitat. Biological clearance surveys (conservation measure 1), protective measures for sensitive plants (conservation measure 8), minimize disturbance to habitat

(conservation measure 5) and reduce the potential for invasive plant species through implementation of the IPMP (conservation measure 4) will reduce potential adverse impacts to these listed plants. USAF determined that due to the lack of detection of these plants the proposed action *May Affect but is not Likely to Adversely Affect* Bodgett's silverbush, Carter's small flower flax, Everglades bully, Florida brickell-bush, Florida prairie-clover, and Tiny polygala. The Service concurs with USAF's determination that the Project may affect, but is not likely to adversely affect the Bodgett's silverbush, Carter's small flower flax, Everglades bully, Florida brickell-bush, Florida prairie-clover, and Tiny polygala and no further consultation is required.

STATUS OF THE SPECIES

Florida bonneted bat

Please see Enclosure for the Status of the Species for the Florida bonneted bat.

Summary of threats to the species

Threats to the FBB include loss of forested habitat, land use changes, land management practices involving the removal of trees with cavities, and loss of artificial structures. Loss and alteration of habitat in forested and urban areas are threats to the FBB (Belwood 1992; NatureServe 2009). In natural areas, this species may be impacted when forests are converted to other uses or when old trees with cavities are removed (Belwood 1992; NatureServe 2009). In urban settings, this species may be impacted when buildings with suitable roosts are demolished (Robson et al. 1989; NatureServe 2009) or when structures are modified to exclude bats. Small population size, restricted range, low fecundity, and few and isolated occurrences are considerable on-going threats. Other threats include direct and indirect harm by humans, competition for tree cavities, ecological light pollution, climate change and sea level rise, loss of foraging habitat, disease, routine maintenance of bridges and overpasses, and pesticides and contaminants. Threats that are relevant to this Project include land management practices involving the removal of trees with cavities, building demolition, and direct and indirect harm by humans (aircraft strikes).

Sand flax and Small's milkpea

Please see Enclosure for the Status of the Species for the sand flax and Small's milkpea.

Summary of threats to the species

Nearly all remaining populations of Small's milkpea and sand flax are threatened by development, fire suppression, road maintenance activities, exotic species and/or illegal dumping and clearing. Most threats to the species are ongoing and are considered imminent. Threats that are relevant to this Project include land development (building construction), management practices, and encroachment by invasive exotic species.

ENVIRONMENTAL BASELINE

Florida bonneted bat

Status of the species within the action area

The FBB has one of the most restricted distributions of any species of bat in the New World, and it appears to be restricted to the southern portion of Florida, excluding the Keys. Southeast Florida (Monroe and Miami-Dade Counties) is one of four main geographic focal areas identified by the Service (2013). Within the Project action area and surrounding lands, the FBB has been recorded acoustically in Everglades National Park, Fairchild Tropical Botanical Garden, Zoo Miami, Larry and Penny Thompson Park, Martinez Preserve, and Snapper Creek Park (Service 2013). Although limited data are available on foraging and dispersal distances and home ranges for the FBB; one study using GPS-satellite tags at Babcock-Webb WMA, found that most FBB locations were within 1 mi of the roost (point of capture) (Ober 2016). However, FBBs also tended to take one longer foray, up to 7 mi, shortly after sunset each night. A second survey at Babcock-Webb WMA in 2016 tracked bats anywhere from 1 to 6 nights. Most bats took one long foray shortly after sunset each evening. The maximum distance a bat was detected from their capture site was 24 mi (Ober 2015 and 2016).

The Project site contains forested habitat types, is within a FBB focal area, and immediately adjacent to known habitat of the FBB.

Acoustic and mist net surveys were conducted between 2015 and 2016 (October 10, 2015, to May 25, 2016) at Homestead ARB. The acoustic survey results confirmed Florida bonneted bat usage of certain areas of the base for foraging. Although no Florida bonneted bats were captured and roosts were not located, the recording of bats immediately after sunset at multiple locations indicated the possibility of roosting locations, likely within one mile of the installation (Smart Sciences 2017). However, activity varied across the base. A total of 27 feeding buzzes and 76 social calls indicating both feeding and social activity were recorded. The most active foraging sites were near the Homestead ARB MSA and Former Homestead ARB property area (Smart Sciences 2017). Bats were also detected on the west side of the base near Phantom Lake and MSA, near a strangler fig tree (*Ficus aurea*), at the triple hangers (Building 779) on the SOCSOUTH parcel, as well as at the Air Base K-8 Center for International Education. The survey results suggest that there is a relatively large-sized population near Homestead ARB and that the base could contain roosts as well as foraging areas.

Factors affecting the species environment within the action area

The action area for the Florida bonneted bat includes large tracts of agriculture land used for tree farms and row crops. The most significant factor affecting the species in the action area is the air traffic into and out of the base. To date there has been two know collisions with aircraft and Florida bonneted bats on the base. Another factor affecting the species includes the potential for land use changes from agriculture lands to residential. This conversion could potentially eliminate both roosting and forage habitat for the Florida bonneted bat. A third factor affecting the Florida bonneted bat in the action area is the potential encroachment of invasive exotic

vegetation. Invasive exotic vegetation can reduce the quality of or eliminate foraging and roosting habitat. Fortunately implementation of the IPMP at Homestead ARB has helped reduce the amount of invasive exotic plants within the action area.

Sand flax and Small's milkpea

Status of the species within the action area

In 2012 a baseline assessment of sand flax and Small's milkpea was conducted by the Institute for Regional Conservation on Homestead ARB within approximately 1000 acres of modified pine rockland habitat. Nineteen populations of sand flax were found with varying average densities; the lowest density 0.006/ m2 and the highest 2.0/ m2. The average density of sand flax is 0.213 ± 0.058 standard error (SE)/m2. The population estimate for sand flax on HARB is estimated at 31,399±2,271 standard deviation (SD) plants. A total of 56 populations of Small's milkpea were mapped and quantified. Small's milkpea was found in varying quantities throughout the base with the lowest average density of 0.008/ square meter (m2) and highest density of 3.12/ m2. The average density is 0.379 ± 0.051 (SE)/m2. The total population on HARB is estimated at 404,779±7,442 (SD).

Factors affecting the species environment within the action area

The action area for sand flax and Small's milkpea has been defined as the boundaries of Homestead ARB. The most important factor affecting these two plant species within the action area is loss of habitat from land development. Other factors affecting these two plants species is land management practices and encroachment of invasive exotic species. Both of these factors have the potential to reduce the quality of habitat by which sand flax and Small's milkpea depend on.

Climate Change

Our analyses under the Act include consideration of observed or likely environmental effects related to ongoing and projected changes in climate. As defined by the Intergovernmental Panel on Climate Change (IPCC), "climate" refers to average weather, typically measured in terms of the mean and variability of temperature, precipitation, or other relevant properties over time; thus "climate change" refers to a change in such a measure which persists for an extended period, typically decades or longer, due to natural conditions (e.g., solar cycles) or human-caused changes in the composition of the atmosphere or in land use (IPCC 2013, p. 1450). Detailed explanations of global climate change and examples of various observed and projected changes and associated effects and risks at the global level are provided in reports issued by the IPCC (2014 and citations therein). Information for the United States at national and regional levels is summarized in the National Climate Assessment (Melillo *et al.* 2014 entire and citations therein; see Melillo *et al.* 2014, pp.28-45 for an overview). Because observed and projected changes in climate at regional and local levels vary from global average conditions, rather than using global scale projections, we use "downscaled" projections when they are available and have been developed through appropriate scientific procedures, because such projections provide higher resolution information that is more relevant to spatial scales used for analyses of a given species

and the conditions influencing it. (See Melillo *et al.* 2014, Appendix 3, pp. 760-763 for a discussion of climate modeling, including downscaling). In our analysis, we use our expert judgment to weigh the best scientific and commercial data available in our consideration of relevant aspects of climate change and related effects.

The effects resulting from climatic change, including sea level rise and coastal squeeze, are expected to become severe in the future and result in additional habitat losses, including the loss of roost sites and foraging habitat. Three subpopulations of the Florida bonneted bat occur in at-risk coastal locations (Gore et al. 2010), and the effects of sea level rise are expected to be a continual problem for species using coastal habitats (Saha et al. 2011). Within the species' range, low-lying areas in Collier, Lee, Miami-Dade, and Monroe Counties appear most vulnerable to inundation. Much of low-lying, coastal south Florida "will be underwater or inundated with saltwater in the coming century" (U. S. Climate Change Science Program (CCSP) 2008). This means that large portions of occupied, suitable, and potential roosting and foraging habitat for the Florida bonneted bat in low-lying areas will likely be either submerged or affected by increased flooding.

Climate change may result in sea level rise, altered weather patterns, and an increase in the intensity or frequency of tropical storms and hurricanes in Florida. The Atlantic Multi-decadal Oscillation (AMO) influences rain patterns in Florida. We are currently in an AMO wet phase that is predicted to persist through 2020 (Miller 2010). The increased rainfall associated with both of these factors could benefit the Blodgett's silverbush by increasing growth of the species. Conversely, increased rainfall could also reduce the amount of habitat suitable for sand flax and Small's milkpea by increasing the amount of lands inundated as well as the duration of inundation of seasonally wet areas. It is difficult to determine if the sand flax and Small's milkpea will be affected by climate change or exactly how it will be affected. The Service will use Strategic Habitat Conservation planning, an adaptive science-driven process that begins with explicit trust resource population objectives, as the framework for adjusting our management strategies in response to climate change (Service 2006).

EFFECTS OF THE ACTION

Adverse effects

Florida bonneted bat

Airfield and Aircraft Operations - Given the high level of bat activity, direct adverse impacts (i.e. strike) could result from aircraft operations that occur near roosting and foraging habitat including forested areas, man-made structures, wetlands and waterbodies, especially if activities were to occur during morning, evening and night when bats are typically active.

The greatest risk to the Florida bonneted bat is within an hour after sunset, at the northeast corner of the runway (near the triple hangers), Phantom Lake, Former Homestead AFB property and the Air Base K-8 Center for International Education (Smart Sciences 2017). The majority (75 percent) of aircraft operations at Homestead ARB occur during the day (Table 2-2). Of the remaining operations, 25 percent (20 percent occur in the evening [3:01 P.M. to 10:00 P.M.], 2

percent occur at night [10:01 P.M. to 4:59 A.M.], and 3 percent occur in the morning [5:00 A.M. to 9:00 A.M.]). Thus, because aircraft activities are planned during high risk times for bats, there is potential for aircraft operation to result in take of individuals. In 2015, one Florida bonneted bat was found dead on the airfield at Homestead ARB. Although the cause of mortality could not be determined, the autopsy report documented that the bat had suffered blunt trauma. Similarly, one Florida bonneted bat was found dead on the airfield in February 2018. There have been no other documented cases of aircraft strikes by Florida bonneted bats on Homestead ARB.

Demolition – The action plan proposes the demolition of six separate buildings on the base. During a site inspection it was identified that three of the six (Buildings 208, 700, & 702) have metal rooves that could potentially provide roosting habitat for the Florida bonneted bat. The extent of which bats maybe using these buildings as roost sites has not been investigated. It is possible that mortality of bats could occur as a result of the demolition of these three buildings. However, this adverse effect to Florida bonneted bat could be avoided and/or minimized through measures including pre-demolition surveys; scheduling building demolition outside the nesting season; restricting nonessential equipment and personnel access to affected areas and use of existing disturbed areas for access roads and laydown areas.

Operation and Maintenance and Construction – There are no anticipated adverse effects to the Florida bonneted bat as a result of these proposed project activities.

Sand flax Small's milkpea

Construction and Demolition – The proposed construction and demolition projects were identified to permanently remove approximately 7.9 acres of occupied sand flax and Small's milkpea habitat. Based on the baseline surveys conducted by Institute for Regional Conservation in 2012, it was determined that approximately 1,837 sand flax plants and 13,593 Small's milkpea plants would be affected as a result of the proposed construction and demolition projects. Adverse effects from construction and demolition will be minimized by clearly marking with flagging, fencing, or signposts and delineated in the field by a biologist the limits of the demolition and construction areas. No unauthorized personnel or equipment (including off-road vehicle access) will be allowed in native habitats outside the construction limits or designated access routes. All project-related activities will occur within the designated construction boundary.

Operation and Maintenance - All vegetation on the installation is managed per the requirements established in the grounds maintenance SOW, the PPMP and the Landscape Management Plan. There is potential for these maintenance activities to result in adverse effects to the sand flax and Small's milkpea such as direct mortality, loss of seed dispersal due to inappropriate mowing heights, and degradation of habitat due to encroachment of invasive exotic species. These adverse effects are minimized through implementation of the SOW and PPMP which specifies mowing and weed whacking heights in areas that are occupied by sand flax and Small's milkpea. The adverse effects are further minimized by implementation of the IPMP.

Airfield and Aircraft Operation - There are no anticipated adverse effects to the sand flax and Small's milkpea as a result of the aircraft and airfield operations.

Interrelated and interdependent actions

An interrelated activity is an activity that is part of the proposed action and depends on the proposed action for its justification. An interdependent activity is an activity that does not have independent utility apart from the action under consultation. Interrelated or interdependent actions are not expected to result from the project.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, Tribal, local, or private actions that are reasonably certain to occur in the action area considered in this Biological Opinion. Future Federal actions unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Urban development continues to occur in the area surrounding Homestead ARB and has the potential to reduce habitat in these areas. The Air Force Reserve Command works with the local planning communities to help plan compatible development under the installations noise contours. Recent development trends have seen areas that were formerly zoned as agricultural or were vacant converted to low to medium density residential areas. Increases in urban development have the potential to reduce foraging habitat for the Florida bonneted bat.

As limited information is available on Florida bonneted bat territory size and foraging ranges, nightly and seasonal movements, dispersal capabilities, dietary requirements, and locations of key roost sites, it is difficult to estimate how many bats may be disturbed by future non-Federal actions. The Service accounts for some habitat loss and changes in habitat quality through habitat restoration associated with reviewed projects, and encourages State and County entities responsible for permitting to pursue the Section 10 (HCP) process to account and mitigate for adverse effects to the Florida bonneted bat. Based on the above analysis, the Service believes the loss of the habitat associated with these lands is insignificant in the short term, but may adversely impact the Florida bonneted bat as development continues to occur.

As discussed above, the action area for the sand flax and Small's milkpea is defined as all lands within the boundaries of Homestead ARB. As such all future actions within the action area would constitute a Federal action and would require separate consultation pursuant to section 7 of the Act. Consequently, additional cumulative effects are not expected to occur in the action area for sand flax and Small's milkpea.

CONCLUSION

Florida bonneted bat

After reviewing the current status of the Florida bonneted bat, the environmental baseline for the action area, the effects of the proposed action, and cumulative effects, it is the Service's Biological Opinion that development of the Project, as proposed, is not likely to jeopardize the continued existence of the Florida bonneted bat. We have reached this conclusion because: (1)

the majority (75 percent) of aircraft operations at Homestead ARB occur during the day when the bats are inactive; (2) of the remaining 25 percent (20 percent occur in the evening [3:01 P.M. to 10:00 P.M.], 2 percent occur at night [10:01 P.M. to 4:59 A.M.], and 3 percent occur in the morning [5:00 A.M. to 9:00 A.M.] it is likely that only about 5 percent or less of the aircraft operations occur during peak hours of Florida bonneted bat activity [1/2 hour before and after sunset and sunrise]; (3) the action area as described above for the Florida bonneted bat is is small compared to the hundreds of thousands of acres available throughout the range of the Florida bonneted bat; and (4) pre-demolition roost surveys will avoid direct mortality of Florida bonneted bats as a result of the proposed demolition activities.

Sand flax and Small's milkpea

After reviewing the current status of the sand flax and Small's milkpea, the environmental baseline for the action area, the effects of the proposed action, and cumulative effects, it is the Service's Biological Opinion that development of the Project, as proposed, is not likely to jeopardize the continued existence of the sand flax and Small's milkpea. We have reached this conclusion because: (1) only a small amount of the on-site occupied habitat (approximately 7.0 acres) will be permanently lost as a result of the Project, which represents only 1.4% of the entire on-site occupied habitat on Homestead ARB; and (2) the establishment of protected plant management areas on Homestead ARB will help to ensure the sustainability of the on-site sand flax and Small's milkpea populations.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of the agency action, is not considered to be prohibited taking under the Act provided such taking is in compliance with the terms and conditions of this incidental take statement.

Sections 7(b)(4) and 7 (o)(2) of the Act generally do not apply to listed plant species. However, limited protection of listed plants from take is provided to the extent that the Act prohibits the removal and reduction to possession of Federally listed endangered plants or the malicious damage of such plants on areas under Federal jurisdiction, or the destruction of endangered plants on non-Federal areas in violation of State law or regulation or in the course of any violation of a State criminal trespass law.

AMOUNT OR EXTENT OF TAKE ANTICIPATED

The Service has reviewed the biological information for the Florida bonneted bat, information presented by the Applicant, and other available information relevant to this action. The Service anticipates two Florida bonneted bats per year could be taken as a result of this proposed action. The incidental take is expected to be in the form of bats killed from the Airfield and Aircraft Operations.

The Service finds that no more than two Florida bonneted bats per year will be incidentally taken as a result of the proposed action. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided.

As indicated above, Sections 7(b)(4) and 7 (o)(2) of the Act generally do not apply to Federally listed plant species. Consequently, the sand flax and Smalls milkpea will not be discussed further in this incidental take statement.

EFFECT OF THE TAKE

In the accompanying Biological Opinion, the Service determined that this level of expected take is not likely to result in jeopardy to the Florida bonneted bat. Critical habitat has not been designated for the species and will not be affected.

REASONABLE AND PRUDENT MEASURES

Based on the implementation of the Project as described, the Service does not have any reasonable and prudent measures or terms and conditions. Reporting requirements and disposition of individuals taken are as described below.

MONITORING AND REPORTING REQUIREMENTS

Pursuant to 50 CFR § 402.14(i)(3), the Homestead ARB must provide adequate monitoring and reporting to determine if the amount or extent of take is approached or exceeded. In accordance with the base's BASH plan Homestead ARB must record and document all bird or other wildlife strikes that occur on base. An annual report summarizing all strikes should be provided to the Service. The report should include a summary of the number of Florida bonneted bats that were involved in strikes or otherwise found dead on the base. Additionally, an annual report that summarizes any on-site construction activities that involved the removal of sand flax and/or Small's milkpea. The report should include the number of plants relocated if any and the amount in acres of habitat removed that was occupied by sand flax and/or Small's milkpea. These reports should be provided annually no later than March 31st for the previous calendar year.

DISPOSITION OF DEAD OR INJURED SPECIMENS

Upon locating a dead, injured, or sick threatened or endangered species, initial notification must be made to the nearest Service Law Enforcement Office: 20501 Independence Blvd., Groveland,

Florida 34736; 352-429-1037 as well as the biologist identified below at the South Florida Ecological Service Office, 772-562-3909. Secondary notification should be made to the Florida Fish and Wildlife Conservation Commission: (*3900 Drane Field Road; Lakeland, Florida; 33811-1299; 1-800-282-8002*). Care should be taken in handling sick or injured specimens to ensure effective treatment and in the handling of dead specimens to preserve biological material in the best possible state for later analysis as to the cause of death. In conjunction with the care of sick or injured specimens, or preservation of biological materials from a dead animal, the finder has the responsibility to carry out instructions provided by Law Enforcement to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The Service recommends the following:

1. Establish a "Conservation Management Area" for the purpose of protecting on-site pine rockland plant species. Preferably in the area of the grenade range.
2. Conduct a replanting effort to replace the plants affected by the proposed construction projects. Planting effort should be done at a ratio of 5:1 (# of plants replaced : # of plants affected) for the sand flax or 9,183 plants and a ratio of 3:1 for Small's milkpea or 40,778 plants over a 3 year period following the first removal of affected plants.
3. Reduce foot and vehicle traffic in replanting areas preferably through the posting of signage.
4. Monitor base populations of sand flax and Small's milkpea every 5 years.
5. Develop a management plan specifically for the "Conservation Management Area" that will focus on preservation of pine rockland plant species.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the conservation recommendation carried out.

REINITIATION NOTICE

This concludes formal consultation on the action(s) outlined in the Programmatic BA. As written in 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary Homestead ARB involvement or control over the action has been retained (or is authorized by law) and if: 1) the amount or extent of incidental take is exceeded (if more than two dead Florida bonneted bats per year are found); 2) new information reveals effects of the Homestead ARB action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; 3) the Homestead ARB action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or 4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the

amount or extent of incidental take is exceeded, any operations causing such take must cease until reinitiation.

Thank you for your cooperation and effort in protecting federally listed species and fish and wildlife resources. If you have any questions regarding this project, please contact Brian Powell at 772-469-4315.

Sincerely yours,

Acting for Roxanna Hinzman
Field Supervisor
South Florida Ecological Services Office

cc: (electronic only)
USAF, San Antonio Texas, (Kevin Porteck)
USAF, Homestead, Florida, (Micheal Andrejko)
Leidos Engineering, Inc., Earth City, MO (Tom Daues)

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