

Draft

Environmental Assessment (EA)

For the U.S. Special Operations Command (USSOCOM)
Military Information Support Operations (MISO) Facility
MacDill Air Force Base, Florida



Photo: Aerial view of MacDill Air Force Base, Tampa, FL (credit: James Schwabel)

November 20, 2018

ACRONYMS

1	ACQR	Air Quality Control Region	45	LBP	Lead-Based Paint
2	AFB	Air Force Base	46	Leq	Equivalent Noise Levels
3	APE	Area of Potential Effect	47	MBTA	Migratory Bird Treaty Act
4	ASHRAE	American Society of Heating	48	MISO	Military Information Support
5		Refrigeration and Air conditioning	49		Operations
6		Engineers	50	mgd	Million Gallons Per Day
7	AST	Aboveground Storage Tank	51	MSGP	Multi-Sector General Permit
8	BGEPA	Bald and Golden Eagle Protection	52	NAAQS	National Ambient Air Quality
9		Act	53		Standards
10	BMP	Best Management Practices	54	NEPA	National Environmental Policy Act
11	CAA	Clean Air Act	55	NHPA	National Historic Preservation Act
12	CDC	Child Development Center	56	NHRP	National Register of Historical
13	CEQ	Council on Environmental Quality	57		Places
14	CFR	Code of Federal Regulations	58	NO ₂	Nitrogen Dioxide
15	CMP	Florida Coastal Management	59	NPDES	National Pollutant Discharge
16		Program	60		Elimination System
17	CO	Carbon Monoxide	61	O ₃	Ozone
18	COCOM	Unified Combatant Command	62	OSHA	Occupational Safety and Health
19	CZMA	Coastal Zone Management Act	63		Administration
20	dB	Decibel	64	Pb	Lead
21	dba	A-weighted decibels	65	PM	Particulate Matter
22	DOD	Department of Defense	66	POV	Privately Owned Vehicles
23	DNL	day-night average sound level	67	PPE	Personal Protective Equipment
24	EA	Environmental Assessment	68	SF	Square Feet
25	EO	Executive Order	69	SHPO	State Historic Preservation Officer
26	EPC	Environmental Protection	70	SIP	State Implementation Plan
27		Commission of Hillsborough County	71	SO ₂	Sulfur Dioxide
28	ERP	Environmental Restoration	72	SWMU	Solid Waste Management Unit
29		Program	73		Site
30	ESA	Endangered Species Act	74	SWPPP	Storm Water Pollution Prevention
31	FAC	Florida Administrative Code	75		Plan
32	FDEP	Florida Department of	76	tpy	Tons Per Year
33		Environmental Protection	77	USAF	U.S. Air Force
34	FEMA	Federal Emergency Management	78	USCENTCOM	United States Central Command
35		Agency	79	USEPA	U.S. Environmental Protection
36	ft	Feet	80		Agency
37	FY	Fiscal Year	81	USFWS	U.S. Fish and Wildlife Service
38	GCC	Global Combatant Commands	82	USSOCENT	U.S. Special Operations Command
39	HAPS	Hazardous Air Pollutants	83		Central
40	HMA	Housing Market Area	84	UST	Underground Storage Tank
41	HUD	U.S. Department of Housing and	85	USSOCOM	U.S. Special Operations Command
42		Urban Development	86	VOC	Volatile Organic Compounds
43	INRMP	Integrated Natural Resources			
44		Management Plan			

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34

**DRAFT
ENVIRONMENTAL ASSESSMENT (EA)**

**FOR UNITED STATES SPECIAL OPERATIONS COMMAND (USSOCOM)
MILITARY INFORMATION SUPPORT OPERATIONS (MISO) FACILITY
MACDILL AIR FORCE BASE (AFB), FLORIDA**

TABLE OF CONTENTS

ACRONYMS.....INSIDE FRONT COVER

1 PURPOSE OF AND NEED FOR PROPOSED ACTION1

 1.1 PURPOSE OF THE PROPOSED ACTION..... 1

 1.2 NEED FOR THE PROPOSED ACTION 1

 1.3 SELECTION CRITERIA 2

 1.4 SCOPE OF THE ENVIRONMENTAL REVIEW 3

 1.5 ENVIRONMENTAL PERMIT REQUIREMENTS 3

2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES.....3

 2.1 DETAILED DESCRIPTION OF THE PROPOSED ACTION 6

 2.1.1 Proposed Action..... 6

 2.1.2 Description of Alternative Actions..... 8

 2.1.3 Alternatives Eliminated from Further Study..... 10

 2.1.4 Description of the No Action Alternative..... 11

 2.2 COMPARISON OF ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION AND ALTERNATIVES..... 11

3 AFFECTED ENVIRONMENT14

 3.1 AIR QUALITY 15

 3.2 BIOLOGICAL RESOURCES..... 16

 3.3 CULTURAL RESOURCES (INCLUDING VISUAL RESOURCES) 20

 3.4 NOISE 22

 3.5 TRANSPORTATION 24

 3.6 WASTES, HAZARDOUS MATERIALS, AND STORED FUELS 25

 3.7 FLOODPLAINS 28

 3.8 WATER RESOURCES..... 28

 3.9 GEOLOGICAL RESOURCES..... 30

 3.10 SAFETY AND OCCUPATIONAL HEALTH 31

 3.11 SOCIOECONOMICS..... 32

4 ENVIRONMENTAL CONSEQUENCES33

1	4.1	AIR QUALITY	33
2	4.2	BIOLOGICAL RESOURCES.....	35
3	4.3	CULTURAL RESOURCES (INCLUDING VISUAL RESOURCES)	37
4	4.4	NOISE	39
5	4.5	TRANSPORTATION	41
6	4.6	WASTES, HAZARDOUS MATERIALS, AND STORED FUELS	42
7	4.7	FLOODPLAINS	44
8	4.8	WATER RESOURCES.....	44
9	4.9	GEOLOGICAL RESOURCES.....	47
10	4.10	SAFETY AND OCCUPATIONAL HEALTH	48
11	4.11	SOCIOECONOMICS.....	48
12	4.12	CUMULATIVE IMPACTS.....	49
13	4.12.1	Past, Present, and Reasonably Foreseeable Actions	50
14	4.12.2	Cumulative Impacts	50
15	4.12.3	Unavoidable Adverse Impacts	58
16	4.12.4	Compatibility with the Objectives of Federal, Regional, State, and Local Land Use Plans, Policies, and Controls	58
18	4.12.5	Relationship Between Short-term Uses of the Human Environment and Maintenance and Enhancement of Long-term Productivity	58
20	4.12.6	Irreversible and Irretrievable Commitment of Resources	59
21	5	CONCLUSIONS	60
22	6	MANAGEMENT REQUIREMENTS.....	60
23	7	LIST OF PREPARERS.....	62
24	8	REFERENCES	62
25		APPENDIX A - AIR FORCE FORM 813	A-1
26		APPENDIX B - COASTAL ZONE MANAGEMENT ACT (CZMA) CONSISTENCY DETERMINATION.....	B-1
27		APPENDIX C - AIR EMISSION CALCULATIONS.....	C-1
28		APPENDIX D - PUBLIC NOTICES & STAKEHOLDER CONSULTATION.....	D-1
29		APPENDIX E – ERP SITE SUMMARY	E-1

1 **List of Figures**

2 **Figure** **Page**

3 **1 Proposed Facility Locations5**

4 **2 Proposed Facility Locations – Biological Resources.....19**

5 **3 Proposed Facility Locations – Environmental Restoration Program Sites.....27**

6 **4 Proposed Facility Locations and 100-Year Floodplain and Wetlands29**

7 **List of Tables**

8 **Table** **Page**

9 **2-1 Summary of Resource Areas Analyzed and Potential Impacts.....12**

10 **3-1 MacDill AFB 2017 Stationary Emissions Summary15**

11 **3-2 Summary of Protected Species that Could Occur at MacDill AFB.....16**

12 **3-3 Distance to Nearest Residence from Proposed and Alternative Project Locations23**

13 **3-4 2019 Roadway Network Level of Service (LOS) Analysis24**

14 **4-1 Noise Levels (Equivalent Noise Levels – Leq) and Distance to Nearest Residence from**

15 **Proposed and Alternative Project Locations.....40**

16 **4-2 MacDill AFB Development Projects FY18-FY2251**

17 **4-3 Estimated Annual Greenhouse Gas Emissions53**

1 PURPOSE OF AND NEED FOR PROPOSED ACTION

2 This Environmental Assessment (EA) identifies, describes, and evaluates the potential environmental
3 impacts associated with the proposed implementation of phased actions to support the expansion and
4 consolidation of United States Special Operations Command (USSOCOM) Military Information Support
5 Operations (MISO) activities at MacDill Air Force Base (AFB), Florida (the Proposed Action). This EA also
6 describes alternatives to the Proposed Action and the No Action Alternative.

7 1.1 PURPOSE OF THE PROPOSED ACTION

8 The purpose of the Proposed Action is to consolidate MISO activities from Global Combatant Commands
9 (GCCs) at USSOCOM MISO facilities on MacDill AFB as directed by the United States Secretary of Defense.
10 MacDill AFB currently hosts approximately 300 United States Central Command (USCENTCOM) MISO
11 personnel that work out of trailers located east of the main runway.

12 Adversary propaganda and misinformation are increasingly occurring on the Internet with direct impact
13 on U.S. military operations around the globe. Studies conducted by the Department of Defense (DOD)
14 determined that the coordination and synchronization of online DOD efforts to combat such propaganda
15 and misinformation are best consolidated under a single Combatant Command, specifically USSOCOM.

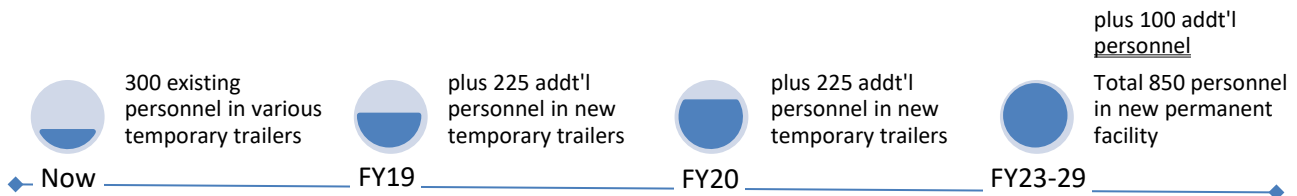
16 1.2 NEED FOR THE PROPOSED ACTION

17 The Proposed Action is needed because USSOCOM requires enhanced MISO capabilities and associated
18 facilities to meet their mission requirements. USSOCOM synchronizes the planning of Special Operations
19 and provides Special Operations Forces to support persistent, networked, and distributed GCC operations
20 in order to protect and advance American interests. A critical component of this support is the counter-
21 terrorism capabilities provided by MISO personnel. The existing MISO facility location cannot
22 accommodate any growth of USCENTCOM and the other three participating GCCs, much less the addition
23 of USSOCOM personnel. In order to conduct its assigned coordination mission, USSOCOM must
24 consolidate its efforts in a common facility.

25 Currently 300 MISO personnel work out of various trailers. Expanding USSOCOM MISO mission
26 requirements would add approximately 450 additional USSOCOM MISO personnel the majority of which
27 are anticipated to be contractor personnel over the next several years in new temporary trailers while the

1 permanent consolidated location is being built. Once the new permanent facility is constructed,
 2 USSOCOM MISO would add 100 additional personnel. Therefore, the resulting projected total of
 3 approximately 850 USSOCOM sponsored MISO personnel would need a permanent consolidated location
 4 with associated infrastructure (e.g., utilities, landscaping, and parking) at MacDill AFB to achieve mission
 5 requirements (see timeline below).

6 **Timeline of Personnel – Phased Approach (approximate numbers & dates)**



8 **1.3 SELECTION CRITERIA**

9 Because the Secretary of Defense has directed USSOCOM to consolidate MISO operations in one location
 10 and USSOCOM headquarters is located on MacDill AFB, no other installations outside of MacDill AFB have
 11 been identified as potential locations for implementing the Proposed Action. The Air Force has identified
 12 the following selection criteria to aid in identifying potential feasible locations for implementing the
 13 Proposed Action at MacDill AFB:

- 14
- 15 1. **Close to USSOCOM Headquarters:** A potential temporary and permanent facility location
 16 would ideally be located within a short walking distance of USSOCOM headquarters (within
 17 0.10 mile) to enhance mission efficiency and coordination.
 - 18 2. **Minimize Fill/Development within the Floodplain:** A feasible location would
 19 avoid/minimize fill/development within the floodplain to the extent practicable.
 - 20 3. **Sufficient Area for MISO Facility:** A feasible location would provide sufficient space for the
 21 facility and associated parking and infrastructure. Based on a parking generation rate of 0.83
 22 parking spaces per person (ITE 2010), 450 personnel would necessitate approximately 374
 23 parking spots at temporary facilities or based on an average per stall allocation of 300 square
 24 feet (SF) (which includes the parking stall and drive aisles), approximately 2.6 acres. Similarly,
 25 assigning 850 personnel to the permanent MISO facility would require approximately 705
 26 parking spots and 4.8 acres for parking. The trailers would cover approximately 0.7 acres and
 27 the permanent facility would cover approximately 2.3 acres. Therefore, a feasible temporary
 28 location would need to be approximately 3.3 acres, and a permanent location approximately
 7.1 acres, subject to project-specific design elements and staggered work schedules (e.g., a

1 multi-level parking garage and/or multi-story building would have a smaller footprint and thus
2 a smaller minimum acreage requirement; staggering the work hours throughout the day
3 would reduce the amount of parking area required).

4 **1.4 SCOPE OF THE ENVIRONMENTAL REVIEW** _____

5 This EA examines the potential for impacts to the environment resulting from the expansion and
6 consolidation of USSOCOM MISO operations at MacDill AFB, Florida. This environmental analysis has been
7 prepared in accordance with the National Environmental Policy Act (NEPA) (42 U.S. Code sections 4321-
8 4370h), as implemented by the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal
9 Regulations [CFR] parts 1500-1508) and Air Force regulations for implementing NEPA (32 CFR Part 989,
10 *Environmental Impact Analysis Process*).

11 Executive Order (EO) 11988, *Floodplain Management*, requires federal agencies to avoid to the extent
12 possible the long and short-term adverse impacts associated with the occupancy and modification of
13 floodplains, and to avoid direct and indirect support of floodplain development wherever there is a
14 practicable alternative. The federal Coastal Zone Management Act (CZMA) of 1972 also requires federal
15 agencies to demonstrate a proposed action is consistent with the Florida Coastal Management Program.
16 The Proposed Action would occur within the 100-year floodplain at MacDill AFB. Therefore, in accordance
17 with EO 11988, the CZMA, and Air Force Instruction 32-7064, *Integrated Natural Resources Management*,
18 the Air Force has issued an early public notice describing the proposed activity within the 100-year
19 floodplain at MacDill AFB (Appendix D). Appendix B demonstrates the Proposed Action's consistency with
20 the CZMA.

21 **1.5 ENVIRONMENTAL PERMIT REQUIREMENTS** _____

22 Implementation of the Proposed Action would require a Storm Water Management Permit from the
23 Southwest Florida Water Management District and a National Pollutant Discharge Elimination System
24 (NPDES) Construction General Permit from the Florida Department of Environmental Protection (FDEP).

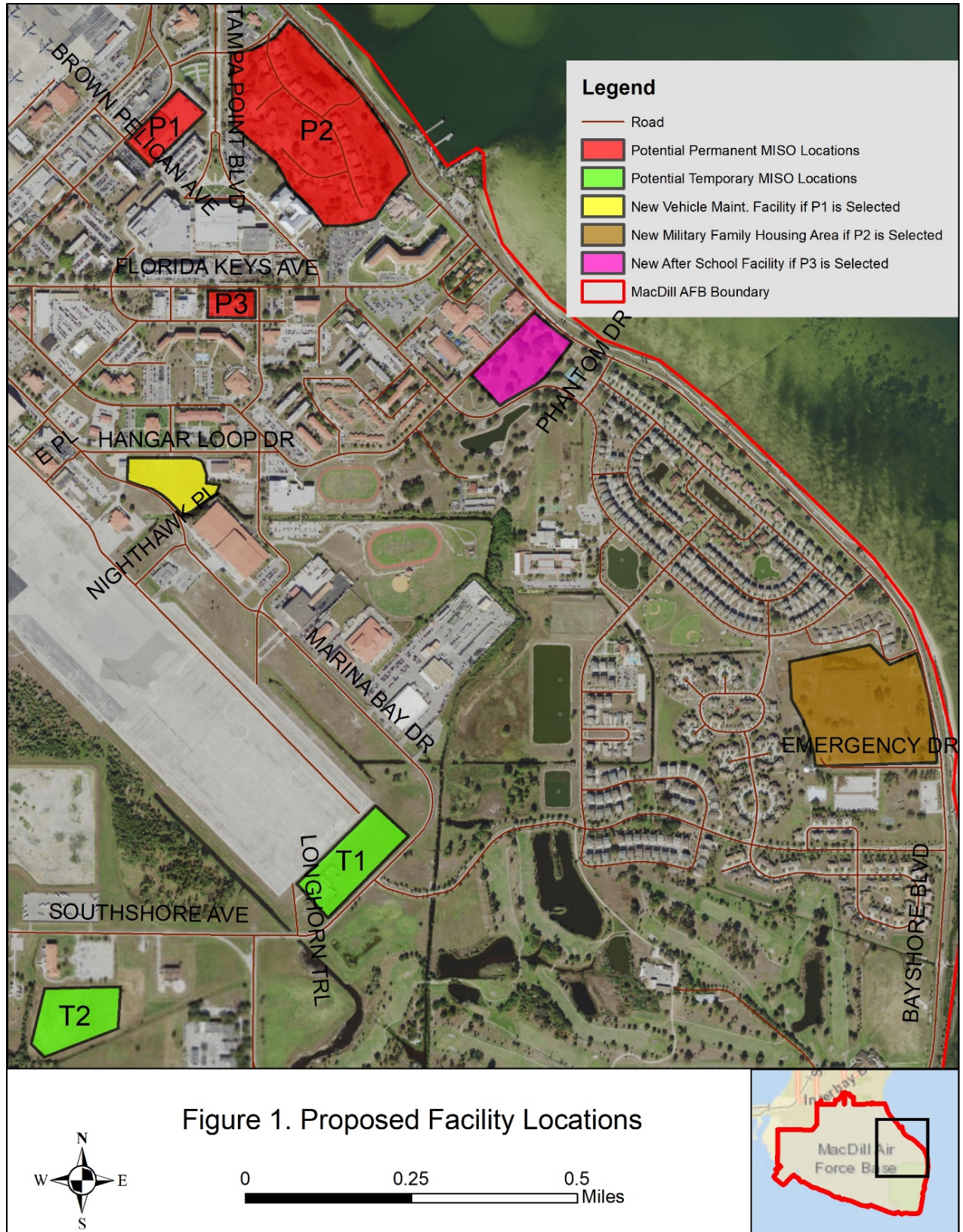
25 **2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES**

26 This section provides a description of the Proposed Action and alternatives to the Proposed Action. The
27 Proposed Action consists of the addition of approximately 450 new USSOCOM MISO personnel in

1 approximately 45,000 SF of temporary trailers (see Figure 1, "T1"), and the ultimate consolidation of
2 approximately 850 total USSOCOM MISO personnel in an approximately 100,000 SF permanent facility
3 (see Figure 1, "P1"). The resulting total of 850 MISO personnel would consist of the 300 existing MISO
4 personnel currently working at MacDill AFB, the addition of 450 MISO personnel working in the new
5 temporary trailers, and 100 additional MISO personnel once the permanent MISO facility is completed
6 (see timeline in Section 1.2). To make room for the permanent MISO facility, an existing facility would be
7 relocated and constructed in another area at MacDill AFB (see Figure 1).

8 In addition to evaluating the Proposed Action, this EA evaluates the following alternatives:

- 9 • An alternative temporary trailer location (see Figure 1, "T2");
- 10 • Two alternative permanent MISO facility locations (see Figure 1, "P2" and "P3");
- 11 • Two alternative relocated facility locations (see Figure 1); and
- 12 • The No Action Alternative.



1 **2.1 DETAILED DESCRIPTION OF THE PROPOSED ACTION** _____

2 **2.1.1 Proposed Action**

3 The Proposed Action consists of the phased implementation of actions to support the expansion and
4 consolidation of USSOCOM MISO operations at MacDill AFB in order to support the continued
5 achievement of USSOCOM mission requirements.

6 Initially, the existing 300 MISO personnel would continue to work in their current location in trailers near
7 the airfield. Approximately 450 additional personnel would arrive at MacDill AFB in two waves of
8 approximately 225 people in successive years and work in the new temporary trailers. The goal is to have
9 the trailers in place in Fiscal Year (FY) 2019. The combined total of approximately 750 personnel would
10 continue to work in their respective trailers until USSOCOM constructs a new permanent MISO facility at
11 one of three potential locations. USSOCOM MISO facility personnel would work in the new temporary
12 trailers for approximately five to seven years.

13 The Proposed Action would also include the construction of a replacement building for the building(s) that
14 would be displaced by the construction of the new MISO facility. Once the new replacement building is
15 constructed, the existing building(s) would be demolished, and the new MISO facility would be
16 constructed at the location of the previous facility. Once the permanent MISO facility is constructed,
17 USSOCOM would add an additional approximately 100 MISO personnel, for a total of approximately 850
18 MISO personnel working in the new permanent MISO facility, the majority of these would be contractor
19 personnel.

20 Staging/construction laydown areas would be situated within the project footprint at a previously
21 disturbed area with no sensitive resources. Construction of both new facilities (the relocated facility and
22 MISO facility) would occur over a two- to three-year period. The goal is to start construction of the new
23 facilities in FY 2023.

1 2.1.1.1 Temporary Trailer Preferred Location (“T1”)

2 Under the Proposed Action, USSOCOM would place
3 approximately three structures of grouped trailers
4 consisting of up to 14 trailers each (7 trailers wide and
5 stacked 2 stories high). Each group of trailers would
6 provide approximately 15,000 SF of work space, or a total
7 facility size of approximately 45,000 SF. Each trailer would
8 be approximately 80 feet long by 14 feet wide. While the
9 total SF of office space is approximately 45,000 SF, the



Photo 1: Proposed Temporary Trailer Location (“T1”)

10 resulting three structures, or groups of trailers would be stacked and subsequently would cover
11 approximately 22,500 SF within an approximately 7.0-acre undeveloped area immediately southeast of
12 the south ramp, along Marina Bay Drive (see Figure 1, “T1” and Photo 1). Associated site improvements
13 would consist of grading, utilities, and a gravel parking lot. With the installation of the trailers and
14 completion of associated site improvements, approximately 450 new MISO personnel would arrive
15 (approximately 225 personnel in each of two successive years) and begin working in the trailers. The MISO
16 personnel would use the trailers for approximately five to seven years until USSOCOM completes
17 construction of the permanent MISO facility.

18 2.1.1.2 Permanent USSOCOM MISO Facility Preferred Location (“P1”)

19 Under the Proposed Action, the permanent USSOCOM MISO facility would be constructed at the existing
20 vehicle maintenance facility location. The existing vehicle maintenance facility covers approximately 3.7
21 acres and is located northeast of Brown Pelican Avenue (see Figure 1, “P1”). MacDill AFB uses the facility
22 to service and maintain vehicles (Buildings 500, 500 S1, and 510). The MISO facility would be
23 approximately 100,000 SF and would be two or three stories high. Site improvements would consist of
24 utilities, landscaping, and parking. A generator with associated fuel storage would also be part of the MISO
25 facility.

1 **2.1.1.3 New Vehicle Maintenance Facility Location**

2 The new vehicle maintenance facility would be relocated
3 south of its current location adjacent to the existing
4 vehicle refueling station, south of Hangar Loop Drive (see
5 Figure 1 and Photo 2). The approximately 4.5-acre area is
6 currently undeveloped with maintained vegetation. The
7 same type of vehicle maintenance activity would occur at
8 the new location (e.g., preventative vehicle
9 maintenance/repair and unscheduled repair work of Base-
10 assigned vehicles). Site improvements would consist of
11 utilities, landscaping, and parking.



Photo 2: Proposed New Vehicle Maintenance Facility Location

12 **2.1.2 Description of Alternative Actions**

13 **2.1.2.1 Temporary Trailer Location**

14 The Air Force has identified one alternative location for the temporary trailers.

15 **Former Landfill Location Alternative ("T2")**

16 Under this alternative, the temporary trailers supporting
17 the approximately 450 new MISO personnel would be
18 located south of the airfield, south of Southshore Avenue
19 (see Figure 1, "T2" and Photo 3). The property is a closed
20 landfill consisting of maintained vegetation. The same
21 number of trailers and site improvements as described
22 for the Proposed Action would be implemented within
23 this approximately 6.2-acre area.



Photo 3: Proposed Temporary Trailer Location ("T2")

24 **Permanent USSOCOM MISO Facility Locations**

25 The Air Force has identified two alternative locations for construction of the permanent MISO facility.

1 Existing Military Family Housing Area (“P2”)

2 Under this alternative, USSOCOM would redevelop some
 3 portion of the existing military family housing area for use
 4 as the permanent MISO facility (see Figure 1, “P2” and
 5 Photo 4). The housing area covers approximately 28 acres
 6 and is situated adjacent to USSOCOM headquarters.
 7 Under this alternative, the same MISO facility and
 8 associated site improvements as described for the
 9 Proposed Action would be implemented at this location.



Photo 4: Existing Military Family Housing Area (“P2”)

10 Existing After School Care Facility (“P3”)

11 Located southeast of the airfield on Florida Keys Avenue,
 12 this facility provides after school care for children living
 13 on-Base (see Figure 1, “P3”, Building 307, and Photo 5).
 14 This approximately 1.7-acre area also includes another
 15 building used to provide banking services and by
 16 USSOCOM operations. The Base Honor Guard is also
 17 housed at this location. All three entities would be
 18 relocated to existing Base facilities to make way for the
 19 MISO facility at this location. Under this alternative, the
 20 same MISO facility and associated site improvements as
 21 described for the Proposed Action would be implemented at this location.



Photo 5: Existing After School Care Facility (“P3”)

22 2.1.2.2 Relocated Facility Locations

23 New Military Family Housing Area

24 Under the Existing Military Family Housing (P2)
 25 alternative, new military family housing would be
 26 constructed in the southeastern portion of the Base,
 27 within an open undeveloped area surrounded by other
 28 military family housing (see Figure 1 and Photo 6). The
 29 approximately 19.1-acre area is currently undeveloped
 30 with maintained vegetation. The housing relocation area
 31 is where the former hospital was located, before the Air



Photo 6: Military Family Housing Relocation Area

1 Force demolished it several years ago. The new military family housing would be consistent in size and
2 design with existing adjacent housing and include utilities, landscaping, open areas, roadways, and
3 parking.

4 New After School Care Facility

5 Under the Existing After School Care Facility (P3)
6 alternative, the new after school care facility would be
7 relocated south and east of its current location to an
8 undeveloped area covering approximately 6.6 acres
9 northeast of Tampa Point Boulevard, across the street
10 from other childcare/school-related facilities (see Figure 1
11 and Photo 7). The same type of after school care services
12 would be provided in the new location. Site
13 improvements would consist of utilities, landscaping, and
14 parking. Administrative space required for the banking
15 services, USSOCOM operations, and the Base Honor Guard would be provided by relocating these
16 functions to available space within other existing facilities at MacDill AFB.



Photo 7: New After School Care Facility
Location

17 **2.1.3 Alternatives Eliminated from Further Study**

18 Air Force planners initially identified two potential locations for the temporary trailers: next to Building
19 147 (between Buildings 143 and 153), and at a location near the Base entrance. The Air Force eliminated
20 these two potential locations from further study as they are located more than 0.10 mile from USSOCOM
21 Headquarters, both did not offer sufficient area for the anticipated parking needs, and the latter location
22 has been designated for relocation of the existing ground maintenance facility as part of the U.S. Special
23 Operations Command Central (USSOCENT) Headquarters Facility project, scheduled for 2023.

24 Air Force planners also initially identified a potential permanent location for the MISO facility in the
25 southeast portion of the Base (between Fortress Drive and Marina Bay Drive, north of McClelland
26 Avenue). Upon further evaluation, however, this location would be geographically separated from
27 USSOCOM, would require extensive fill within the floodplain to level the site for construction, and would
28 not offer sufficient space to accommodate the anticipated parking requirements. Therefore, the Air Force
29 eliminated this potential alternative from further study.

1 **2.1.4 Description of the No Action Alternative**

2 Under the No Action Alternative, the approximately 550 additional MISO personnel would not be
3 relocated to MacDill AFB and no new facilities (temporary or permanent) would be constructed. The No
4 Action Alternative is not a reasonable alternative because it does not meet the purpose of, and need for,
5 the Proposed Action; however, as required under CEQ Regulations (40 CFR 1502.14[d]), this EA analyzes
6 the No Action Alternative as it does provide a description of the baseline conditions to compare against
7 the impacts of the Proposed Action.

8 **2.2 COMPARISON OF ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION AND ALTERNATIVES** ____

9 Table 2-1 provides a summary of the resource areas analyzed and the potential environmental impacts of
10 the Proposed Action and Alternatives.

Table 2-1 Summary of Resource Areas Analyzed and Potential Impacts

Resource Area	TEMPORARY LOCATIONS		PERMANENT LOCATIONS			No Action Alternative
	Preferred Alternative ("T1")	Alternative 1 ("T2")	Preferred Alternative ("P1")	Alternative ("P2")	Alternative ("P3")	
Air Quality						
<i>Impact Summary</i>	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	No Impact
Biological Resources						
<i>Impact Summary</i>	Short-term–No Impact Long-term–No Impact Cumulative–No Impact	Short-term–No Impact Long-term–No Impact Cumulative–No Impact	Short-term–No Impact Long-term–No Impact Cumulative–No Impact	Short-term–No Impact Long-term–No Impact Cumulative–No Impact	Short-term–No Impact Long-term–No Impact Cumulative–No Impact	No Impact
Cultural Resources (including Visual Resources)						
<i>Impact Summary</i>	Short-term–No Adverse Effect Long-term–No Adverse Effect Cumulative–No Adverse Effect	Short-term–No Adverse Effect Long-term–No Adverse Effect Cumulative–No Adverse Effect	Short-term–No Adverse Effect Long-term– No Adverse Effect Cumulative–No Adverse Effect	Short-term–No Adverse Effect Long-term– No Adverse Effect Cumulative–No Adverse Effect	Short-term–No Adverse Effect Long-term– No Adverse Effect Cumulative–No Adverse Effect	No Impact
Noise						
<i>Impact Summary</i>	Short-term–No Impact Long-term–No Impact Cumulative–No Impact	Short-term–No Impact Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	No Impact
Transportation						
<i>Impact Summary</i>	Short-term–Minor Adverse Long-term–Minor Adverse Cumulative–Minor Adverse	Short-term–Minor Adverse Long-term–Minor Adverse Cumulative–Minor Adverse	Short-term–Minor Adverse Long-term–Minor Adverse Cumulative– Minor Adverse	Short-term–Minor Adverse Long-term–Minor Adverse Cumulative–Minor Adverse	Short-term–Minor Adverse Long-term–Minor Adverse Cumulative–Minor Adverse	No Impact
Wastes, Hazardous Materials, and Stored Fuels						
<i>Impact Summary</i>	Short-term–Minor Adverse Long-term–No Impact	Short-term–Minor Adverse Long-term–No Impact	Short-term–Minor Adverse Long-term–No Impact	Short-term–Minor Adverse Long-term–No Impact	Short-term–Minor Adverse	No Impact

Resource Area	TEMPORARY LOCATIONS		PERMANENT LOCATIONS			No Action Alternative
	Preferred Alternative ("T1")	Alternative 1 ("T2")	Preferred Alternative ("P1")	Alternative ("P2")	Alternative ("P3")	
	Cumulative–No Impact	Cumulative–No Impact	Cumulative–No Impact	Cumulative–No Impact	Long-term–No Impact Cumulative–No Impact	
Floodplains						
<i>Impact Summary</i>	Short-term–No Impact Long-term–No Impact Cumulative–No Impact	Short-term–No Impact Long-term–No Impact Cumulative–No Impact	Short-term–No Impact Long-term–No Impact Cumulative–No Impact	Short-term–No Impact Long-term–No Impact Cumulative–No Impact	Short-term–No Impact Long-term–No Impact Cumulative–No Impact	No Impact
Water Resources						
<i>Impact Summary</i>	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	No Impact
Geological Resources						
<i>Impact Summary</i>	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	No Impact
Safety and Occupational Health						
<i>Impact Summary</i>	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	Short-term–Minor Adverse Long-term–No Impact Cumulative–No Impact	No Impact
Socioeconomics						
<i>Impact Summary</i>	Short-term–Minor Beneficial Long-term–Minor Beneficial Cumulative–Minor Beneficial	Short-term–Minor Beneficial Long-term–Minor Beneficial Cumulative–Minor Beneficial	Short-term–Minor Beneficial Long-term–Minor Beneficial Cumulative–Minor Beneficial	Short-term–Minor Beneficial Long-term–Minor Beneficial Cumulative–Minor Beneficial	Short-term–Minor Beneficial Long-term–Minor Beneficial Cumulative–Minor Beneficial	No Impact

3 AFFECTED ENVIRONMENT

This section presents a description of the environmental resources and existing conditions that could be affected by the Proposed Action and the alternatives.

All environmental resources were initially considered in this EA. In compliance with NEPA, CEQ, and United States Air Force (USAF) Environmental Impact Analysis Process regulations and guidelines, the following discussion of the affected environment and environmental consequences focuses only on those environmental resources considered potentially subject to impact: air quality; biological resources; cultural resources (including visual resources); noise; transportation; wastes, hazardous materials, and stored fuels; floodplains; water resources; geological resources; safety and occupational health; and socioeconomics. Conversely, potential impacts to land use, utilities, airspace and airfield operations, and environmental justice were not analyzed in detail in this EA because negligible or no potential impacts would occur, as explained in the following paragraphs.

Land Use. The Proposed Action would not result in incompatibilities with existing or projected land uses on or off the Base. As presented in Section 3.4, *Noise*, estimated noise levels would not be incompatible with existing land uses. No impacts to land use would occur.

Utilities. Short-term and localized service disruptions could occur on-Base as the new facilities are constructed; however, any impacts would be temporary and likely avoided with proper planning. The long-term increase in utility demand associated with the increase in personnel would be accommodated by existing utility providers. Negligible impacts to utilities would occur.

Airspace and Airfield Operations. Because the Proposed Action would not affect airspace or airfield operations, no impacts to airspace or airfield operations would occur.

Environmental Justice. Executive Order (EO) 12898, *Environmental Justice in Minority Populations*, requires Federal agencies to consider any potentially disproportionate human health or environmental risks their activities, policies, or programs may pose to minority or low-income populations. EO 13045, *Protection of Children for Environmental Health Risks and Safety Risks*, requires Federal agencies to identify and assess health risks and safety risks that may disproportionately affect children.

All construction associated with the Proposed Action would occur entirely on-Base. An increase in noise would occur temporarily during the construction period, but it would be short-term and is not expected to significantly impact on or off-base human populations. Therefore, potential environmental justice

1 populations (i.e., minority, low-income, or otherwise) would not be disproportionately affected. Standard
 2 construction site safety precautions (e.g., fencing and other security measures) would reduce potential
 3 risks to minimal levels and any potential impacts to children would be negligible and short-term. Under
 4 the No-Action Alternative, there would be no impacts to Environmental Justice. Therefore, this resource
 5 area was eliminated from further consideration in this EA.

6 **3.1 AIR QUALITY**

7 The Clean Air Act (CAA) of 1970, 42 USC Section 7401 et seq. amended in 1977 and 1990, is the primary
 8 federal statute governing air pollution. The CAA establishes national ambient air quality standards
 9 (NAAQS) for criteria pollutants and classifies areas as to their attainment status relative to NAAQS. The six
 10 criteria pollutants with promulgated federal NAAQS are: particulate matter (PM₁₀ and PM_{2.5}), carbon
 11 monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), lead (Pb), and ozone (O₃). Federal regulations
 12 designate air quality control regions (AQCR) in violation of the NAAQS as nonattainment areas and areas
 13 that meet the NAAQS as attainment areas. An area's attainment status is determined for each NAAQS and
 14 provides information to evaluate the level of air quality impairment.

15 The General Conformity Rule (40 CFR Part 93, Subpart B) requires any federal agency responsible for an
 16 action in a nonattainment area or maintenance area to determine that action conforms to the appropriate
 17 State Implementation Plan (SIP) or that the action is exempt from the General Conformity Rule
 18 requirements. Because MacDill AFB is not within any specified nonattainment areas, General Conformity
 19 Rule requirements do not apply for this EA.

20 The Environmental Protection Commission of Hillsborough County (EPC) issues and enforces an Air
 21 Operation Permit for operation of emergency engines/generators at MacDill AFB (Permit No. 0570141-
 22 022-AO effective June 1, 2018) (USAF 2018). This current permit states that MacDill AFB is not a major
 23 source of hazardous air pollutants (HAPS) nor is a Title V major air pollution source. Permit 0570141-022
 24 requires annual submission of stationary emissions (in tons) for each calendar year for the operation of
 25 the stationary sources (including emergency generators). Table 3-1 presents the 2017 stationary source
 26 emissions.

Table 3-1 MacDill AFB 2017 Stationary Emissions Summary

Pollutant	2017 Actual Emissions (tons per year)
Carbon monoxide (CO)	0.265
Hazardous Air Pollutants (HAPS)	0.0016
Nitrogen Oxides (NO _x)	1.528
Lead (Pb)	Not Reported

Pollutant	2017 Actual Emissions (tons per year)
Particulate Matter (Total)	0.011
Particulate Matter (PM ₁₀)	0.011
Sulfur dioxide (SO ₂)	0.029
Volatile Organic Compounds (VOC)	0.045

Source: Florida DEP 2018a

1 **3.2 BIOLOGICAL RESOURCES**

2 Biological resources include living, native, or naturalized plant and animal species and the habitats within
 3 which they occur. Plant associations are referred to generally as vegetation, and animal species are
 4 referred to generally as wildlife. Habitat can be defined as the resources and conditions present in an area
 5 that support a plant or animal. The primary laws protecting biological resources of the study area are the
 6 Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), and Bald and Golden Eagle Protection
 7 Act (BGEPA). MacDill AFB implements biological resources management actions per their Integrated
 8 Natural Resources Management Plan (INRMP) (MacDill AFB 2018).

9 **Protected and Sensitive Species**

10 Biological surveys of the project area were not conducted because the project area is located within
 11 previously disturbed/industrialized areas with no known sensitive species or habitat, based on prior
 12 surveys and existing biological resources data (MacDill AFB 2018). Table 3-2 lists these species along with
 13 other protected species that could occur at MacDill AFB. The U.S. Fish and Wildlife Service (USFWS) has
 14 not designated any portion of MacDill AFB as critical habitat for the federally listed species (MacDill AFB
 15 2018).

Table 3-2 Summary of Protected Species that Could Occur at MacDill AFB

Common Name	Scientific Name	Status	
		Federal	State
Reptile/Amphibians			
American alligator	<i>Alligator mississippiensis</i>	T (SA)	T (SA)
Atlantic loggerhead turtle	<i>Caretta</i>	T	T
Atlantic green turtle	<i>Chelonia mydas</i>	T	E
Eastern Diamondback Snake	<i>Crotalus adamanteus</i>	UR	UR
Leatherback turtle	<i>Dermochelys coriacea</i>	E	E
Eastern Indigo snake	<i>Drymarchon couperi</i>	T	T
Hawksbill turtle	<i>Eretmochelys imbricata</i>	E	E
Gopher tortoise	<i>Gopherus polyphemus</i>	C	T
Gopher frog	<i>Lithobates capito</i>	UR	SSC
Florida pine snake	<i>Pituophis melanoleucus mugitus</i>	UR	SSC
Short-tailed snake	<i>Stilosoma extenuatum</i>	UR	T
Birds			
Scott's seaside sparrow	<i>Ammodramus martimus peninsulae</i>	-	SOC

Common Name	Scientific Name	Status	
		Federal	State
Florida scrub jay	<i>Aphelocoma coerulescens</i>	T	T
Limpkin	<i>Aramus guarauna</i>	-	SSC
Burrowing owl	<i>Athene cunicularia</i>	-	SSC
Red knot	<i>Calidris canutus rufa</i>	T	T
Piping plover	<i>Charadrius melodus</i>	T	T
Southeastern snowy plover	<i>Charadrius alexandrinus tenuirostris</i>	-	T
Little blue heron	<i>Egretta caerulea</i>	-	SSC
Reddish egret	<i>Egretta rufescens</i>	-	SSC
Snowy egret	<i>Egretta thula</i>	-	SSC
Tricolored heron	<i>Egretta tricolor</i>	-	SSC
White ibis	<i>Eudocimus albus</i>	-	SSC
Southeastern American kestrel	<i>Falco sparverius paulus</i>	-	T
Florida sandhill crane	<i>Grus canadensis pratensis</i>	UR	T
American oystercatcher	<i>Haematopus palliatus</i>	-	SSC
Bald eagle	<i>Haliaeetus leucocephalus</i>	DL BGEPA	-
Wood stork	<i>Mycteria americana</i>	T	T
Brown pelican	<i>Pelecanus occidentalis</i>	DL	SSC
Red-cockaded woodpecker	<i>Picoides borealis</i>	E	E
Roseate spoonbill	<i>Platalea ajaja</i>	-	SSC
Least tern	<i>Sterna antillarum</i>	-	T
Black skimmer	<i>Rynchops niger</i>	-	SSC
Mammals			
Florida mouse	<i>Peromyscus floridanus</i>	UR	SSC
Sherman's fox squirrel	<i>Sciurus niger shermani</i>	-	SOC
West Indian (FL) manatee	<i>Trichechus manatus</i>	E	E
Fish (none are known to occur on-Base)			
Gulf sturgeon	<i>Acipenser oxyzinchus desotoi</i>	T	T
Plants (none are known to occur on-Base)			
Note: T = Threatened, T(SA) = Threatened/Similarity of Appearance, E = Endangered, C = Candidate for listing, DL = Delisted, SSC = Species of Special Concern, SOC = Species of Concern, UR = Under review, BGEPA = Bald and Golden Eagle Protection Act			
Source: MacDill AFB 2018			

1 **Temporary Trailer Locations, Permanent Potential MISO Facility, and Relocated Facility Locations**

2 All of the potential temporary and permanent facility locations, as well as the relocation sites consist of
3 either developed (i.e., vehicle maintenance facility, military family housing, or after school care facility),
4 maintained low-quality vegetation/grasses (i.e., the temporary trailer locations, new vehicle maintenance
5 facility location), or were previously developed/demolished and now consist of low-quality
6 vegetation/grasses (i.e., the new military family housing area and new after school care facility).

7 No federally or state listed species are known to be located within the project area; however, the ditches
8 and water retention areas located near T1 and T2 (see Figure 2) do support wildlife, as wood storks
9 (*Mycteria americana*) have been consistently observed in these features and foraging and resting near

1 the temporary trailer locations. In addition, bald eagles (*Haliaeetus leucocephalus*) have been observed
2 feeding and roosting in areas near the Proposed Action. At the potential new after school care facility
3 there is a Bald Eagle nest located approximately 500 feet (ft) to the southwest of the site (near the
4 intersection of Hangar Loop Drive and Second Avenue) within a 40-acre area consisting of mowed grass
5 and trees (Figure 2). A second nest has recently been identified by MacDill AFB and is located
6 approximately 2,000 ft from T2 (not shown on Figure 2).

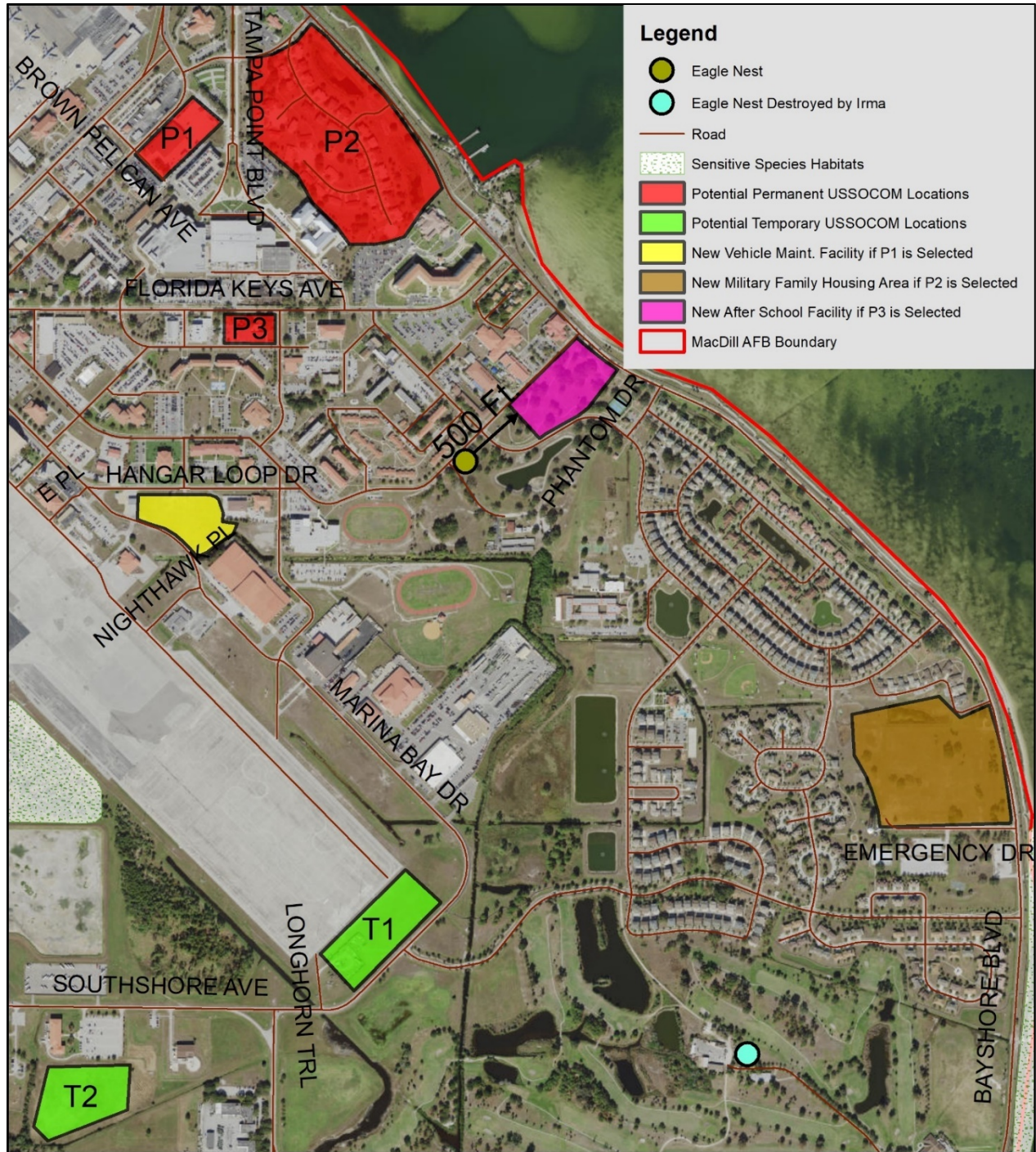
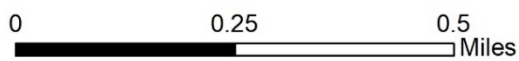


Figure 2. Proposed Facility Locations
Biological Resources



3.3 CULTURAL RESOURCES (INCLUDING VISUAL RESOURCES)

Cultural resources are historic districts, sites, buildings, structures, or objects considered important to a culture, subculture, or community for scientific, traditional, religious, or other purposes. Depending on the condition and historic use, such resources might provide insight into the cultural practices of previous civilizations, or they might retain cultural and religious significance to modern groups. Cultural resources that are listed in or eligible for listing in the National Register of Historic Places (NRHP) are known as historic properties.

Section 106 of the NHPA requires federal agencies to assess the impact of their undertakings on historic properties in the Area of Potential Effect (APE). The APE is the “geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 CFR 800.16[d]). MacDill AFB has defined the APE as a 0.25-mile radius around the proposed facility construction areas. MacDill AFB is consulting with the Florida State Historic Preservation Officer (SHPO) under Section 106 of the National Historic Preservation Act (NHPA). MacDill AFB is consulting with three Native American tribes (Seminole Tribe of Florida, Miccosukee Tribe of Indians of Florida, and Seminole Nation of Oklahoma) with an expressed interest in activities at MacDill AFB.

Cultural resources include historic properties and archaeological sites. There are two historic districts on Base, the MacDill Field Historic District and the MacDill Field Staff Officer’s Quarters Historic District. The 2 historic districts, 29 historic facilities, and 9 known archaeological sites located at MacDill AFB are not located within the APE. Using survey data and other information, MacDill AFB has developed a GIS database that identified areas of “high,” “medium,” and “low” probability for archaeological resources.

NEPA provides general direction on the analysis of visual impacts by establishing that the federal government use all practicable means to ensure all Americans safe, healthful, productive, aesthetically and culturally pleasing surroundings (42 U.S. Code [U.S.C.] 4331[b][2]). Thus, a visual analysis should determine if and how a project’s visual appearance would potentially substantially affect the public’s view of the area, especially when those views are associated with important scenic, recreational, historic, and cultural resource values.

Temporary Trailer Locations

Temporary Trailer Preferred Location (“T1”)

T1 is located within an open field adjacent to the southern ramp. No buildings and thus, no historic resources are located at the site. The area has a “medium” probability for archaeological resources;

1 however, the site was recently surveyed and no potential archaeological sites were detected and there
2 are no known archaeological sites located within one half mile of the site. Visually, the site consists of
3 maintained low vegetative cover with unobstructed views.

4 Former Landfill Location Alternative (“T2”)

5 T2 overlies a closed landfill consisting of maintained vegetation. Despite its prior use as a landfill, the area
6 has a “medium” probability for archaeological resources. The site was recently surveyed for cultural
7 resources and no potential archaeological sites were detected and the nearest archaeological site is
8 located approximately 0.25 miles to the south. Visually, the site consists of vegetation with unobstructed
9 views.

10 **Permanent MISO Facility Locations**

11 Permanent USSOCOM MISO Facility Preferred Location (“P1”)

12 P1 is the existing vehicle maintenance facility. The facility is not an historic resource and there is a “low”
13 probability for archaeological resources. There are no known archaeological sites located within one half
14 mile of the site. The MacDill Field Historic District is located across the street from P1. Visually, the building
15 is consistent with Base architecture.

16 Existing Military Family Housing Area (“P2”)

17 Constructed in the late 1990s, P2 is one of MacDill AFB’s military family housing areas. The housing is not
18 an historic resource. While the area has a “high” probability for archaeological resources, because the
19 area was substantially disturbed for the construction and subsequent demolition of the old hospital, it is
20 likely no archaeological sites exist. The site is located approximately 0.25 mile east of the MacDill Field
21 Staff Officer’s Quarters Historic District. There are no known archaeological sites located within one half
22 mile of the site. Visually, the building is consistent with Base architecture.

23 Existing After School Care Facility (“P3”)

24 P3 includes two buildings and surrounding grounds. The buildings are not historic resources and there is
25 a “low” probability for archaeological resources. P3 is located approximately 450 ft from two known
26 historic facilities – Building 501 and Building 41 – although neither building is associated with one of the
27 two historic districts. There are no known archaeological sites located within one half mile of P3. Visually,
28 the buildings are consistent with Base architecture.

1 **Relocated Facility Locations**

2 **New Vehicle Maintenance Facility Location**

3 This location consists of maintained low vegetation cover. No buildings and thus, no historic resources are
4 located at the site. This site is located approximately 200 ft from Building 45 and approximately 400 ft
5 from Building 68, both of which are historic buildings but not part of one of the two historic districts. The
6 area has a “medium” probability for archaeological resources. There are no known archaeological sites
7 located within one half mile of the site. Visually, the site consists of maintained low vegetation cover with
8 unobstructed views.

9 **New Military Family Housing Area**

10 This location is the former hospital and consists of low vegetation cover and surrounding mature trees.
11 No buildings and thus, no historic resources are located at the site. While the area has a “high” probability
12 for archaeological resources, because the area was substantially disturbed for the construction and
13 subsequent demolition of the old hospital, it is likely no archaeological sites exist. There are no known
14 archaeological sites located within one half mile of the site. Visually, the site consists of maintained low
15 vegetation cover with unobstructed views, especially east towards Hillsborough Bay.

16 **New After School Care Facility**

17 This location consists of maintained low vegetation cover and mature trees. The area has a “high”
18 probability for archaeological resources and a majority of the area was recently surveyed (Panamerican
19 Consultants 2018); however, the survey did not discover any resources. There are no known
20 archaeological sites located within one half mile of the site. The site is located approximately 0.25 mile
21 southeast of the MacDill Field Staff Officer’s Quarters Historic District. Visually, the site consists of
22 maintained low vegetation cover and trees with semi-occluded views due to the trees and nearby
23 buildings.

24 **3.4 NOISE**

25 Noise is defined as unwanted or annoying sound that interferes with or disrupts normal human activities.
26 Although continuous and extended exposure to high noise levels (e.g., through occupational exposure)
27 can cause hearing loss, the principal human response to noise is annoyance. The response of different
28 individuals to similar noise events is diverse and is influenced by the type of noise, perceived importance
29 of the noise, its appropriateness in the setting, time of day, type of activity during which the noise occurs,
30 and sensitivity of the individual.

1 *Construction Noise*

2 Construction noise also uses an average noise level called equivalent noise levels abbreviated as Leq. Leq
 3 is similar to Day-Night Average Sound Level (DNL) typically used to describe aircraft noise, but the
 4 averaging period is one hour and assumes that noise created in one hour is constant throughout the
 5 workday. Other than pile-driving operations, most construction equipment generates noise levels
 6 between 80-90 A-weighted decibels (dBA).

7 *Operational Noise*

8 As previously mentioned, around airports, the typical noise metric is expressed as dB DNL. This metric is
 9 an average sound level over a 24-hour period and adds a 10 dB penalty for noise occurring between the
 10 hours of 10:00 p.m. and 7:00 a.m. MacDill AFB published noise contours in 2014 reflecting new aircraft
 11 operational data. Noise from aircraft operations dominate the overall noise environment at MacDill AFB,
 12 and at each of the proposed project locations. Existing noise levels at the proposed locations are less than
 13 65 dB DNL under normal noise conditions (MacDill AFB 2014) and well outside of the 65 dB DNL noise
 14 contour. Table 3-3 presents the nearest identified sensitive noise receptor to each of the potential project
 15 areas. In addition, location P3 is located near existing childcare/school-related facilities.

Table 3-3 Distance to Nearest Residence from Proposed and Alternative Project Locations

Project	Nearest Residence	Distance (feet)
Temporary T1	Fortress Drive	1,300
Temporary T2	Okinawa Street	3,700
Permanent P1	Dune Lily Street	550
Permanent P2	Constellation Boulevard	2,200
Permanent P3	Tuskegee Court	940
New Vehicle Maintenance Facility (if P1 is selected)	Tinker Street	3,000
New Military Family Housing (if P2 is selected)	Viper Drive	500
New After School Facility (if P3 is selected)	Constellation Boulevard	530

1 **3.5 TRANSPORTATION**

2 Four entry gates provide access onto MacDill AFB: Dale Mabry Highway (main gate), Bayshore Boulevard,
 3 MacDill Avenue, and Tanker Way. Large vehicles (contractor trucks, delivery vehicles, RVs) enter through
 4 the Tanker Way Gate. Privately owned vehicles (POVs) access MacDill AFB through the Tanker Way Gate
 5 during the morning rush hours only. The largest morning traffic volume flows through the main gate at
 6 Dale Mabry Highway and the Bayshore Boulevard gate with 36-percent and 34-percent respectively.
 7 MacDill gate and Tanker gate carry 18 and 12-percent respectively. In the afternoon, when the Tanker
 8 Gate is closed to POV traffic, traffic flow adjusts to 42-percent through Bayshore Boulevard, 41-percent
 9 through Dale Mabry, and 17-percent through the MacDill gate (MacDill 2010).

10 Once on-Base, various arterials, collectors, and local streets distribute traffic. Main arterial roads include
 11 North and South Boundary Boulevards, Bayshore Boulevard, Marina Bay Drive, and Tampa Point
 12 Boulevard. A traffic study prepared in 2010 analyzed future traffic volumes and determined that
 13 implementing roadway/parking project remedies would render service levels for traffic on-base as
 14 generally acceptable (MacDill AFB 2010). Since 2010, most of the suggested improvements have been
 15 completed. Table 3-4 shows the current Level of Service and volume to capacity levels for various on-base
 16 roadways.

17 Parking is limited at MacDill AFB, especially for operational buildings. MacDill AFB actively manages
 18 transportation to minimize peak traffic impacts (e.g. staggered work shifts and more efficient Base-access
 19 measures). Each of the proposed or alternative project sites have direct access via existing roadways.

20 **Table 3-4 2019 Roadway Network Level of Service (LOS) Analysis**

Roadway/Segment	Number of Lanes	LOS - Standard	Peak Hour Capacity	2019 Peak Hour	LOS	Volume to Capacity Ratio
South Boundary Boulevard Between Hangar Loop Drive & Zemke Avenue	4		1,960	1,400	B	0.71
North Boundary Boulevard Between Zemke Avenue & MacDill Avenue	4		1,770	1,800	E	1.02
Between MacDill Avenue & Kingfisher Street	6**		3,082	2,100 3,100	C	0.68
Between Kingfisher Street & Tanker Way	6**		3,082	2,400	E	1.01
Between Tanker Way & Dale Mabry Gate	4		1,770		F	1.36
Tanker Way Between North Boundary Boulevard & Tanker Way Gate	2		729	700	D	0.96
Bayshore Boulevard Between Florida Keys Avenue & Chevron Park Drive/SOCOM Memorial Way	2		1,140	800	C	0.70
Between Chevron Park Drive/SOCOM Memorial Way & Zemke Avenue	4		1,770	1,800	E	1.02
	4		1,770	1,700	D	0.96

Roadway/Segment	Number of Lanes	LOS - Standard	Peak Hour Capacity	2019 Peak Hour	LOS	Volume to Capacity Ratio
Between Zemke Avenue & Bayshore Gate						
Zemke Avenue						
Between Bayshore Boulevard & North Boundary Boulevard (east)	4		1,593	850	C	0.53
Between South Boundary Boulevard & South MacDill Avenue	3*		765	700	D	0.91
Between South MacDill Avenue & Kingfisher Street	3*		765	750	D	0.98
Between Kingfisher Street & North Boundary Boulevard (west)	2		729	1,100	F	1.51
Florida Keys Avenue						
Between Bayshore Boulevard & Hangar Loop Drive	2		729	350	C	0.48
Hillsborough Loop Drive						
Between South Boundary Boulevard & Florida Keys Avenue	2		792	650	C	0.82
South MacDill Avenue						
Between Zemke Avenue & North Boundary Boulevard	3*		765	500	C	0.65
Kingfisher Street						
Between Zemke Avenue & North Boundary Boulevard	3*		911	850	D	0.93
SOCOM Memorial Way						
Between Hillsborough Loop Drive & Tampa Point Boulevard	2		572	250	B	0.44
Chevron Park Drive/SOCOM Memorial Way						
Between Tampa Point Boulevard & Bayshore Boulevard	2		572	1,100	F	1.92
Hangar Loop Drive						
Between Florida Keys Avenue & South Boundary Boulevard	2		792	750	D	0.95
* Roadway includes a center two-way left turn lane. ** Eastbound direction has 3 lanes, but westbound direction only has 2 lanes; however, due to the continuous green indication for the outside lane at the Kingfisher and Zemke intersections, the 2 lanes operate with a capacity similar to 3 lanes Notes: - This analysis assumes that Centcom Avenue has been closed and Zemke Avenue has been extended to Bayshore Boulevard. - This analysis assumes that Tampa Point Boulevard is closed at Bayshore Boulevard and Chevron Park Drive/SOCOM Memorial Way extension is open. - V/C is based on the maximum service volume at the adopted LOS standard. - LOS thresholds on North Boundary Blvd from Centcom Avenue to Zemke Avenue are conservative. The segment characteristics are borderline Class I and Class II. The segment may operate better than shown in this analysis. Source: MacDill AFB 2010						

1 **3.6 WASTES, HAZARDOUS MATERIALS, AND STORED FUELS** _____

2 Hazardous materials and wastes are used and generated at MacDill AFB. Approximately 105 shops,
 3 hangars, and maintenance facilities Base-wide use hazardous materials and generate wastes. Wastes are
 4 managed and accumulated at approximately 50 locations throughout the Base and are managed at
 5 satellite accumulation points Base-wide.

6 Most generated waste water is treated at the Base’s privatized waste water treatment plant. The plant is
 7 permitted to treat a volume of 1.2 million gallons per day (mgd). Currently, the plant operates at an
 8 average of approximately 0.6 mgd. All treated waste water is currently reused on- Base by reclamation,
 9 principally through spray application at the golf course located at the southeast quadrant of MacDill AFB.

1 Two active Environmental Restoration Program (ERP) sites are located near the project area (Figure 3).
2 The first site is located on the Golf Course and is Solid Waste Management Unit-2 (SWMU-2) and the
3 second is located between Golf Course Avenue and South Shore Road near the Dog Kennel and is
4 designated as SWMU-3. SWMU-2 was operated during the 1940s and SWMU-3 was operated during the
5 1950s. Both are no longer in use. No liners, engineered caps, leachate systems or other modern landfill
6 practices are installed at these old landfills closed prior to the advent of these practices. Both these sites
7 are managed under non-residential land use controls. Appendix E provides ERP site summaries for SWMU-
8 2 and SWMU-3.

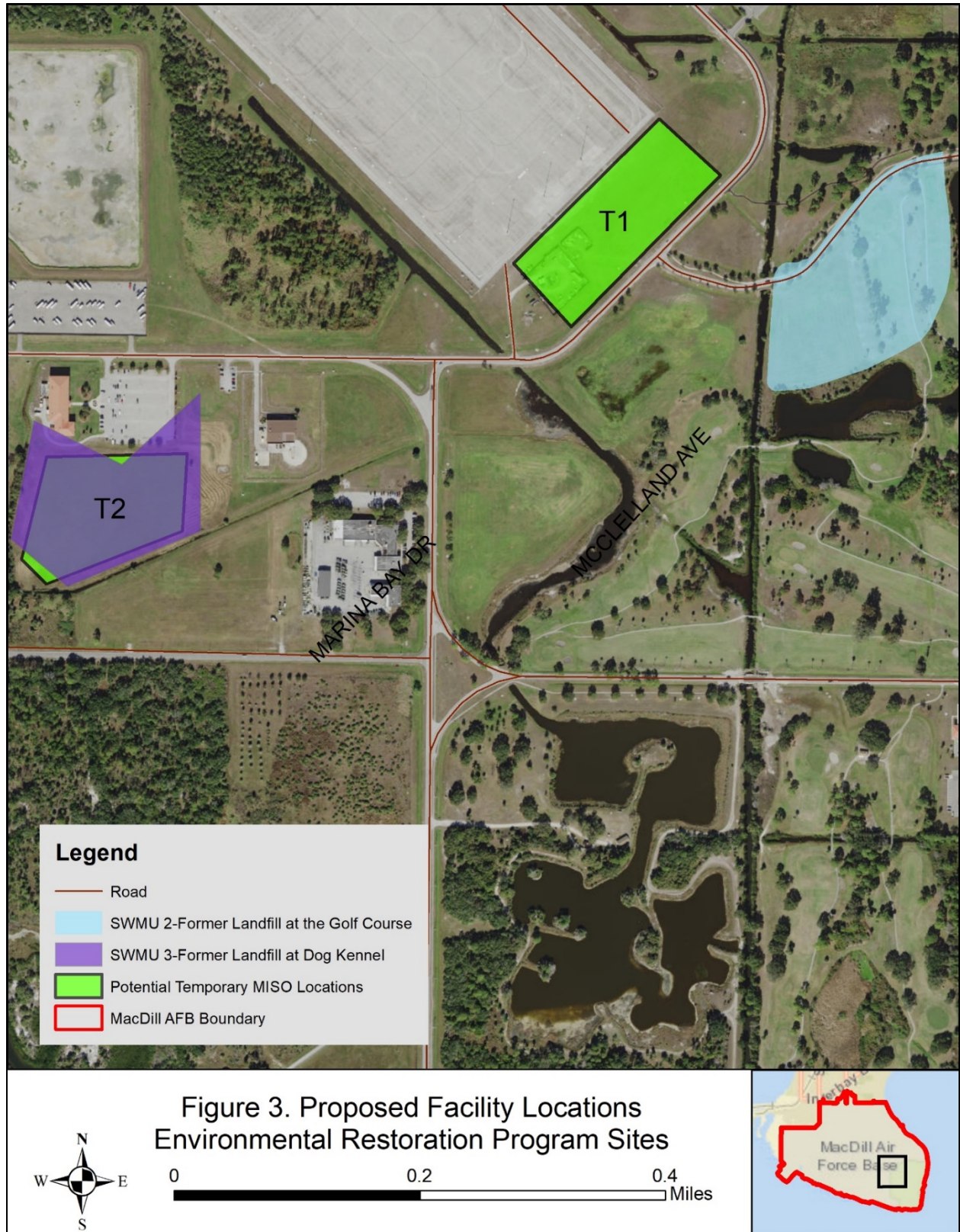


Figure 3. Proposed Facility Locations
Environmental Restoration Program Sites

1 **3.7 FLOODPLAINS** _____

2 According to information provided by the Federal Emergency Management Agency (FEMA) approximately
3 80 percent of the Base is within the 100-year floodplain. The FEMA maps indicate that all the residential,
4 industrial, and institutional (medical and education) land uses on the Base are within the 100-year
5 floodplain, including most of the commercial and aviation support areas. The majority of the 20 percent
6 of the Base that is outside of the floodplain is designated for airfield operations. As shown on Figure 4, all
7 of the proposed and alternative sites are located within the 100-year floodplain.

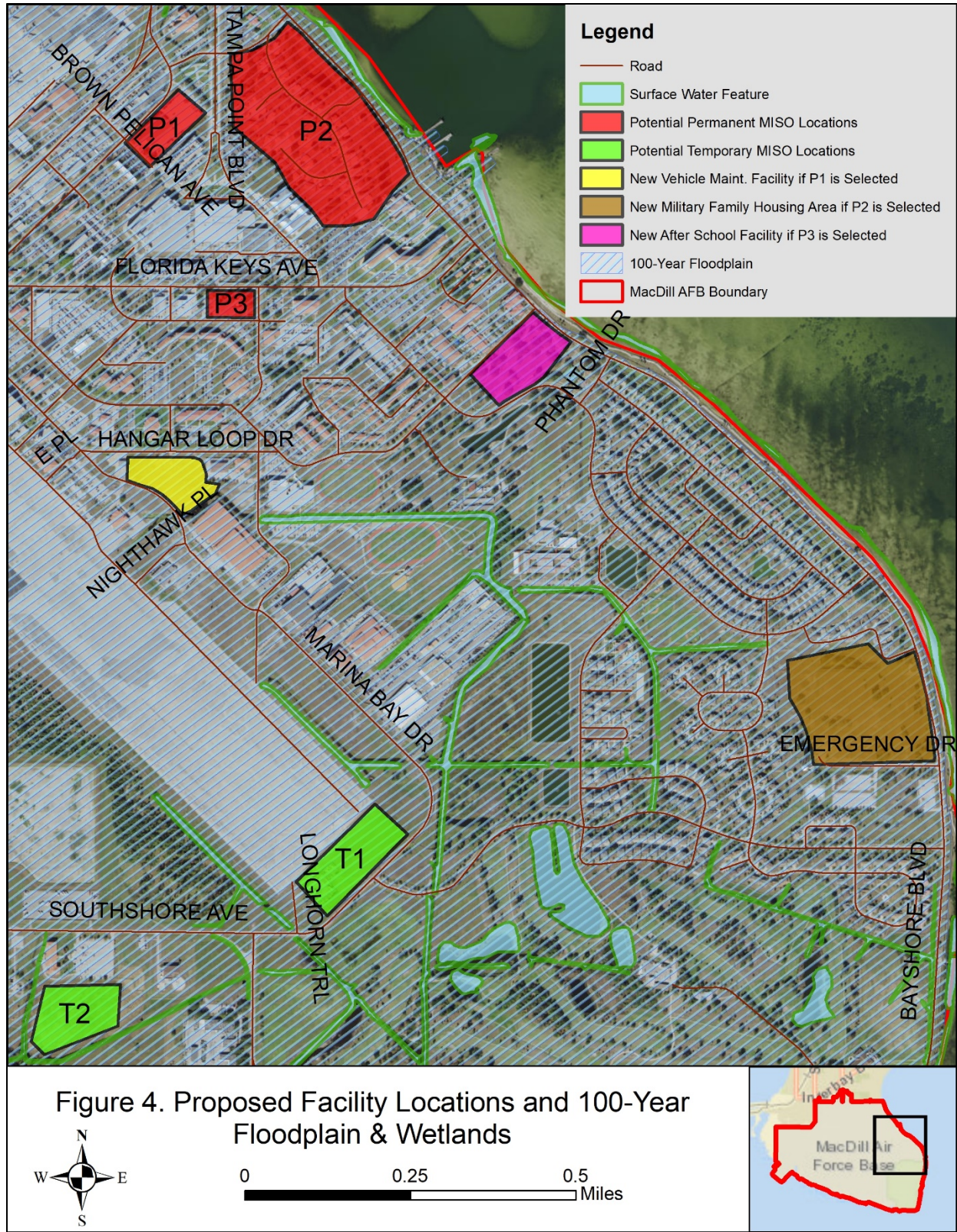
8 EO 11988, *Floodplain Management*, requires federal agencies to avoid to the extent possible the long and
9 short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid
10 direct and indirect support of floodplain development wherever there is a practicable alternative. The
11 federal CZMA of 1972 also requires federal agencies to demonstrate a proposed action is consistent with
12 the Florida Coastal Management Program. In accordance with EO 11988, the CZMA, and Air Force
13 Instruction 32-7064, *Integrated Natural Resources Management*, the Air Force has issued an early public
14 notice describing the proposed activity within the 100-year floodplain at MacDill AFB (Appendix D).

15 **3.8 WATER RESOURCES** _____

16 Water resources consist of the natural and man-made sources of water that are available for use by and
17 for the benefit of humans and the environment. Water resources include groundwater, surface water,
18 and wetlands. Evaluation of water resources examines the quantity and quality of the resource and its
19 demand for various purposes.

20 **Groundwater**

21 MacDill AFB has two aquifer systems: a shallow, surficial aquifer and the underlying regional Floridan
22 aquifer. The surficial aquifer system is approximately 20 feet thick and is used to supply small irrigation
23 systems off-Base and is not used by MacDill AFB. This shallow aquifer ranges from the surface to
24 approximately 5 feet below ground surface at inland locations. The surficial aquifer is highly susceptible
25 to groundwater contamination, primarily due to shallow water table depth and permeable sediments.
26 The Floridan aquifer is not significantly recharged from the surface at MacDill AFB or the surficial aquifer.
27 The groundwater quality of the Floridan aquifer has not been fully defined due to a lack of monitoring
28 wells. (MacDill AFB 2018).



1 Surface Water

2 MacDill AFB is within an independent watershed with no surface waters entering or leaving the Base prior
3 to discharge to Tampa and Hillsborough bays. Surface water flows on the Base are primarily stormwater
4 runoff. Figure 4 depicts the surface water features within the greater project area; these features consist
5 predominantly of drainage ditches and water retention areas. Ditches and pipes have been constructed
6 to drain the developed portions of the Base. Runoff from all the proposed and alternative sites flows
7 toward Hillsborough Bay.

8 MacDill AFB has two NPDES permits: A Multi-Sector General Permit (MSGP) for stormwater discharge
9 associated with industrial activity (Permit No. FLR05E128) and a Phase II MS4 general stormwater permit
10 (Permit No. FLR04E059). The MSGP primarily covers air transportation activities. MacDill AFB maintains
11 and follows a Storm Water Pollution Prevention Plan (SWPPP) that documents existing stormwater
12 management practices and guides personnel who are responsible for ensuring that potential stormwater
13 pollution is minimized.

14 Wetlands

15 More than 20 percent of MacDill AFB is covered by wetlands, totaling 1,195 acres (MacDill AFB 2018). As
16 shown on Figure 4, none of the proposed or alternative sites are located within or directly adjacent to a
17 surface water feature.

18 3.9 GEOLOGICAL RESOURCES

19 Geological resources consist of the Earth's surface and subsurface materials. Within a given physiographic
20 province, these resources typically are described in terms of geology, topography and physiography, and
21 soils.

22 Geology

23 The surficial geology of MacDill AFB consists of unconsolidated sand, clay, and marl. Sands in this unit
24 range from 5 to 20 feet thick with clay layers up to 40 feet thick. This surficial layer is very thin to absent
25 on the eastern side of the installation, and underlying limestone formations may outcrop in this area.
26 Underlying the surficial layer are the Tampa and Suwannee limestones, which range from 250 to 500 feet
27 thick (MacDill AFB 2018).

1 **Topography and Physiography**

2 The geologic features of MacDill AFB are consistent with the generally flat, sandy terrain of the
3 surrounding area. Elevations range from sea level at the southern edge to approximately 15 feet above
4 MSL in the northern portions; however, much of the installation is less than 5 feet above MSL (MacDill
5 AFB 2018).

6 **Soils**

7 Most of the soil at the airfield and cantonment area on MacDill AFB is fill derived from dredging activities
8 in surrounding areas that was used during construction of the installation to fill existing swamps and
9 create stable construction surfaces (MacDill AFB 2017b). Surface cover in the proposed construction areas
10 is currently a combination of pavement, buildings, and maintained vegetation.

11 **3.10 SAFETY AND OCCUPATIONAL HEALTH** _____

12 For the purpose of this EA, this section focuses on the analysis of impacts to safety and occupational health
13 resulting from the placement of temporary facilities, demolition of existing buildings, and construction of
14 a new permanent facility.

15 Safety and occupational health refers to the health and well-being of Airmen, MacDill employees and
16 contractors, and other branches of services/agencies that access MacDill AFB.

17 **Construction Safety**

18 All performing construction activities at MacDill AFB are responsible for following federal Occupational
19 Safety and Health Administration (OSHA) regulations and are required to conduct these activities in a
20 manner that does not increase risk to workers or the public. OSHA regulations address the health and
21 safety of people at work and cover potential exposure to a wide range of chemical, physical, and biological
22 hazards, and ergonomic stressors. The regulations are designed to control these hazards by eliminating
23 exposure to the hazards via administrative or engineering controls, substitution, use of personal
24 protective equipment (PPE), and availability of Safety Data Sheets.

25 Occupational health and safety is the responsibility of each employer, as applicable. Employer
26 responsibilities are to review potentially hazardous workplace conditions; monitor exposure to workplace
27 chemicals (e.g., asbestos, lead, hazardous substances), physical (e.g., noise propagation, falls), and
28 biological (e.g., infectious waste, wildlife, poisonous plants) agents, and ergonomic stressors; and
29 recommend and evaluate controls (e.g., prevention, administrative, engineering, PPE) to ensure exposure

1 to personnel is eliminated or adequately controlled. Additionally, employers are responsible for ensuring
2 a medical surveillance program is in place to perform occupational health physicals for those workers
3 subject to the use of respiratory protection, engaged in hazardous waste work, asbestos, lead, or other
4 work requiring medical monitoring.

5 **Asbestos**

6 The MacDill AFB Asbestos Management Plan identifies procedures for management and abatement of
7 asbestos. Prior to renovation or demolition activities, asbestos sampling is performed and, if present, the
8 asbestos is removed in accordance with applicable federal and state regulations. The demolition
9 associated with the Proposed Action for P1 are Buildings 500 (built in 1967), 500 S1 (built in 1967), and
10 510 (built in 1988); P2 is multiple housing units (built from 1998 and 2004); and P3 is Building 307 (built
11 in 1968). Asbestos survey reports were completed for P1 (Building 500 only in 2010) and for P3 (Building
12 307 in 1997 and 2005) (MacDill AFB 1996-2011). For Building 500, no asbestos containing materials were
13 observed. For Building 307, no friable asbestos-containing materials were observed in the building.
14 Asbestos was detected or assumed in the following non-friable materials: floor tile.

15 **Lead-Based Paint**

16 The Base Civil Engineer assumes that all structures constructed prior to 1978 possibly contain lead-based
17 paint (LBP). When required, LBP abatement is accomplished in accordance with applicable federal and
18 state regulations, and Base procedures, prior to demolition activities to prevent any health hazards.

19 **3.11 SOCIOECONOMICS**

20 Socioeconomics comprises the basic attributes and resources associated with the human environment,
21 particularly population and economic activity. The region of influence for socioeconomics is The Tampa-
22 St. Petersburg-Clearwater, Florida Housing Market Area (hereafter the Tampa HMA), as defined by the
23 U.S. Department of Housing and Urban Development (HUD 2015).

24 According to the 2017 MacDill AFB Economic Impact Statement (MacDill AFB 2017b), MacDill AFB's
25 population is 53,373, including military and civilian personnel and dependents. In addition to the
26 personnel employed at MacDill AFB, there are over 37,880 retirees and spouses of military retirees within
27 the local community. Economic spending associated with MacDill AFB personnel, construction and other
28 services that supports local expenditures amounted to \$705,687,086 in 2017 (MacDill AFB 2017b).

1 The Tampa HMA consists of Hernando, Hillsborough, Pasco, and Pinellas Counties and includes MacDill
2 AFB, the Port of Tampa, and the University of South Florida, contributing a combined \$31.5 billion annually
3 in economic impact to the Tampa HMA. The 2015 population of the Tampa HMA was an estimated 2.94
4 million, an average increase of 32,150, or 1.1 percent, annually since 2010. As of March 2015, the home
5 sales market in the HMA was slightly soft, with an estimated 2.2-percent vacancy rate, down from 3.5
6 percent in April 2010. Similarly, the rental housing market was estimated at 8.6 percent in 2015, down
7 from 13.1 percent in April 2010. The apartment rental market had a vacancy rate of 4.8 percent in 2015,
8 down from 5.8 percent a year earlier (HUD 2015).

9 Hillsborough County had an estimated population in July 2017 of 1,408,566, an increase of approximately
10 15 percent from April 2010. The total number of housing units in July 2017 was 580,323, with over 11,500
11 building permits (US Census Bureau 2018). With an enrollment of over 200,000 students in 2014,
12 Hillsborough County is one of the largest school districts in the Nation. Hillsborough County Fire Rescue
13 maintains 43 fire and one rescue station, and equips more than a thousand career firefighters,
14 paramedics, and staff, in addition to approximately 100 Reserve Responders. The Hillsborough County
15 Sheriff's Office is comprised of more than 4,000 law enforcement officers, detention deputies and civilians
16 (Hillsborough County 2018).

17 **4 ENVIRONMENTAL CONSEQUENCES**

18 This section presents an analysis of the potential environmental consequences of the Proposed Action
19 and alternatives on each of the resource areas described in Section 3, *Affected Environment*. The Proposed
20 Action and alternatives were evaluated for their potential environmental consequences on the
21 environmental resources in accordance with CEQ NEPA regulations at 40 CFR 1508.8.

22 **4.1 AIR QUALITY**

23 Emissions from the Proposed Action would consist of emissions during the construction phase and
24 emissions during the operational phase. Construction emissions would be short-term and primarily occur
25 within the boundaries of the site. Operational emissions would be from additional MISO personnel
26 commuting to the facilities, and their dependents driving within the region. Because the project area is in
27 attainment for all NAAQS, a General Conformity Rule applicability analysis is not necessary. However, the
28 General Conformity Rule *de minimis* values provide a useful and validated threshold to compare proposed
29 action and alternatives' estimated emissions for potential adverse impact to Air Quality. The *de minimis*

1 values are published in 40 CFR 93.153 and are 100 tons per year (tpy) of all criteria pollutants and 25 tpy
2 for lead (Pb). Volatile organic compounds (VOC) are a precursor to ozone and are calculated and compared
3 against the *de minimis* value of 100 tpy to prevent excess ozone generation. Operational emissions for the
4 stationary emissions (building heating and cooling and emergency generator) can be compared to existing
5 emissions to determine potential for adverse impact based on permitted emissions that have already
6 undergone review by the EPC for no adverse impact to regional air quality.

7 Construction emissions would include emissions sources from equipment used to perform site grading,
8 building construction, parking area paving, and application of architectural coatings. Operational
9 emissions include operating the heating and cooling equipment of the building, vehicle emissions from
10 new personnel and their dependents, and emissions from emergency generators for an assumed
11 maximum of 500-hours per year per generator. Estimated air pollutant emissions resulting from the
12 Proposed Action were modeled using a publicly available air quality modeling platform. See Appendix C
13 for additional information and detailed calculations.

14 **Proposed Action**

15 As presented in detail in Appendix C and summarized here, implementation of Proposed Action would
16 result in a less than significant impact to air quality as both construction and operational emissions would
17 be well below *de minimis* levels. The operational impacts include vehicle miles driven by the new
18 personnel and their dependents.

19 An emergency generator would be installed to provide power to the P1 Permanent USSOCOM MISO
20 Facility in the event of a power outage. This generator and associated diesel fuel tank would be permitted
21 through the EPC by modification of the existing Base-wide permit (Air Permit No. 0570141-022-AO or any
22 future versions) (USAF 2018). Based on comparison of the estimated annual emissions of this generator
23 to the emissions stated in annual reports, the additional generator and estimated emissions from the
24 operation of the office-like building would not affect permitting thresholds or the ability of MacDill AFB
25 to comply with permit conditions.

26 **Alternative Temporary and Permanent MISO Facility and Relocated Facility Locations**

27 Implementation of Alternative Actions at any of the alternative temporary and permanent locations would
28 result in a less than significant impact to air quality as both construction and operational emissions would
29 be well below *de minimis* levels. The construction assumptions for the alternative MISO facilities would
30 be similar to the Proposed Action, including emergency generator permitting requirements. See Appendix
31 C for assumptions and model results for Alternative T2, P2, and P3.

1 Alternative T2 estimated emissions would be similar to Alternative T1. Alternative P2 would result in the
2 overall greatest estimated short-term emissions from construction due to the volume of housing to be
3 removed and replaced; however, the emissions would still be well below the *de minimis* thresholds.
4 Operational emissions from the emergency generator use and additional personnel for the MISO Facility
5 alternatives (P2, P3) would be similar to the Proposed Action P1. Operational emissions, including the
6 additional 450 personnel in the Temporary Trailer T2 would be the same as T1.

7 **No Action Alternative**

8 Under the No Action Alternative, the temporary and permanent MISO facilities would not be constructed,
9 and existing facilities would not be relocated. Air quality resources as described in Section 3.1 would
10 remain unchanged. Therefore, implementation of the No Action Alternative would result in no significant
11 impact to air quality.

12 **4.2 BIOLOGICAL RESOURCES**

13 This analysis focuses on vegetation types or wildlife that are important to the function of the ecosystem
14 or are protected under federal or state law. Impacts to biological resources would be considered
15 significant if, after the completion of required consultations and authorizations, a permanent loss of high
16 value habitat for fish and wildlife, or reduction in the population of a special status species would result
17 from the Proposed Action.

18 **Proposed Action**

19 Implementation of the Proposed Action would result in no adverse effect to known biological resources
20 as there are no known protected species or critical habitat located within or adjacent to the proposed
21 locations that would be impacted.

22 The proposed temporary trailers would be located in a 7.0-acre undeveloped area immediately southeast
23 of the south ramp. The site consists of maintained low vegetative cover with no trees and is of low
24 ecological value. Ground-disturbing activities would primarily occur in previously disturbed areas resulting
25 in negligible, short term effects to biological and natural resources at the site. It is unlikely that the gravel
26 parking lot would become attractive nesting habitat for the least tern (*Sterna antillarum*). This is because
27 the anticipated level and periodicity (all day/night) of parking activity makes it highly unlikely terns would
28 select the area for nesting. Also, the gravel would be much finer and more compacted than the tern's
29 preferred nesting habitat. Once the new permanent MISO facility is constructed, the trailers would be
30 removed, and the site would revert back to pre-development conditions.

1 Negligible, short-term, adverse effects on biological and natural resources would be expected from the
2 construction of the new MISO facility at the preferred location. The project site currently serves as the
3 vehicle maintenance facility and the 3.7-acre area is largely covered with a concrete parking area and the
4 existing building footprint. This area of MacDill AFB is highly developed, and any green space in the area
5 is primarily low, maintained vegetation of low ecological value. There are a small number of trees in the
6 southeast corner of the site and along Hillsborough Avenue and attempts would be made to maintain
7 these trees during construction of the new facility.

8 Construction of the new vehicle maintenance facility would occur on a 4.5-acre lot that is currently
9 undeveloped with low, maintained vegetation. The surrounding area is highly developed and maintained
10 vegetation is of low ecological value. The Air Force would consider the placement of anti-raptor perching
11 devices (e.g., bird spikes) if raptor perching is identified as an issue following construction.

12 No federal- or state-listed species or their habitat are present at the Proposed Action locations, nor would
13 any be impacted. Wood storks have been observed in the water features near T1; however, there would
14 be no direct impact to the water features and the species is habituated to activity and noise levels
15 associated with on-going and proposed demolition, construction, and vehicle activity at MacDill AFB.
16 Noise from proposed demolition and construction activities would be temporary and confined to regular
17 working hours. Thus, implementation of the Proposed Action may affect, but is not likely to adversely
18 affect the Wood stork. Therefore, implementation of the Proposed Action would result in no adverse
19 effect to biological resources. Therefore, implementation of the Proposed Action would result in no
20 adverse effect to biological resources. Coordination with USFWS is underway to confirm that the project
21 would have no adverse effect on listed species.

22 **Alternative Temporary and Permanent MISO Facility and Relocated Facility Locations**

23 Implementation of the Alternative Actions at any of the alternative temporary and permanent locations
24 would result in no adverse effects to known biological resources as there are no known biological
25 resources within the alternative locations. Ground disturbing activities would primarily occur in previously
26 disturbed/industrialized areas. Construction of the temporary and permanent facilities would include the
27 placement of anti-raptor perching devices (e.g., bird spikes).

28 Given the proximity of Bald Eagle nest located approximately 500 ft southwest of the New After School
29 Facility location (P3), if this alternative is selected, the Air Force would comply with the USFWS National
30 Bald Eagle Management Guidelines (USFWS 2007), to include maintaining natural vegetative buffers and

1 avoiding disturbance at the nesting site by scheduling construction activities outside of the nesting season,
2 if eggs or young are present.

3 Wood storks have been observed in the water features near T2; however, there would be no direct impact
4 to the water features and the species is habituated to activity and noise levels associated with on-going
5 and proposed demolition, construction, and vehicle activity at MacDill AFB. Noise from proposed
6 demolition and construction activities would be temporary and confined to regular working hours. Thus,
7 implementation of the Alternative Actions may affect, but are not likely to adversely affect the Wood
8 stork. Therefore, implementation of the Alternative Actions would result in no adverse effect to biological
9 resources.

10 **No Action Alternative**

11 Under the No Action Alternative, the temporary and permanent MISO facilities would not be constructed,
12 and existing facilities would not be relocated. Biological resources as described in Section 3.2 would
13 remain unchanged. Therefore, implementation of the No Action Alternative would result in no significant
14 impact to biological resources.

15 **4.3 CULTURAL RESOURCES (INCLUDING VISUAL RESOURCES)** _____

16 Under Section 106 of the NHPA, MacDill AFB must determine if the Proposed Action and alternatives
17 would result in an “adverse effect” on historic properties and must avoid, minimize, or mitigate such
18 effects if they would occur. For the purposes of Section 106, an adverse effect is one that changes
19 elements or characteristics of a historic property that make the property eligible for listing. MacDill AFB
20 is consulting with the Florida SHPO and has requested concurrence that the Proposed Action would have
21 no adverse effect on historic properties under Section 106 of the NHPA. MacDill AFB is also consulting
22 with three Tribes and has requested concurrence of no adverse effect (Appendix D).

23 The evaluation of visual resources in the context of environmental analysis typically addresses the
24 contrast between visible landscape elements. Collectively, these elements comprise the aesthetic
25 environment, or landscape character. The landscape character is compared to the Proposed Action’s
26 visual qualities to determine the compatibility or contrast resulting from the construction and demolition
27 activities associated with the Proposed Action.

1 **Proposed Action**

2 Implementation of the Proposed Action would result in no adverse effect to known historic properties
3 because as presented in Section 3.3, *Cultural Resources*, there are no historic properties located within or
4 adjacent to the proposed locations.

5 The proposed temporary trailers would be visually consistent with other trailers being used at MacDill
6 AFB (e.g., the existing MISO trailers) and would not be located near enough to the two historic districts to
7 potentially affect their characteristics. Once the new permanent MISO facility is constructed, the trailers
8 would be removed, and the site would revert back to approximating pre-development conditions. The
9 permanent MISO facility and new vehicle maintenance facility would be constructed in accordance with
10 MacDill AFB's architectural compatibility plan to ensure the facility is visually consistent with the Base
11 architecture. Reflective of P1's location across the street from the MacDill Field Historic District, the
12 permanent MISO facility at P1 would be designed to be compatible with the district's historic architectural
13 styles and consistent with other recent buildings to minimize physical and visual intrusion on the district,
14 as feasible to do so.

15 Prior to installation of the temporary trailers, fill would be placed across the area to raise the finish floor
16 elevation above the 100-year floodplain. Extensive subsurface excavation would not be needed to provide
17 structural support for the temporary trailers, nor the parking lot (the parking lot would not be similarly
18 elevated).

19 Ground-disturbing activities would primarily occur in previously disturbed areas and based on past surveys
20 (i.e., MacDill AFB 2017a; 2018) and assessments, it is highly unlikely that any previously undocumented
21 archaeological resources would be encountered during facility demolition or construction activities. A
22 cultural resources monitor would be present during construction in any undeveloped areas. In the unlikely
23 event of an inadvertent discovery, MacDill AFB would comply with Section 106 of the NHPA, as specified
24 in standard operating procedures described in the MacDill AFB Integrated Cultural Resources
25 Management Plan (MacDill AFB 2017a). Therefore, implementation of the Proposed Action would result
26 in no adverse effect to cultural resources.

27 **Alternative Temporary and Permanent MISO Facility and Relocated Facility Locations**

28 Implementation of the Alternative Actions at any of the alternative temporary and permanent locations
29 would result in no adverse effect to known historic properties because there are no historic properties
30 located within the alternative locations. The temporary and permanent facility alternatives would be

1 constructed in accordance with MacDill AFB's architectural compatibility plan to ensure the facility is
2 visually consistent with the Base architecture.

3 Ground-disturbing activities would primarily occur in previously disturbed areas. Based on past surveys
4 (i.e., MacDill AFB 2017a; 2018) and assessments, it is highly unlikely that any previously undocumented
5 archaeological resources would be encountered during facility demolition or construction activities. A
6 cultural resources monitor would be present during construction in any undeveloped areas. In the event
7 of an unanticipated or inadvertent discovery, MacDill AFB would comply with Section 106 of the NHPA,
8 as specified in standard operating procedures described in the MacDill AFB Integrated Cultural Resources
9 Management Plan (MacDill AFB 2017a). Therefore, implementation of the Alternative Actions would
10 result in no adverse effect to cultural resources.

11 **No Action Alternative**

12 Under the No Action Alternative, the temporary and permanent MISO facilities would not be constructed,
13 and existing facilities would not be relocated. Cultural resources as described in Section 3.3 would remain
14 unchanged. Therefore, implementation of the No Action Alternative would result in no adverse effect to
15 cultural resources.

16 **4.4 NOISE**

17 Noise would be generated under all of the proposed and alternative temporary and permanent facility
18 locations due to construction activities. Once construction is completed and facilities become operational,
19 noise associated with the project would be similar to existing operations. Aircraft noise would continue
20 to dominate the noise environment.

21 **Proposed Action and Alternative Actions**

22 *Construction Noise*

23 Construction of the temporary facilities would necessitate the use of graders, excavators, backhoes, dump
24 trucks, and other miscellaneous equipment that would generate typical noise levels ranging between 80-
25 90 dBA at a distance of 50 feet from the equipment. T1 and T2 would be located too far away from
26 sensitive receptors such as residents in the housing areas with the closest house located about 3,000 feet
27 from T1 and over a mile from T2. As noise decreases with increasing distance from the source,
28 construction-related noise would not result in a significant impact to sensitive noise receptors. In addition,
29 the construction noise would be temporary and generally be confined to normal working hours. Using the
30 Federal Highway Administration's Road Construction Noise Model, Table 4-1 lists the estimated

1 equivalent noise levels (Leq) at the nearest residences. Equivalent Noise Levels are similar to Day-Night
 2 Average Sound Levels (DNL) except there is no 10 dB penalty for environmental night operations between
 3 the hours of 10:00 p.m. and 7:00 a.m. because construction would not normally occur during those hours.

4 **Table 4-1 Noise Levels (Equivalent Noise Levels - Leq) and Distance to Nearest Residence from**
 5 **Proposed and Alternative Project Locations**

Project	Nearest Residence	Distance (feet)	Noise Level (dBA Leq)
Temporary T1	Fortress Drive	1,300	61.3
Temporary T2	Okinawa Street	3,700	52.2
Permanent P1	Dune Lily Street	550	68.8
Permanent P2	Constellation Boulevard	2,200	56.7
Permanent P3	Tuskegee Court	940	64.1
New Vehicle Maintenance Facility (if P1 is selected)	Tinker Street	3,000	54.1
New Military Family Housing (if P2 is selected)	Viper Drive	500	69.6
New After School Facility (if P3 is selected)	Constellation Boulevard	530	69.1

6 *Operational Noise*

7 Both T1 and T2 would be located in areas less than 65 dB DNL and considered compatible with existing
 8 noise zones for any type of facility. In this case, the temporary trailers would be considered an office
 9 building and would be consistent with the noise environment of less than 65 dB DNL. The operation of a
 10 generator would create noise during use; however, generator noise is anticipated to be rare and noise
 11 levels would not impact sensitive noise receptors. Unique to T1, would be its proximity to the south ramp
 12 that would have the potential for additional noise impacts. The 2014 Noise Contours (MacDill 2014) show
 13 a circle of 65 dB DNL in the center of the ramp but does not extend to the edge of the ramp where T1
 14 would be located and therefore the location would be considered allowable for this type of facility under
 15 the current noise environment. However, intermittent noise levels may occur during engine runup
 16 operations, but indoor decibel levels drop approximately 25 dB from outdoors and may cause speech
 17 interference occasionally. Noise levels should be well below potential hearing loss levels. In fact, DOD

1 guidance regarding noise analyses for hearing loss starts at 80 dB DNL which is well above the current
2 noise levels.

3 **Proposed and Alternative Permanent MISO Facility and Relocated Facility Locations**

4 Noise levels due to construction of the proposed permanent facility and alternatives at the nearest
5 respective residence is provided above in Table 4-1. Permanent facility P1 would have the highest noise
6 level at 68.8 dBA at Lily Dune Street and the associated replacement new vehicle maintenance facility
7 would create noise levels of 54.1 dBA at the nearest residence on Tinker Street. The highest overall noise
8 level would be due to the replacement Military Family Housing if P2 is selected. The resulting noise level
9 would be 69.6 dBA. Although these noise levels are above 65 dB DNL, they are temporary and would cease
10 once the site preparation phase of construction is completed. Thus, construction noise would be less than
11 significant. Similar to the temporary facilities, each of the permanent facilities would be located outside
12 of the 65 dB DNL noise zone and would be considered compatible for any type of usage.

13 Noise levels associated with the proposed project and alternatives would be due to construction activities
14 and operation of a generator as needed. Construction noise would be short-term and temporary and
15 cease upon completion. Resulting noise levels would be less than significant and would not impact
16 sensitive noise receptors. Aircraft-generated noise would continue to dominate the noise environment.
17 As discussed below in *Section 4.5, Transportation*, there would be approximately a 3-percent increase in
18 traffic resulting in a very minor increase in noise levels but would be nearly imperceptible.

19 **No Action Alternative**

20 Under the No Action Alternative, the temporary and permanent MISO facilities would not be constructed,
21 and existing facilities would not be relocated. The noise environment as described in Section 3.4 would
22 remain unchanged. Therefore, implementation of the No Action Alternative would result in no significant
23 impact to noise.

24 **4.5 TRANSPORTATION** _____

25 **Proposed Action and Alternative Actions**

26 All of the Proposed Action and alternative actions would have the same impacts with respect to
27 transportation. Under the Proposed Action there would be a total increase of 550 personnel phased in
28 three increments; the first two increases in personnel would occur in 2019 and 2020 with 225 people
29 each, and the last increase of 100 people would occur between 2023 and 2029 once the permanent facility

1 becomes operational. According to the 2017 MacDill AFB Economic Impact Statement, 22,773 people
2 work on MacDill AFB. An increase of 550 people would represent less than a 3-percent increase in
3 personnel and the associated traffic would not be expected to appreciably change over existing conditions
4 that are considered to be generally acceptable. The baseline LOS ratings presented in Table 3-4 are
5 anticipated to be similar with implementation of the Proposed Action. Appropriately sized parking areas
6 would be made available for the facilities. In addition, MISO personnel would work in staggered shifts
7 throughout the day/night to reduce peak traffic levels and associated parking requirements.

8 The only other potential transportation impacts would be due to the delivery of the temporary trailers to
9 their proposed locations. Each trailer would be approximately 80 feet long by 14 feet wide and would be
10 considered an extra-large load on the roadways. The transportation and delivery of the trailers would be
11 planned and scheduled to minimize impacts to the regional transportation network (e.g., scheduling the
12 delivery during off-peak hours, sticking to major roads, and using escort vehicles as needed). Though
13 impacts may occur, they would be short-term and temporary only during the time of delivery.

14 **No Action Alternative**

15 Under the No Action Alternative, the temporary and permanent MISO facilities would not be constructed,
16 and existing facilities would not be relocated. Transportation resources as described in Section 3.5 would
17 remain unchanged. Therefore, implementation of the No Action Alternative would result in no adverse
18 effect to transportation.

19 **4.6 WASTES, HAZARDOUS MATERIALS, AND STORED FUELS** _____

20 **Proposed Action**

21 Under the Proposed Action, there would be an increase of solid wastes due to demolition and construction
22 activities. There would be an overall increase of 550 personnel upon implementation of the Proposed
23 Action and wastes would increase accordingly. The amount of wastes generated by the additional
24 personnel and associated activity would be well within the capabilities of the Base's capacity to manage
25 these wastes.

26 During construction, a small amount of hazardous materials and wastes would be used and generated,
27 and the contractor would be required to manage all wastes according to the MacDill Hazardous Waste
28 Management Plan (USAF 2017a).

1 An increase of 550 people would increase the amount of sanitary waste water that the Base waste water
2 treatment plant would have to process. It is anticipated that the amount of waste water would not exceed
3 the capacity of the waste water treatment plant. During the design of the facilities, this would be verified
4 and, if necessary, changes to the waste water facility or adjustments to the design would be implemented.

5 Temporary location T1 is located near SWMU-2 and lies approximately 500 feet northwest of SWMU-2.
6 Construction activities would not disturb soils or groundwater at SWMU-2 and therefore there would be
7 no impact.

8 None of the other sites would be located near active ERP sites.

9 **Alternative Temporary and Permanent MISO Facility and Relocated Facility Locations**

10 Impacts due to the use, generation, storage, and disposal of all hazardous materials and wastes
11 for the alternative sites would be identical to those described above for the Proposed Action. The
12 relocated facilities construction would vary slightly because the size of demolished facilities and
13 size of the new Military Family Housing and/or the new After School facility differ from the
14 Vehicle Maintenance facility but the procedures for waste management would be identical and
15 the requirements for the contractor and the Base would be implemented.

16 During demolition of the Vehicle Maintenance Facility waste, underground storage tanks (USTs),
17 aboveground storage tanks (ASTs), asbestos, lead-based paint may be encountered, but demolition and
18 construction contractors would be briefed and provisions would be implemented to handle these
19 materials. If anything out of the ordinary is encountered, coordination between the contractor,
20 contracting officer and environmental management would determine and implement the proper course
21 of action.

22 Temporary location T2 would be located on SWMU-3, a former landfill at the Dog Kennels that has
23 instituted land use controls and any contaminated soils encountered can be replaced on the site; however,
24 soils removed must be sampled and disposed of in accordance with all applicable local, state and federal
25 requirements. There are no active ERP sites located in the vicinity of any of the other alternative location
26 sites and thus no impact by or to ERP sites would occur.

27 **No Action Alternative**

28 Under the No Action Alternative, the temporary and permanent MISO facilities would not be constructed,
29 and existing facilities would not be relocated. Wastes, Hazardous Materials, and Stored Fuels as described

1 in Section 3.6 would remain unchanged. Therefore, implementation of the No Action Alternative would
2 result in no significant impact to Wastes, Hazardous Materials, and Stored Fuels.

3 **4.7 FLOODPLAINS** _____

4 **Proposed Action and Alternative Actions**

5 All of the proposed and alternative temporary and permanent facility locations are located within the 100-
6 year floodplain. Therefore, direct impacts from construction within the 100-year floodplain would be
7 unavoidable. Based on the extent of the 100-year floodplain and development and mission constraints on
8 the small area of MacDill AFB located outside of the 100-year floodplain, there is no practicable alternative
9 to building within the floodplain. However, the proposed MISO and relocated facilities would be designed
10 to avoid and minimize floodplain impacts and flood damage to the facilities to the extent possible. The
11 finished floor elevation of the facilities would be above the 100-year flood elevation. Therefore,
12 implementation of the Proposed Action would result in an unavoidable but less than significant impact to
13 floodplains.

14 **No Action Alternative**

15 Under the No Action Alternative, the temporary and permanent MISO facilities would not be constructed,
16 and existing facilities would not be relocated. Floodplains as described in Section 3.7 would remain
17 unchanged. Therefore, implementation of the No Action Alternative would result in no significant impact
18 to floodplains.

19 **4.8 WATER RESOURCES** _____

20 The analysis of potential impacts to water resources considers the potential impacts on groundwater,
21 surface water, and wetlands.

22 **Proposed Action**

23 **Groundwater**

24 Implementation of the Proposed Action is not anticipated to reach depths that would affect groundwater
25 resources. However, if groundwater resources are encountered, appropriate dewatering, shoring, and
26 water quality management measures (e.g., Best Management Practices [BMPs]) would be implemented.

1 There would be no direct or indirect discharges to groundwater. Construction of the several acres of new
2 impervious surface would require the installation of appropriately sized stormwater
3 treatment/attenuation areas. The stormwater retention areas would collect surface water runoff from
4 the impervious surfaces and allow it to infiltrate into the ground, recharging the groundwater in the
5 surficial aquifer. The measures indicated below to protect surface water quality would also help protect
6 groundwater quality in the groundwater below the project area.

7 Surface Water

8 Because more than 1 acre would be disturbed under the Proposed Action, the construction contractor
9 would obtain a NPDES Construction General Permit from the FDEP. Under the permit, a site-specific
10 SWPPP would be prepared that includes a site plan for managing stormwater runoff and describes BMPs
11 to be implemented to eliminate or reduce erosion, sedimentation, and stormwater pollution. As required
12 by the NPDES permit, the construction contractor would implement BMPs to eliminate the potential for
13 discharges of pollutants to waterways when engaged in activities such as clearing, grading, and excavating.
14 Any excavated soil material would be temporarily stockpiled within site boundaries in generally flat and
15 previously developed/disturbed areas, and appropriate erosion-control BMPs would be implemented in
16 accordance with a project-specific SWPPP.

17 Example BMPs include using stabilized construction entrances, silt fencing, berms and swales, check dams,
18 vegetated channels, basins and traps, stabilization, erosion control blankets, inlet protection, outlet
19 protection, and level spreaders to reduce soil erosion and stormwater runoff. With the proper
20 implementation of the SWPPP and associated BMPs, there would be negligible impacts to surface waters
21 and wetlands from erosion and off-site sedimentation during construction. Because no drainages are
22 located within the Proposed Action area, no direct impacts to drainages would occur. Potential indirect
23 impacts to drainages would be minimized through the proper implementation of the aforementioned
24 BMPs.

25 Implementation of the Proposed Action would result in a net increase in impervious surfaces at MacDill
26 AFB. The corresponding anticipated increase in stormwater discharge would be accommodated by new
27 project-specific and existing Base-wide stormwater conveyance infrastructure to demonstrate a no net
28 increase in the post-development discharge of pollutants to receiving waters. The facilities and site
29 improvements would be designed and implemented to ensure that the post-project hydrology mirrors
30 pre-project hydrology to the maximum extent technically feasible with respect to temperature, rate,
31 volume, and duration of flow. The Southwest Florida Water Management District would permit new or

1 modified impervious surface construction for water quality and quantity, which would ensure no net
2 increase in pollutants from flooding discharges and demonstrate a no net increase in the post-
3 development discharge of pollutants to receiving waters.

4 Accidental spills or leaks of substances such as fuels, oils, and other lubricants from construction
5 equipment and vehicles could contaminate water resources. All equipment would be maintained
6 according to manufacturer's specifications and all fuels and potentially hazardous materials would be
7 contained and stored appropriately. The potential for contamination to occur would also be minimized
8 through the implementation of the MacDill AFB Spill Prevention Control and Countermeasures Plan
9 (MacDill AFB 2012b) and the use of secondary containment for the temporary storage of any hazardous
10 materials and other BMPs would prevent or minimize spills or leaks.

11 Implementation of the Proposed Action would result in a net increase in personnel at MacDill AFB, which
12 would result in a corresponding long-term increase in the consumption of groundwater for potable water
13 purposes. MacDill AFB obtains potable water from the City of Tampa, which uses several different sources
14 including groundwater. The increase in groundwater consumption from the MacDill AFB Alternative
15 would not appreciably reduce regional groundwater availability.

16 Wetlands

17 No direct impacts on wetlands would occur because no wetlands are located within the Proposed Action
18 area. The proper implementation of construction BMPs would minimize potential indirect impacts on
19 wetlands. Therefore, implementation of the Proposed Action would result in no significant impacts to
20 water resources.

21 **Alternative Temporary and Permanent MISO Facility and Relocated Facility Locations**

22 Implementation of the Alternative Actions at the alternative temporary and permanent locations would
23 result in similar impacts to water resources as described under the Proposed Action. There are no unique
24 water resources or wetlands associated with the alternative locations. The same type of BMPs would be
25 implemented and the anticipated increase in stormwater discharge would be accommodated by new
26 project-specific and existing Base-wide stormwater conveyance infrastructure to demonstrate a no net
27 increase in the post-development discharge of pollutants to receiving waters. Therefore, implementation
28 of the Alternative Actions would result in no significant impact to water resources.

1 **No Action Alternative**

2 Under the No Action Alternative, the temporary and permanent MISO facilities would not be constructed,
3 and existing facilities would not be relocated. Water resources as described in Section 3.8 would remain
4 unchanged. Therefore, implementation of the No Action Alternative would result in no significant impact
5 to water resources.

6 **4.9 GEOLOGICAL RESOURCES**

7 **Proposed Action and Alternative Actions**

8 The Proposed Action and Alternatives would not alter geological structures or features and would have
9 no impact on regional geology. Long-term, negligible, adverse impacts would occur to the natural
10 topography as a result of demolition, site preparation (i.e., grading, excavating, and recontouring), and
11 construction activities associated with the Proposed Action. However, the areas subject to potential
12 demolition and construction are flat, and disturbance of these areas would not appreciably change local
13 topography.

14 Short- and long-term impacts would be minimized through the implementation of BMPs including erosion
15 and sediment control measures. Measures could include installing silt fencing and sediment traps,
16 applying water to disturbed soil, decompacting soils, and revegetating disturbed areas as soon as possible
17 after the disturbance, where possible. These measures would reduce soil compaction and loss of soil
18 productivity and would minimize the risk of erosion and sedimentation. As described in Section 4.8, *Water*
19 *Resources*, the long-term increase in impervious surfaces would be managed by existing and new
20 appropriately sized stormwater infrastructure, which would minimize the potential for erosion and
21 sedimentation. Therefore, implementation of the Alternative Actions would result in no significant impact
22 to geological resources.

23 **No Action Alternative**

24 Under the No Action Alternative, the temporary and permanent MISO facilities would not be constructed,
25 and existing facilities would not be relocated. Geological resources as described in Section 3.9 would
26 remain unchanged. Therefore, implementation of the No Action Alternative would result in no significant
27 impact to geological resources.

4.10 SAFETY AND OCCUPATIONAL HEALTH

Proposed Action and Alternative Actions

The proposed construction activities for the project would pose safety hazards to the workers similar to those associated with typical industrial construction projects, such as falls, slips, heat stress, and machinery injuries. Construction would not involve any unique hazards and all construction methods would comply with OSHA requirements to ensure the protection of workers and the general public during construction. Government oversight of contractor activities would help assure OSHA compliance.

The demolition may encounter asbestos containing material and LBP. The demolition contractor shall hire a qualified independent environmental consulting firm to perform a comprehensive asbestos and LBP survey for the existing facility. Once the surveys have been completed, if any hazardous materials have been identified, the demolition contractor shall hire a qualified environmental abatement subcontractor to remove and dispose of the asbestos containing material and LBP. The same environmental firm shall perform environmental monitoring during the abatement work in accordance with the Air Force, U.S. Environmental Protection Agency (USEPA), and other applicable environmental regulations. All waste disposal manifests shall be turned over to the government upon completion of the demolition work.

No Action Alternative

Under the No Action Alternative, the temporary and permanent MISO facilities would not be constructed, and existing facilities would not be relocated. Safety and Occupational Health as described in Section 3.10 would remain unchanged. Therefore, implementation of the No Action Alternative would result in no significant impact to safety and occupational health.

4.11 SOCIOECONOMICS

Socioeconomic impacts would be considered significant if the Proposed Action resulted in a substantial shift in population trends or notably affected regional employment, earnings, or community resources.

Proposed Action and Alternative Actions

Temporary Construction

The proposed construction activity would provide temporary employment for construction contractors in the area, resulting in a short-term positive economic impact to the local economy. Construction for the temporary facilities is anticipated to start in FY19 and construction for the permanent facilities is anticipated to last approximately two to three years. The proposed work would occur entirely on MacDill

1 AFB property and would have little potential to impact off-base resources.

2 Permanent Operations

3 A combined total of 550 additional personnel would work in the proposed permanent facility, most of
4 which are anticipated to be contracted personnel who would live off-Base and provide an additional
5 economic benefit to the community. The construction and associated increase in personnel would result
6 in a small positive impact to the regional economy.

7 The arrival of 550 additional personnel (and their dependents) would result in a net increase in population
8 in the immediate area (the majority within Hillsborough County). When compared to the existing
9 population, recent housing vacancy rates, and public services (refer to Section 3.11), the increase of 550
10 personnel and their dependents would result in a negligible socioeconomic impact to the Tampa HMA
11 and Hillsborough County. Therefore, implementation of the Proposed Action or Alternative Actions would
12 result in no significant impact to socioeconomics.

13 No Action Alternative

14 Under the No Action Alternative, the temporary and permanent MISO facilities would not be constructed,
15 and existing facilities would not be relocated. Socioeconomics as described in Section 3.11 would remain
16 unchanged. Therefore, implementation of the No Action Alternative would result in no significant impact
17 to socioeconomics.

18 **4.12 CUMULATIVE IMPACTS** _____

19 Federal regulations implementing NEPA (40 CFR §§ 1500–1508) require that the cumulative impacts of a
20 proposed action be assessed. CEQ regulations implementing the procedural provisions of NEPA (40 CFR
21 1508.7) define cumulative impacts as:

22 *“The impact on the environment, which results from the incremental impact of the action when*
23 *added to other past, present, and reasonably foreseeable future actions regardless of what agency*
24 *(federal or non-federal) or person undertakes such other actions.”*

25 Cumulative impacts can be additive (i.e., the net adverse cumulative impacts are strengthened by the sum
26 of individual impacts), countervailing (i.e., the net adverse cumulative impacts are less because of the
27 interaction between beneficial and adverse individual impacts), or synergistic (i.e., the net adverse
28 cumulative impacts are greater than the sum of the individual impacts). Cumulative impacts could result
29 from individually minor, but collectively significant, actions that take place over time. Accordingly, a

1 cumulative impacts analysis identifies and defines the scope of other actions and their interrelationship
2 with a proposed action if there is an overlap in space and time.

3 Cumulative impacts may occur when there is a relationship between a proposed action and other actions
4 expected to occur in a similar location (i.e., overlapping geographic location) or during a similar time
5 period (i.e., coincidental or sequential timing of events). This relationship may or may not be obvious. The
6 impacts may then be incremental and may result in cumulative impacts. Actions overlapping with or in
7 close proximity to a proposed action can reasonably be expected to have more potential for cumulative
8 impacts on “shared resources” than actions that may be geographically separated. Similarly, actions that
9 coincide in the same timeframe tend to offer a higher potential for cumulative impacts.

10 **4.12.1 Past, Present, and Reasonably Foreseeable Actions**

11 This section assesses the potential for cumulative impacts caused by the incremental contribution of the
12 Proposed and Alternative Actions together with the identified past, present, and reasonably foreseeable
13 actions. Table 4-2 identifies the current and planned future actions at MacDill AFB.

14 Past activities are those actions that occurred within the geographic scope of cumulative impacts and have
15 shaped the current environmental conditions of MacDill AFB and the surrounding area. Thus, unless
16 otherwise noted, the impacts of past actions are now part of the existing environment and are
17 incorporated in the description of the affected environment in Section 3.

18 **4.12.2 Cumulative Impacts**

19 **4.12.2.1 Air Quality**

20 The State of Florida takes into account the impacts of all past, present, and reasonably foreseeable
21 emissions during the development of the SIP. The state accounts for all significant stationary, area, and
22 mobile emission sources in the development of this plan. Implementation of the Proposed Action and
23 cumulative project would result in short-term construction emissions and a long-term increase in vehicle-
24 related emissions with the proposed increase in MISO personnel commuting to MacDill AFB. However,
25 these emissions would not significantly contribute to adverse cumulative impacts on air quality within the
26 immediate area or across the region. Cumulatively, the Proposed Action and the cumulative projects listed
27 in Table 4-2 would result in short-term, intermittent increases in emissions within the region during
28 construction activities – and – negligible increases in long-term emissions due to additional personnel at
29 MacDill AFB.

/

Table 4-2 MacDill AFB Development Projects FY18-FY22

Project Number	Project Title	Estimated Total Area Impacted (SF)	Project Description
NVZR153713	ADAL Fuel Cell Maintenance Dock Building 1071	30,500	Renovate approximately 17,000 SF of Building 1071 and construct a new 13,500 SF addition to improve Fuel Cell Maintenance.
NVR173702	Construct U.S. Marine Forces Central Command (MARCENT) HQ Facility	59,700	Construct a facility within the existing U.S. Central Command (USCENTCOM) Complex and demolish Buildings 535 and 548.
NVZR153704	Construct USCENTCOM Support Facility	134,400	Construct a multi-story USCENTCOM Support Facility and demolish Buildings 529, 530, 531, 550, 1047, 3070, 3071, 3072, and 3541.
NVZR133713	Construct Youth Center	44,000	Construct a Youth Activity Center to consolidate functions currently operating in Building 307.
NVZR103712	Construct Alert Facility/Alert Ramp Improvements	86,000	Construct a 2-story 30,000 SF building with an additional alert ramp to create room for 12 KC-135 aircraft.
NVZR160038 & NVZR160034	Construct Wastewater Treatment Plant (WWTP) Administration Building and Storage Facility	40,000	Construct an administration building and adjacent warehouse along the shoreline at the WWTP for administrative and operational functions. Install new electrical utilities to upgrade service to the WWTP.
NVZR080003	Construct Family (FAM) Camp Annex	800,000	Clear wooded areas to add RV parking pads, an activity center, and other amenities for the FAM Camp.
NVZR173708	Construct New Fire Station	10,000	Construct a new fire station with larger bays and drive-thru access near the Base Theater.
NVZR053706	Construct Fuels Management Facility	10,500	Demolish Building 1062 and construct a new Fuel Management Facility, including a laboratory, resource control center, and offices.
NVZR150072	Construct Screen Enclosure Child Development Center (CDC) MFAC	35,000	Construct additions to several Child Development Center buildings to provide enclosed recreational areas to children.
NVZR150063	Construct Parking Lot Building 1071	140,000	Construct a new parking lot and an associated stormwater management system near Building 1071.
Unknown/IDP	U.S. Special Operations Command (USSOCOM) Main HQ Replacement Facility (Building 501)	210,000	Construct a new USSOCOM HQ facility.

Project Number	Project Title	Estimated Total Area Impacted (SF)	Project Description
NVZR093705	Extend Great Egret Avenue	60,000	Extend Great Egret Ave to S. Boundary Blvd.
NVZR173706	Construct LRS Vehicle Maintenance Complex	32,000 (Building) and 293,000 (Parking/Roadway)	Demolish Buildings 119, 175, 178, 500, 510, and 3175 to clear site for new construction. New construction would consist of multiple buildings and a parking lot to support Logistics Readiness, Maintenance and Operations Squadron. Approximately 975 feet of Marina Bay Drive would be realigned, and two box culverts would be added.
Unknown / IDP	Construct USSOCOM Parking Lot	43,500	Construct a new parking lot with approximately 400 parking spaces near the USSOCOM facility.
NVZR143705	Add Unified Combatant Command (COCOM) Essential Power Upgrade	Unknown	Construct a new 37.5-megawatt electrical substation at Tanker Way Gate.
NVZR173711	U.S. Central Command Support Facility	25,000	Construct a new secure support facility to provide command and control capabilities.
NA	Construct Multi-Use Access Trails	30	Survey, design, and permit a series of access trails throughout approximately 1,500 acres.
NA	Dredge Hole Fill & Seagrass Restoration	10	Survey, design, model, and obtain permits for the placement of fill material in two historic dredge holes.

1 In addition to the potential cumulative impacts of additional criteria pollutants, the cumulative effects
2 analysis for air quality assesses if the Proposed Action would contribute ozone depleting substances
3 (greenhouse gases). The potential effects of greenhouse gas emissions are by nature global and
4 cumulative and it is impractical to attribute climate change to individual activities. Therefore, an
5 appreciable impact on global climate change would only occur when greenhouse gas emissions associated
6 with the Proposed Action or other alternatives are combined cumulatively with greenhouse gas emissions
7 from other human-made activities on a global scale.

8 Table 4-3 summarizes the annual maximum anticipated greenhouse gas emissions that would occur with
9 implementation of the Proposed Action. The emissions are provided in CO_{2e}, which is the CO₂ equivalent
10 of methane plus the CO₂ equivalents of nitrous oxide plus CO₂ emissions.

Table 4-3 Estimated Annual Greenhouse Gas Emissions

<i>Scenario/Activity</i>	<i>Annual CO₂e¹ Emissions (tons)</i>
Temporary Facility Construction	305
Permanent Facility Construction	541
Operational Emissions ²	5,420

Notes: ¹ CO₂e = CO₂ + (21 * CH₄) + (310 * N₂O). CO₂e = Equivalent Carbon Dioxide.

² Transportation emissions from 550 additional personnel and their dependents (1,100 drivers total).

1 As an indication of the nominal relative magnitude of these emissions, total annual CO₂e emissions in the
 2 U.S. in 2013, were approximately 6,673.0 million metric tons (USEPA 2015). When greenhouse gas impacts
 3 from the Proposed Action are added to the greenhouse gas emissions impacts from the cumulative
 4 projects, there would not be significant cumulative impacts to global climate change from implementation
 5 of Alternative 1. There would also be no significant cumulative impact from the emission of criteria
 6 pollutants in conjunction with the other past, present, and reasonably foreseeable actions. Therefore,
 7 implementation of the Proposed Action in conjunction with the identified cumulative projects would not
 8 result in a significant impact to air quality.

9 4.12.2.2 Biological Resources

10 Short- and long-term, minor, adverse, cumulative impacts would occur to low-quality vegetation and
 11 some common, less mobile species from construction and demolition associated with the Proposed Action
 12 and cumulative projects that include ground disturbance. However, there is limited natural wildlife habitat
 13 in the MacDill AFB cantonment area, and wildlife are habituated to disturbances because of the moderate
 14 development throughout the Base and existing operations. Cumulatively, as the amount of
 15 development/impervious surfaces increases, MacDill AFB would continue to be cognizant of the impact
 16 of development on natural resources/habitat, especially for species such as the Gopher tortoise and
 17 Eastern Indigo snake). The MacDill INRMP represents a commitment by the Air Force to protect the
 18 integrity and value of the natural resources at MacDill AFB. The INRMP integrates the Air Force mission
 19 with an interdisciplinary approach to ecosystem management to ensure that MacDill AFB continues to
 20 support present and future mission requirements while preserving, improving, and enhancing ecosystem
 21 integrity. Thus, MacDill AFB would continue to implement the biological resources management actions
 22 identified in the INRMP (MacDill AFB 2018), resulting in an overall long-term positive impact to biological
 23 resources. Therefore, implementation of the Proposed Action in conjunction with the identified
 24 cumulative projects would not result in a significant impact to biological resources.

1 4.12.2.3 Cultural Resources

2 The Proposed Action would not result in adverse effects to cultural resources. The identified cumulative
3 projects would avoid or minimize impacts to cultural resources and would be implemented in accordance
4 with Section 106 regulations, to include consultation with the SHPO and Tribes. Construction of new
5 buildings with modern materials could visually intrude upon the aesthetics of the historic district;
6 therefore, to minimize these impacts, buildings would be designed and constructed in accordance with
7 the MacDill AFB design guidelines, which addresses the compatibility of new construction within historic
8 districts and minimizes visual impacts. In addition, MacDill AFB would continue to manage their cultural
9 resources in accordance with the Integrated Cultural Resources Management Plan. Therefore,
10 implementation of the Proposed Action in conjunction with the identified cumulative projects would not
11 result in a significant impact to cultural resources.

12 4.12.2.4 Noise

13 Implementation of the Proposed Action and cumulative projects would result in mostly short-term
14 impacts to the noise environment from construction activities and the increase in vehicular traffic.
15 Cumulative impacts associated with roadway level of service are anticipated to be very minor due to
16 increase volume of traffic. The Proposed Action and identified cumulative projects would not alter the
17 overall long-term noise environment; noise generated by aircraft operations would continue to dominate
18 the noise environment at MacDill AFB. Therefore, implementation of the Proposed Action in conjunction
19 with the identified cumulative projects would not result in a significant impact to the noise environment.

20 4.12.2.5 Transportation

21 The proposed increase in temporary construction traffic and long-term personnel-increase related traffic
22 would contribute to long-term, minor to moderate, cumulative impacts on transportation systems,
23 especially at the access gates. Construction and new personnel vehicular trips associated with the
24 cumulative projects would result in a net increase in traffic at MacDill AFB and a corresponding adverse
25 effect to cumulative roadway level of service ratings. However, MacDill AFB is actively managing
26 transportation and staggering work hours to minimize queuing at the access gates and streamline Base
27 circulation. Furthermore, MacDill AFB is and would continue to implement transportation study
28 recommendations as identified in the 2010 Transportation Study (MacDill AFB 2010). These and other
29 measures have proven to be effective in minimizing transportation impacts. Therefore, implementation
30 of the Proposed Action in conjunction with the identified cumulative projects would not result in a
31 significant impact to transportation.

1 4.12.2.6 Wastes, Hazardous Materials, and Stored Fuels

2 Short- and long-term, minor, adverse cumulative impacts would occur from the increase in hazardous
3 wastes generated from the proposed and cumulative construction activities. Because some construction
4 activities would occur within active ERP sites, short-term, minor, adverse cumulative impacts from
5 environmental contamination might occur. Construction would require the use and on-site storage of
6 hazardous materials such as paints, welding gases, solvents, preservatives, and sealants. Demolition could
7 disturb special hazards depending on the age of the buildings demolished. The Proposed Action and
8 cumulative projects would incorporate measures to limit or control hazardous materials and wastes and
9 would comply with all federal, state, and local laws to ensure compliance with the use, storage, transport
10 and disposal of hazardous materials and wastes. Therefore, implementation of the Proposed Action in
11 conjunction with the identified cumulative projects would not result in a significant impact to Wastes,
12 Hazardous Materials, and Stored Fuels.

13 4.12.2.7 Floodplains

14 The Proposed Action and most of the cumulative projects would occur within the 100-year floodplain.
15 This is unavoidable because approximately 80 percent of MacDill AFB is located within the 100-year
16 floodplain. Therefore, direct impacts from construction within the 100-year floodplain would be
17 unavoidable. Based on the extent of the 100-year floodplain and development and mission constraints on
18 the small area of MacDill AFB located outside of the 100-year floodplain, there is no practicable alternative
19 to building within the floodplain. Any practical alternatives outside of the floodplain have been and would
20 continue to be explored for future projects. The proposed and cumulative projects would be designed to
21 avoid and minimize floodplain impacts and flood damage to the facilities to the extent possible. The
22 finished floor elevation of the facilities would be above the 100-year flood elevation. Therefore,
23 implementation of the Proposed Action in conjunction with the identified cumulative projects would not
24 result in a significant impact to floodplains.

25 4.12.2.8 Water Resources

26 While the demolition and construction actions associated with the Proposed Action and cumulative
27 projects could result in erosion, sedimentation, and degraded water quality, the implementation of
28 project-specific BMPs and continued adherence to the Base SWPPP would minimize or avoid the potential
29 for water quality impacts. The Southwest Florida Water Management District would permit new or
30 modified impervious surface construction for water quality and quantity, which would ensure no net
31 project-level increase in pollutants from runoff, and therefore a negligible cumulative increase in potential

1 stormwater runoff pollution. Though the Proposed Action would not impact wetlands or drainages, it is
2 possible that cumulative projects could result in impacts. Any design, siting, and proper implementation
3 of construction BMPs would minimize potential cumulative impacts to wetlands and drainages.

4 Under the Proposed Action, a cumulative increase in impervious surfaces at the MacDill AFB would occur.
5 Proper planning and coordination would strive to minimize the potential for adverse cumulative impacts
6 from proximate construction projects and/or overlapping creation of new impervious surfaces. Through
7 the implementation of BMPs and stormwater-specific projects, hydrologic conditions within and
8 downstream of project areas, and within the Base as a whole would be managed to minimize the potential
9 for flooding and water quality impacts. For example, in 2012, MacDill AFB implemented a large project to
10 improve storm water quality by diverting storm water from a major drainage canal through a series of
11 ponds, resulting in improved storm water quality. The project, known as Surface Water Improvement and
12 Management Phase III, restored over 100 acres of wetland habitat and created approximately 22 acres of
13 new wetlands. In addition, implementation of SWPPP-identified measures and annual operations and
14 maintenance funding help ensure the maintenance of wetlands and storm water drainage features
15 (MacDill AFB 2018). MacDill AFB would continue to achieve the preservation of hydrologic conditions
16 through utilization of existing and new stormwater management systems and incorporation of other
17 BMPs as well as appropriate low-impact development strategies that would attenuate potentially long-
18 term, adverse impacts on water resources. Therefore, implementation of the Proposed Action in
19 conjunction with the identified cumulative projects would not result in a significant impact to water
20 resources.

21 4.12.2.9 Geological Resources

22 The actions associated with the Proposed Action and cumulative projects could result in soil disturbance,
23 minor changes in topography, and the potential for soil erosion and sedimentation. The utilization of
24 stormwater management systems and incorporation of other BMPs would attenuate potentially long-
25 term, adverse impacts from erosion and sedimentation. Therefore, implementation of the Proposed
26 Action in conjunction with the identified cumulative projects would not result in a significant impact to
27 geological resources.

28 4.12.2.10 Safety and Occupational Health

29 Short-term, negligible, adverse cumulative impacts on health and safety (e.g., slips, falls, heat exposure,
30 exposure to mechanical, electrical, vision, chemical hazards) would occur from proposed construction and
31 operation activities associated with the Proposed Action and cumulative projects. Implementation of

1 appropriate safety methods, such as wearing PPE, during these activities would minimize the potential for
2 such impacts. Therefore, implementation of the Proposed Action in conjunction with the identified
3 cumulative projects would not result in a significant impact to safety and occupational health.

4 4.12.2.11 Socioeconomics

5 Construction associated with the Proposed Action and cumulative projects would result in short-term,
6 minor to moderate, beneficial, cumulative impacts on the local economy and local employment lasting
7 for the duration of such activities. The cumulative increase in MISO and other MacDill AFB personnel
8 would have long-term, minor to moderate, beneficial cumulative impacts on the local economy. Although
9 the cumulative increase in population would not likely increase the demand for law enforcement,
10 firefighting services, and health care professionals, enrollment in the School District of Hillsborough
11 County system would likely increase. The current off-Base housing market and on-Base unaccompanied
12 housing, which would be added through the cumulative dormitory projects, would accommodate the
13 population increase. Therefore, implementation of the Proposed Action in conjunction with the identified
14 cumulative projects would not result in a significant impact to socioeconomics and environmental justice.

15 4.12.2.12 Other Items with No Potential Impacts

16 The Proposed Action and cumulative projects would not result in incompatibilities with existing or
17 projected land uses on or off the Base. The Proposed Action and cumulative projects would be sited in
18 suitable land use categories and would adhere to the restrictions associated with constraint areas such as
19 noise contours, clear zones, accident potential zones, quantity distance arcs, and land use controls. Long-
20 term, beneficial cumulative impacts would result from efficient use of Base land that would not conflict
21 with existing land uses. Therefore, implementation of the Proposed Action in conjunction with the
22 identified cumulative projects would not result in a significant impact to land use.

23 Construction associated with the Proposed Action and cumulative projects would result in temporary
24 ground disturbance and short-term, minor, adverse impacts on soils from soil compaction, disturbance,
25 and erosion. Most impacts from soil disturbance would not go beyond individual project area boundaries
26 and would not result in significant cumulative impacts on soil resources because BMPs and erosion and
27 sediment control practices would be implemented. Therefore, implementation of the Proposed Action in
28 conjunction with the identified cumulative projects would not result in a significant impact to geological
29 resources.

1 The Proposed Action and cumulative projects are not expected to result in a demand to utilities that
2 cannot be met by existing utility providers. Implementation of the projects would result in short-term,
3 isolated impacts to utilities as new buildings/infrastructure are brought on-line. The impacts of these
4 temporary service interruptions would be planned to minimize any potential impacts. Therefore,
5 implementation of the Proposed Action in conjunction with the identified cumulative projects would not
6 result in a significant impact to utilities.

7 **4.12.3 Unavoidable Adverse Impacts**

8 Some unavoidable adverse impacts would result from the Proposed Action. Energy supplies, although
9 relatively small, would be committed. Fossil fuels, a nonrenewable natural resource, would be used in
10 construction equipment and personnel vehicles. While the use of nonrenewable resources under the
11 Proposed Action would be an unavoidable adverse occurrence, their associated impacts would not be
12 significant. In addition, there would be no unavoidable destruction of natural resources that would result
13 in limiting the range of potential uses of a particular environment.

14 **4.12.4 Compatibility with the Objectives of Federal, Regional, State, and Local Land Use Plans,** 15 **Policies, and Controls**

16 The Proposed Action would occur on government-owned lands operated by MacDill AFB. The nature of
17 activities for the Proposed Action would not differ from the current activities occurring at the Base. As
18 demonstrated in the analysis contained within this EA, the Proposed Action would be compatible with
19 current federal, regional, state, and local land use plans, policies, and controls.

20 **4.12.5 Relationship Between Short-term Uses of the Human Environment and Maintenance** 21 **and Enhancement of Long-term Productivity**

22 Short-term uses of the biophysical components of the human environment include direct, project-related
23 disturbances and direct impacts associated with an increase of population and activity that occurs over
24 less than five years. Long-term uses of the human environment include those impacts occurring over more
25 than five years, including permanent resource loss.

26 The Proposed Action would not require short-term resource uses that would result in long-term
27 compromises of productivity. Under the Proposed Action, short-term uses of the environment would
28 result in air emissions from construction equipment and vehicles, and temporary and localized impacts to

1 biological resources. The long-term increase of approximately 550 MISO personnel would result in a
2 negligible contribution to regional emissions and traffic counts. Long-term impacts on wildlife species
3 from construction would not occur because of the interim nature of the construction and because species
4 would avoid construction areas and are likely habituated to noise. The nature of activities for the Proposed
5 Action would not differ from current uses of these areas. Therefore, implementation of the Proposed
6 Action would not result in significant impacts on sensitive resources. As a result, it is not anticipated that
7 the Proposed Action would result in any environmental impacts that would permanently narrow the range
8 of beneficial uses of the environment or pose long-term risks to health, safety, or the general welfare of
9 the public.

10 **4.12.6 Irreversible and Irretrievable Commitment of Resources**

11 NEPA requires the identification of any irreversible and irretrievable commitment of resources that would
12 be involved in the implementation of a proposed action. Irreversible and irretrievable resource
13 commitments are related to the use of nonrenewable resources (e.g., fossil fuels) and the impacts that
14 the uses of these resources could have on future generations. Irreversible impacts primarily result from
15 the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a
16 reasonable timeframe. Irretrievable resource commitments involve the loss in value of an affected
17 resource that cannot be restored as a result of a proposed action (e.g., extinction of a threatened or
18 endangered species, disturbance of a cultural site).

19 Facility construction associated with the Proposed Action would require consumption of materials
20 typically associated with exterior and interior construction (e.g., concrete, wiring, piping, insulation,
21 windows). Recycled materials would be used to the extent practicable, and the amount of these materials
22 used would not significantly decrease the availability of the resources. Small amounts of nonrenewable
23 resources would be used; however, these amounts would not be appreciable and would not affect the
24 availability of these resources. The Proposed Action would also require consumption of fuels including
25 some that would be nonrenewable resources (e.g., petroleum-based fossil fuel products for vehicles)
26 during the construction and operation phases of the Proposed Action. The Proposed Action would not
27 significantly decrease the availability of mineral or petroleum resources or the availability of such
28 resources in either alternative's region or the nation.

5 CONCLUSIONS

Based upon the analyses presented in this EA, implementation of the Proposed Action or alternatives would not result in a significant impact upon the quality of the human environment.

6 MANAGEMENT REQUIREMENTS

The following management measures would be implemented.

AIR QUALITY

- Use reasonable precautions to control the emissions of unconfined PM during construction activities in accordance with Florida Administrative Code (FAC) Rule 62-296.
- Ensure that all hazardous materials used during construction comply with the MacDill AFB Hazardous Materials Management Program's requirements for low VOC.

BIOLOGICAL RESOURCES

- Ensure that any ground surface areas disturbed during construction are re-seeded or revegetated with native flora.

CULTURAL RESOURCES

- A cultural resources monitor would be present during construction in any undeveloped areas.
- In the unlikely event of an inadvertent discovery, MacDill AFB would comply with Section 106 of the NHPA, as specified in standard operating procedures described in the MacDill AFB Integrated Cultural Resources Management Plan (MacDill AFB 2017a).

NOISE

- Orient interior non-office space such as hallways, utility spaces, restrooms, in T1 towards the north that would be adjacent to the aircraft ramp where engine runup can occur. Also, minimize windows and door openings on the north side of the building.
- Design the site layout to place parking and landscape areas closer to the ramp side of the facility.

WASTES, HAZARDOUS MATERIALS, AND STORED FUELS

- Ensure hazardous materials are approved and tracked through MacDill AFB's Hazardous Materials Management Program.
- Coordinate characterization and disposal of any hazardous or special waste with MacDill AFB's Environmental Compliance Program.
- Coordinate with MacDill AFB's Pollution Prevention Program to ensure recycling of demolition wastes, if possible.

1 WATER RESOURCES

- 2 • Submit appropriate water quality permit applications for active construction sites and post-
3 construction storm water management systems.
4 • Ensure BMPs, such as silt screens and placement of hay bales, are employed during construction
5 to prevent erosion and storm water violations during all construction activities.
6 • Ensure that the new construction complies with all applicable water and energy conservation
7 requirements.

8 SAFETY AND OCCUPATIONAL HEALTH

- 9 • Ensure construction activities at a minimum comply with OSHA standards.
10 • Ensure that a site-specific health and safety plan is prepared prior to initiating construction.
11 • The demolition contractor shall hire a qualified independent environmental consulting firm to
12 perform a comprehensive asbestos and LBP survey for the existing facility.
13 • If any asbestos and LBP are identified during surveys, the demolition contractor shall hire a
14 qualified environmental abatement subcontractor to remove and dispose of the asbestos
15 containing material and LBP.

7 LIST OF PREPARERS

This EA was prepared under the direction of MacDill AFB by the Chloeta and Scout Environmental team.

Members of the professional staff include:

MacDill AFB

Eric Vichich, USAF AMC 6 CES/CEIEC, NEPA Project Manager

Chloeta

Terry Reed, Project Director

Brandon Childers, GIS

Scout Environmental, Inc.

Melanie Hernandez, CEP, JD, Project Manager

Ryan Pingree, AICP, CEP, Deputy Project Manager, Lead NEPA Analyst

Tom Lillie, PhD, Quality Assurance Review

Jason Strayer, Resource Area Analyst

Jim Campe, Resource Area Analyst

Julie Werner, PE, Air Quality

Roxanne Beasley, Technical Editor

8 REFERENCES

American Society of Heating Refrigeration and Air conditioning Engineers (ASHRAE). 2008. Generator Noise Control – An Overview.

Florida DEP. 2018a. DEP Business Portal AirInfo. Facility 0570141 US Air Force (MACDILL AFB) Emissions Information 2017.

<http://prodenv.dep.state.fl.us/DarmAircom/public/showPIFacEmissionInfoAction.action>

Accessed September 30, 2018.

Florida DEP. 2018b. Redesignation and Maintenance Plan for the Hillsborough County Lead Nonattainment Area. September 11, 2018. <https://floridadep.gov/air/air-business-planning/content/redesignation-and-maintenance-plan-hillsborough-county-lead>. Accessed 27 September 2018.

ITE. 2010. 4th Edition. Parking generation rates. Obtained from

<http://mikeontraffic.typepad.com/files/parking-generation---4th-edition.xlsx>. Accessed on September 21, 2018.

MacDill AFB. 1996-2011. Asbestos and Lead-Based Paint Records, Buildings 307 and 500. 2005-2011.

MacDill AFB. 2010. Transportation Study: Future Conditions Technical Memorandum.

-
- 1 MacDill AFB. 2014. Preliminary Noise Contours for MacDill AFB. October.
- 2 MacDill AFB. 2017a. Integrated Cultural Resources Management Plan. September.
- 3 MacDill AFB. 2017b. MacDill Air Force Base 2017 Economic Impact Statement. Available online:
4 <https://www.macdill.af.mil/Portals/26/documents/EIS%202017.pdf>. Accessed October 3, 2018.
- 5 MacDill AFB. 2018. Integrated Natural Resources Management Plan. July.
- 6 Panamerican Consultants. 2018. A Cultural Resource Assessment Survey of the MacDill Air Force Base
7 Parking Lot Project Area in Hillsborough County, Florida. May.
- 8 USAF. 2017a. Hazardous Waste Management Plan, MacDill AFB, Florida.
- 9 USAF. 2017b. Integrated Solid Waste Management Plan, MacDill AFB, Florida
- 10 USAF. 2018. Hillsborough County Environmental Protection Commission (EPC) Air Permit No. 057141-
11 011-AO. Effective Date 1 June 2018. Expiration Date June 1, 2023.
- 12 USEPA. 2015. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2013. Accessed at:
13 [https://www.epa.gov/sites/production/files/2016-03/documents/us-ghg-inventory-2015-main-](https://www.epa.gov/sites/production/files/2016-03/documents/us-ghg-inventory-2015-main-text.pdf)
14 [text.pdf](https://www.epa.gov/sites/production/files/2016-03/documents/us-ghg-inventory-2015-main-text.pdf). Accessed November 12, 2018.
- 15 USEPA. 2018. Florida Nonattainment/Maintenance Status for Each County by Year for All Criteria
16 Pollutants. August 31, 2018. https://www3.epa.gov/airquality/greenbook/anayo_fl.html.
17 Accessed September 27, 2018.
- 18 USFWS. 2007. National Bald Eagle Management Guidelines. May.

1 **APPENDIX A - AIR FORCE FORM 813**

2 *[Note to reviewers: This section will be provided in a subsequent EA submittal]*

1 APPENDIX B - COASTAL ZONE MANAGEMENT ACT (CZMA)

2 CONSISTENCY DETERMINATION

3 This statement examines the potential environmental consequences of the Proposed Action and
4 ascertains the extent to which the consequences of the Proposed Action are consistent with the objectives
5 of Florida Coastal Management Program (CMP).

6 Of the Florida Statutory Authorities included in the CMP, impacts in the following areas are addressed in
7 the EA: beach and shore preservation (Chapter 161), historic preservation (Chapter 267), economic
8 development and tourism (Chapter 288), public transportation (Chapters 334 and 339), saltwater living
9 resources (Chapter 370), living land and freshwater resource (Chapter 372), water resources (Chapter
10 373), environmental control (Chapter 403), and soil and water conservation (Chapter 582). This statement
11 discusses how the proposed options may meet the CMP objectives.

12 CONSISTENCY DETERMINATION

13 Chapter 161: Beach and Shore Preservation

14 No disturbances to canals would occur under the Proposed Action or alternatives.

15 Chapter 267: Historic Preservation

16 The Air Force and the Florida State Historic Preservation Officer have determined that
17 implementation of the Proposed Action or alternatives would have no adverse effect on historic
18 properties associated with the Base (placeholder language to be confirmed upon response from
19 SHPO).

20 Chapter 288: Economic Development and Tourism

21 The EA presents the new employment impact and net income impact of the Proposed Action or
22 alternatives. The Proposed Action would not have significant adverse effects on any key Florida
23 industries or economic diversification efforts. There would be a slight positive impact to the local
24 economy from construction activity and the long-term increase in personnel.

25 Chapter 372: Saltwater Living Resources

26 Based on the analysis contained in the EA, no impacts to local water bodies would result from
27 implementation of the Proposed Action or alternatives.

1 Chapter 372: Living Land and Freshwater Resources

2 The Proposed Action and alternatives would not result in permanent disturbance to native habitat
3 and would not impact threatened or endangered species. The USFWS has concurred with the Air
4 Force's determination of no significant impact to biological resources (placeholder language to be
5 confirmed upon response from USFWS).

6 Chapter 373: Water Resources

7 There would be no impacts to surface water or groundwater quality under the Proposed Action
8 or alternatives as discussed in the EA.

9 Chapter 403: Environmental Control

10 The EA addresses the issues of conservation and protection of environmentally sensitive living
11 resources; protection of groundwater and surface water quality and quantity; potable water
12 supply; protection of air quality; minimization of adverse hydrogeologic impacts; avoidance of
13 impacts to threatened or endangered species; solid, sanitary, and hazardous waste disposal; and
14 minimization of impacts to floodplains and avoidance of impacts to wetlands. Acting under the
15 supervision of MacDill AFB, the construction contractor would implement the aforementioned
16 measures to control, avoid, and/or minimize impacts to the environment.

17 Chapter 582: Soil and Water Conservation

18 As presented in the EA, implementation of the Proposed Action or alternatives would result in
19 negligible impacts to soil. Furthermore, implementation of BMPs would avoid/minimize impacts
20 to soil and water resources, thus, conserving these resources to the extent practicable.

21 CONCLUSION

22 Based on the foregoing and the analysis contained in the EA, the Air Force finds that implementation of
23 the Proposed Action or Alternative Actions would be consistent with Florida's CMP.

APPENDIX C - AIR EMISSION CALCULATIONS

C.1 VERIFICATION OF AQ NONATTAINMENT AREAS

MacDill AFB is located in Hillsborough County. Parts of Hillsborough County are as of September 27, 2018 in nonattainment for Lead (2008 Standard). The SO₂ nonattainment designation only includes a small portion of Hillsborough County located east of MacDill AFB across Hillsborough Bay in the East Tampa-area (USEPA 2018, Florida DEP 2018b). Therefore, MacDill AFB is not within either of the nonattainment areas but is nearby.

C.2 ASSUMPTIONS FOR CONSTRUCTION AND OPERATION EMISSION CALCULATIONS

Proposed Action and Alternative Actions

Temporary Trailers (T1 and T2) assumptions for Construction Phase:

- Total Size: 45,000 SF of prefabricated trailers. Two story construction. 32 total trailers (80 ft by 14 ft, double story, when stacked 7 or 8 wide and two stories high).
- Assume exterior stairs are prefabricated for purposes of construction time.
- Breezeway approximately 2400 SF (80 ft by 30 ft – Approximate length and double width of trailer). Assume constructed on-site.
- 7.0 acres graded and prepped.
- Trailers utilize approximately 0.7 acre for air emission estimates.
- No demolition of existing facilities.
- Gravel parking lot constructed assuming personnel in shifts. Approximately 300 parking spaces assumed. No parking structure considered. Assuming gravel lot uses coarse gravel and low speeds are enforced for standard dust generation during operation.
- 750 kW emergency Generator.
- Construction starts March 2019 and ends October 2019.
- All utilities underground.

Temporary Trailers (T1 and T2) assumptions for Operation Phase:

- Addition of 225 personnel in 2020 and their commutes.
- Addition of 225 personnel in 2021 and their commutes.
- Assumed minimal carpooling and an average of 450 additional commuters by 2022 compared to the current 300 commuters at existing trailers.
- Assumed average commute distance of 50 miles for new additions.
- Assumed mix of vehicles consistent with standard office work.
- Building emissions include those consistent with office work (heating/cooling).
- Trailers equipped with emergency generator.

1 Permanent USSOCOM MISO Facilities (P1, P2, and P3) general assumptions for Construction Phase:

- 2 • Construction from 2023 to 2026. Demolition of old facility and new facility replacement
3 constructed first (from 2023 to mid-2024) second 18-month (from mid-2024 to 2025) is the 18-
4 month construction of the new MISO facility.
- 5 • Demolition of existing vehicle maintenance facility on Brown Pelican to make room for new
6 MISO 100,000 SF facility (280 ft by 150 ft or 42,000 SF).
- 7 • Removal of existing concrete pavement, approximately 75,000 SF.
- 8 • Box trucks used to transport equipment from old facility to new facility.
- 9 • Assume new maintenance facility (see “New Vehicle Maintenance Facility Location”) built first.
- 10 • Assume parking area is paved.
- 11 • Assume 3 stories in height to reach 100,000 SF MISO facility and at two tier concrete 26 parking
12 structure to fit all 664 spaces required plus the building in one 3.7-acre lot.
- 13 • Assume low VOC paints to be used, and interior and exterior of the building to be painted.
- 14 • Construction includes grading after demolition and utility installation.
- 15 • Landscaping, approximately 0.3 acres assumed.
- 16 • Emergency generator would be installed (assumed 1,250 horse-power engine of new (2018 or
17 newer) manufacture, common to computer heavy command locations based on evaluator
18 observations at similar operation). Permit modifications/permit to construct would occur prior
19 to construction per requirements.
- 20 • Include emissions from box truck movers to move from temporary location to permanent
21 location at 2 weeks of moving, included in construction phase.

22 Permanent USSOCOM MISO Facilities (P1, P2, and P3) general assumptions for Operation Phase:

- 23 • Operational starting 2026. Fully operational in 2029. Calculate emissions on an annual basis for
24 full operation in 2029 forward for impact analysis.
- 25 • An additional 100 personnel would be added in 2026 when new facility opens. Addition of
26 personnel include 100 additional car trips of approximately 5-miles each way and 100 additional
27 cars that utilize the same mix as what is assumed for the temporary trailers.
- 28 • Net increase of 550 personnel and 550 dependents contributing to regional vehicle emissions.
- 29 • Calculations do not account for the small number of miles in difference from the temporary
30 location to the permanent location.
- 31 • Building operations would be similar to general office emissions with no industrial operations.
32 Building emissions include those consistent with office work (heating/cooling).
- 33 • Generator operates on average 500 hours per year (including maintenance and emergency
34 operations).

35 New Vehicle Maintenance Facility Location assumptions for Construction Phase:

- 36 • Construction starts in 2023, complete by 2026.
- 37 • Remove vegetation from 4.5-acre lot and grade for construction preparation.
- 38 • Assume rebuild of facility similar to what is to be demolished, approximately 42,000 SF of
39 vehicle maintenance (modeled as light industrial) and 75,000 SF of pavement for a total of 3.7
40 acres.
- 41 • Assume 0.5 acres of landscaping at end of construction.

- 1 • Buildings would be painted with low VOC architectural paints.

2 New Vehicle Maintenance Facility Location assumptions for Operation Phase:

- 3 • Operates as light industrial facility with no change in air emissions from existing site operations
4 (no additional paint booth facilities, generators, etc.). A “one-for-one” replacement.
5 • No additional personnel.

6 New Military Family Housing Area assumptions for Construction Phase:

- 7 • Rebuild similar square footage (268,000 SF) houses in similar style of locations nearby for a total
8 of 19.1 acres of development.
9 • Construction period is 2023 to mid-2024.
10 • Assume grading and site prep of all 19.1 acres.
11 • Assume low VOC paints to be used, and interior and exterior of the building to be painted.
12 • Moving of personnel included in the MISO facility emissions estimate.

13 New Military Family Housing Area assumptions for Operation Phase:

- 14 • Assume no changes in emission from current housing area.

15 New After School Care Facility assumptions for Construction Phase:

- 16 • Construction starting in 2023 with completion by mid-2024.
17 • Only the after-school care facility is being moved.
18 • New facility would be approximately the same size as the old facility, about 30,000 SF of indoor
19 and outdoor space.
20 • Assume approximately 10,000 SF of parking space added as well.
21 • Site would have about 1 acre graded for the construction of the New After School Care Facility.
22 • Assume low VOC paints to be used, and interior and exterior of the building to be painted.
23 • Moving of personnel included in the MISO facility emissions estimate.

24
25 New After School Care Facility assumptions for Operation Phase:

- 26 • Assume no changes in emission from current after school care facility.
27 • Operational changes for other services relocated are also assumed to be similar to existing
28 emission.

29 **Emissions Estimates – Calculation Model**

30 To support the quantitative analyses for air quality, a comprehensive model known as CalEEMod version
31 2013.3.2 was used. Subsequent iterations of the EA will be updated to reflect the use of the Air Force’s
32 Air Conformity Applicability Model (ACAM); the results from the ACAM analysis are anticipated to be
33 similar to the following results and would not change the impact conclusions. See Table C-1 through C-8
34 for details on the calculation model results.

1 **Emission Estimates**

2 **Table C-1 Construction Emissions Estimated and Thresholds for Proposed Action (T1/P1)**

Pollutant	Proposed Action Annual Construction Emissions (tpy)	De minimis threshold values (tpy)	Above/Below de minimis
T1: Temporary Trailer Preferred Location 2019 Construction Year [1]			
CO	2.63	100	Below
VOC	0.79	100	Below
NO _x	2.63	100	Below
SO _x	<0.01	100	Below
PM ₁₀	0.37	100	Below
PM _{2.5}	0.25	100	Below
P1: MISO Facility Maximum Construction Year (2024) [2]			
CO	2.82	100	Below
VOC	1.52	100	Below
NO _x	2.48	100	Below
SO _x	<0.01	100	Below
PM ₁₀	0.29	100	Below
PM _{2.5}	0.13	100	Below
P1: New Vehicle Maintenance Maximum Construction Year [2]			
CO	1.79	100	Below
VOC	1.41	100	Below
NO _x	1.51	100	Below
SO _x	<0.01	100	Below
PM ₁₀	0.16	100	Below
PM _{2.5}	0.09	100	Below
[1] All emissions occur in 2019 based on estimated 6-month construction period. Includes mobile emissions from construction site activity and transport of trailers approximately 50-miles. See Appendix C for additional assumptions.			
[2] Emissions listed represent the construction year with the maximum estimated emissions of the combined projects (P1, New Vehicle Maintenance). All other years are lower emissions and lower effects to air quality.			

3 **Table C-2 Operational Emissions Estimated and Thresholds for Proposed Action (T1/P1)**

Pollutant	Proposed Action Annual Operational Emissions (tpy)	De minimis threshold values (tpy)	Above/Below de minimis
T1: Temporary Trailer Preferred Location – Stationary Emission - Building Operations [1], [2]			
CO	1.36	100	Below
VOC	0.53	100	Below
NO _x	2.38	100	Below
SO _x	<0.01	100	Below
PM ₁₀	0.08	100	Below
PM _{2.5}	0.08	100	Below
T1: Temporary Trailer Preferred Location – Additional Personnel Commutes (900 people in 2020) [3]			
CO	13.06	100	Below
VOC	1.3	100	Below

Pollutant	Proposed Action Annual Operational Emissions (tpy)	De minimis threshold values (tpy)	Above/Below de minimis
NO _x	7.48	100	Below
SO _x	0.04	100	Below
PM ₁₀	2.92	100	Below
PM _{2.5}	0.8	100	Below
P1: Permanent USSOCOM MISO Facility Preferred Location – Building Operations			
CO	1.3	100	Below
VOC	1.04	100	Below
NO _x	2.3	100	Below
SO _x	<0.01	100	Below
PM ₁₀	0.075	100	Below
PM _{2.5}	0.075	100	Below
P1: Permanent USSOCOM MISO Facility Preferred Location – 550 Personnel (1,100 drivers)			
CO	16.32	100	Below
VOC	1.62	100	Below
NO _x	9.36	100	Below
SO _x	0.06	100	Below
PM ₁₀	3.33	100	Below
PM _{2.5}	1.0	100	Below
New Vehicle Maintenance Facility Location – Building Operations			
Same as Existing Conditions			
<p>[1] Emissions listed represent the operational estimated annual emissions of the listed facility in 2020, including additional emissions resulting from additional personnel added. All other operational years (2021 to 2026) would have emissions similar to 2020.</p> <p>[2] Assumed emergency generator operates for a total of 500 hours under operational scenario and accounts for almost 100% of the operational emissions. Operation includes time for regular maintenance (about 100 hours) and time for emergency generation (400 hours). If actual power outage usage of the generator is less than 400 hours, the emissions would be less, especially for NO_x. If actual power outage is higher, emissions would be higher. This is an overly conservative estimation as historical MacDill AFB emissions inventories (including multiple generators) do not indicate generator use much above maintenance levels.</p> <p>[3] Assumes all additional 550 personnel (and one dependent driver each) drive approximately 100 miles each day, which is conservative and does not assume a shorter commute.</p>			

1 **Table C-3 Construction Emissions Estimated and Thresholds for Alternative Action T2**

Pollutant	Proposed Action Annual Construction Emissions (tpy)	De minimis threshold values (tpy)	Above/Below de minimis
T2: Temporary Trailer Alternate Location 2019 Construction Year [1]			
CO	2.01	100	Below
VOC	0.59	100	Below
NO _x	2.62	100	Below
SO _x	<0.01	100	Below
PM ₁₀	0.37	100	Below
PM _{2.5}	0.25	100	Below

1 **Table C-4 Operational Emissions Estimated and Thresholds for Alternative Action T2**

Pollutant	Proposed Action Annual Operational Emissions (tpy)	<i>De minimis</i> threshold values (tpy)	Above/Below <i>de minimis</i>
T2: Temporary Trailer Alternative Location – Stationary Emission - Building Operations [1], [2]			
CO	1.36	100	Below
VOC	0.53	100	Below
NO _x	2.38	100	Below
SO _x	<0.01	100	Below
PM ₁₀	0.08	100	Below
PM _{2.5}	0.08	100	Below
T2: Temporary Trailer Alternative Location – Additional Personnel Commutes (900 people in 2020) [3]			
CO	13.06	100	Below
VOC	1.3	100	Below
NO _x	7.48	100	Below
SO _x	0.04	100	Below
PM ₁₀	2.92	100	Below
PM _{2.5}	0.8	100	Below

2 **Table C-5 Construction Emissions Estimated and Thresholds for Alternative Action P2**

Pollutant	Proposed Action Annual Construction Emissions (tpy)	<i>De minimis</i> threshold values (tpy)	Above/Below <i>de minimis</i>
P2: USSOCOM MISO Facility			
CO	2.51	100	Below
VOC	1.4	100	Below
NO _x	2.23	100	Below
SO _x	<0.01	100	Below
PM ₁₀	0.41	100	Below
PM _{2.5}	0.13	100	Below
P2: USSOCOM Replacement Housing			
CO	1.9	100	Below
VOC	4.33	100	Below
NO _x	1.84	100	Below
SO _x	<0.01	100	Below
PM ₁₀	0.34	100	Below
PM _{2.5}	0.19	100	Below

1 **Table C-6 Operational Emissions Estimated and Thresholds for Alternative Action P2**

Pollutant	Proposed Action Annual Operational Emissions (tpy)	De minimis threshold values (tpy)	Above/Below de minimis
P2: USSOCOM MISO Facility at Existing Housing Location - Building Operations			
CO	1.3	100	Below
VOC	1.04	100	Below
NO _x	2.3	100	Below
SO _x	<0.01	100	Below
PM ₁₀	0.075	100	Below
PM _{2.5}	0.075	100	Below
P2: USSOCOM MISO Facility at Existing Housing Location – 550 Personnel (1,100 drivers)			
CO	16.32	100	Below
VOC	1.62	100	Below
NO _x	9.36	100	Below
SO _x	0.06	100	Below
PM ₁₀	3.33	100	Below
PM _{2.5}	1.0	100	Below
New Family Housing – Building Operations			
Same as Existing Conditions			

2 **Table C-7 Construction Emissions Estimated and Thresholds for Alternative Action P3**

Pollutant	Proposed Action Annual Construction Emissions (tpy)	De minimis threshold values (tpy)	Above/Below de minimis
P3: USSOCOM MISO Facility [1]			
CO	3.11	100	Below
VOC	1.61	100	Below
NO _x	2.93	100	Below
SO _x	<0.01	100	Below
PM ₁₀	0.36	100	Below
PM _{2.5}	0.16	100	Below
P3: USSOCOM Replacement After School Care Facility			
CO	0.41	100	Below
VOC	0.28	100	Below
NO _x	0.39	100	Below
SO _x	<0.01	100	Below
PM ₁₀	0.03	100	Below
PM _{2.5}	0.02	100	Below

I

Table C-8 Operational Emissions Estimated and Thresholds for Alternative Action P3

Pollutant	Proposed Action Annual Operational Emissions (tpy)	<i>De minimis</i> threshold values (tpy)	Above/Below <i>de minimis</i>
P3: USSOCOM MISO Facility at Existing After School Care Facility - Building Operations			
CO	1.3	100	Below
VOC	1.04	100	Below
NO _x	2.3	100	Below
SO _x	<0.01	100	Below
PM ₁₀	0.075	100	Below
PM _{2.5}	0.075	100	Below
P3: USSOCOM MISO Facility at After School Care Facility– 550 Personnel (1,100 drivers)			
CO	16.32	100	Below
VOC	1.62	100	Below
NO _x	9.36	100	Below
SO _x	0.06	100	Below
PM ₁₀	3.33	100	Below
PM _{2.5}	1.0	100	Below
New After School Care Facility – Building Operations			
Same as Existing Conditions			

1 APPENDIX D - PUBLIC NOTICES & STAKEHOLDER CONSULTATION

2 A Notice of Early Public Review was published in the Tampa Bay Times on Tuesday, September 11, 2018
3 because portions of the proposed project are located within the 100-year floodplain. The notice, as it
4 appeared in the newspaper, is below. No public comments were received during the early public review
5 period.

LEGAL NOTICE

**NOTICE FOR EARLY PUBLIC REVIEW OF A
PROPOSED ACTIVITY WITHIN THE 100-YEAR
FLOODPLAIN – UNITED STATES AIR FORCE**

The Air Force (AF) is inviting public input on any practicable alternatives for a proposed activity within the 100-Year floodplain at MacDill Air Force Base (AFB). The Proposed Action involves demolition and construction for the U.S. Special Operations Command (USSOCOM) Global Messaging Counter Messaging (GMCM) Facility at MacDill AFB. The Proposed Action includes 30,000 ft² of temporary trailer space, construction of a 75,000 ft² GMCM Facility, and associated facility improvements. The purpose of the Proposed Action is to consolidate GMCM facilities. The project area consists of several locations around the southern and eastern portions of the Base. Because a bald eagle nest is located near the project area, MacDill AFB is consulting with the U.S. Fish & Wildlife Service regarding potential project impacts to bald eagles.

This notice is required by Executive Order 11988 and has been prepared and made available to the public by the Air Force in accordance with 32 CFR 989 and Air Force Instruction 32-7064 for actions proposed within the 100-year floodplain.

Address written comments to the 6 AMW Public Affairs, 8209 Hangar Loop Drive, Suite 14, MacDill AFB, FL 33621-5502. The telephone number is (813) 828-2215.

09/11/2018 683115-1

I AGENCIES and PERSONS CONTACTED

2 MacDill AFB:

3 Mitchell Dimmick
4 USSOCOM Headquarters
5 MacDill AFB, FL 33621
6

7 David Kattler
8 USSOCOM Headquarters
9 MacDill AFB, FL 33621
10

11 Andrew Rider
12 6 CES/CENPO
13 7621 Hillsborough Loop Dr.
14 MacDill, AFB, FL 33621
15

16 Tony Rodriguez
17 6 CES/CENPO
18 7621 Hillsborough Loop Dr.
19 MacDill, AFB, FL 33621

20 Agencies:

21 Chris Stahl
22 Florida State Clearinghouse
23 2600 Blair Stone Road, M.S. 47
24 Tallahassee, FL 32399-0250
25

26 Jason Aldridge
27 Division of Historical Resources
28 Compliance Review Section
29 500 S. Bronough St.
30 Tallahassee, FL 32399-0250
31

32 Jay Herrington
33 U.S. Fish and Wildlife Service
34 7915 Baymeadows Way, Suite 200
35 Jacksonville, FL 32256
36

37 Native American Tribes:

38 Seminole Tribe of Florida
39 Dr. Paul Backhouse
40 30290 Josie Billie Hwy, PMB 1004
41 Clewiston, FL 33440
42

43 Miccosukee Tribe of Indians of Florida
44 Mr. Fred Dayhoff
45 SR Box 68, Old Loop Road
46 Ochopee, FL 34141
47

48 Seminole Nation of Oklahoma
49 Mr. Lewis Johnson
50 PO Box 1498
51 Wewoka, OK 74884



**DEPARTMENT OF THE AIR FORCE
6TH AIR MOBILITY WING (AMC)
MACDILL AIR FORCE BASE, FLORIDA**

Colonel Stephen P. Snelson
6th Air Mobility Wing Commander
8208 Hangar Loop Drive, Suite 1
MacDill Air Force Base, Florida 33621-5407

Dr. Paul Backhouse
Seminole Tribe of Florida
30290 Josie Billie Hwy, PMB 1004
Clewiston, FL 33440

Dear Dr. Backhouse

Headquarters United States Special Operations Command needs additional office space on MacDill Air Force Base to consolidate Department of Defense support of worldwide operations. The Air Force is initiating consultation with you on our proposal to meet that need to ensure you have a reasonable opportunity to comment on the proposed construction. We do not expect the proposed action to have any effect on archaeological resources or properties of cultural or religious significance.

Additional office space would initially be accomplished by installing a 35,000 square foot temporary modular facility which would also include two acres of parking. Two possible locations for the modular facility and parking area have been identified and are presented in Attachment 1 (Figure 1). Construction of a permanent facility is planned for completion by 2025. The permanent facility is anticipated to be a multi-story building that provides 100,000 square feet of administrative space. The permanent facility will also require construction of a parking area. The three locations considered for the permanent facility are presented in Figure 2. Construction of a permanent facility at all three locations would require demolition of the existing building(s) at those locations, construction of the additional office space and parking at that location, and construction of a replacement facility at another on-base location for the displaced building(s) as shown in Figure 3. The location of each area being evaluated for the temporary and permanent facilities is provided in Figure 4 which also shows the general location of all known archaeological sites on MacDill.

A base-wide Phase I archaeological survey was conducted across the eastern portion of MacDill in 2017. Both of the locations being considered for installation of the temporary modular facility are within the area evaluated in the survey. The final report for the survey is not yet available, but data from the survey showing the archaeological probability and shovel test locations and results of those tests around both areas are provided in Figure 5. Shovel testing is somewhat limited across the specific locations being considered for installation of the modular facility. However, prior to installation of the modular facility, fill would be placed across the area to raise the finish floor elevation above the 100-year floodplain. Extensive subsurface excavation would not be needed to provide structural support for

the modular facility. Consequently, we do not believe we are likely to encounter archaeological resources at either of the proposed locations of the temporary facility.

All six of the locations being evaluated for possible construction of permanent facilities are located within areas of the installation that have been built-over, disturbed, or modified extensively. Therefore the likelihood of encountering undisturbed archaeological sites at any of these six locations is considered to be very unlikely. For example, the May 2017 archaeological survey for the CDC Parking Lot project, which is also located in the northeastern portion of the base, found that all of the shovel tests encountered 'highly disturbed stratigraphy'. The final archaeological survey for the CDC Parking Lot project was submitted to you earlier this year and an excerpt from the survey report is provided in Attachment 2. Likewise, the survey team that completed the 2017 base-wide archaeological survey stated the northeastern portion of the base was visually inspected during pedestrian walkover but very few shovel tests were excavated because the landscape was so heavily modified by urban development during base construction. A figure showing the archaeological probability and shovel test locations around the northeast portion of the base is provided in Attachment 1 (Figure 6).

The Air Force values your views on our proposed plan for constructing additional office space. We look forward to any comments or concerns you may have about the potential for the proposed action to affect any archaeological sites or properties of cultural or religious significance and your recommendations on ways we might avoid those effects. If we do not hear from you within 30 days we will assume you have no objections to the project and will proceed with planning for the Proposed Action. Please do not hesitate to call me at (813) 828-4444 if you require any additional information.

Sincerely

SNELSON.STEPH
EN.P.1010166124

Digitally signed by
SNELSON.STEPHEN.P.10101661
24
Date: 2018.08.17 13:40:10
-04'00'

STEPHEN P. SNELSON, Colonel, USAF
Commander

2 Attachments:

1. Figure 1: Proposed and Alternate Locations for the Temporary Modular Facility
Figure 2: Proposed and Alternate Locations for the Permanent Facility
Figure 3: Proposed Relocation of Existing Facilities from Proposed Construction Locations
Figure 4: Possible Construction Locations in Relation to Known Archaeological Sites
Figure 5: Archaeological Survey Data Around Proposed Modular Facility Locations
Figure 6: Archaeological Survey Data Around Proposed Permanent Facility Locations
2. Excerpt from Phase I Archaeological Survey of CDC Parking Lot at MacDill AFB

Attachments to this letter are included in the administrative record.



**DEPARTMENT OF THE AIR FORCE
6TH AIR MOBILITY WING (AMC)
MACDILL AIR FORCE BASE, FLORIDA**

Colonel Stephen P. Snelson
6th Air Mobility Wing Commander
8208 Hangar Loop Drive, Suite 1
MacDill Air Force Base, Florida 33621-5407

Mr. Fred Dayhoff
Miccosukee Tribe of Indians of Florida
HC 61
SR BOX 68, Old Loop Road
Ochopee, FL 34141

Dear Mr. Dayhoff

Headquarters United States Special Operations Command needs additional office space on MacDill Air Force Base to consolidate Department of Defense support of worldwide operations. The Air Force is initiating consultation with you on our proposal to meet that need to ensure you have a reasonable opportunity to comment on the proposed construction. We do not expect the proposed action to have any effect on archaeological resources or properties of cultural or religious significance.

Additional office space would initially be accomplished by installing a 35,000 square foot temporary modular facility which would also include two acres of parking. Two possible locations for the modular facility and parking area have been identified and are presented in Attachment 1 (Figure 1). Construction of a permanent facility is planned for completion by 2025. The permanent facility is anticipated to be a multi-story building that provides 100,000 square feet of administrative space. The permanent facility will also require construction of a parking area. The three locations considered for the permanent facility are presented in Figure 2. Construction of a permanent facility at all three locations would require demolition of the existing building(s) at those locations, construction of the additional office space and parking at that location, and construction of a replacement facility at another on-base location for the displaced building(s) as shown in Figure 3. The location of each area being evaluated for the temporary and permanent facilities is provided in Figure 4 which also shows the general location of all known archaeological sites on MacDill.

A base-wide Phase I archaeological survey was conducted across the eastern portion of MacDill in 2017. Both of the locations being considered for installation of the temporary modular facility are within the area evaluated in the survey. The final report for the survey is not yet available, but data from the survey showing the archaeological probability and shovel test locations and results of those tests around both areas are provided in Figure 5. Shovel testing is somewhat limited across the specific locations being considered for installation of the modular facility. However, prior to installation of the modular facility, fill would be placed across the area to raise the finish floor elevation above the 100-year floodplain. Extensive subsurface excavation would not be needed to provide structural support for

the modular facility. Consequently, we do not believe we are likely to encounter archaeological resources at either of the proposed locations of the temporary facility.

All six of the locations being evaluated for possible construction of permanent facilities are located within areas of the installation that have been built-over, disturbed, or modified extensively. Therefore the likelihood of encountering undisturbed archaeological sites at any of these six locations is considered to be very unlikely. For example, the May 2017 archaeological survey for the CDC Parking Lot project, which is also located in the northeastern portion of the base, found that all of the shovel tests encountered 'highly disturbed stratigraphy'. The final archaeological survey for the CDC Parking Lot project was submitted to you earlier this year and an excerpt from the survey report is provided in Attachment 2. Likewise, the survey team that completed the 2017 base-wide archaeological survey stated the northeastern portion of the base was visually inspected during pedestrian walkover but very few shovel tests were excavated because the landscape was so heavily modified by urban development during base construction. A figure showing the archaeological probability and shovel test locations around the northeast portion of the base is provided in Attachment 1 (Figure 6).

The Air Force values your views on our proposed plan for constructing additional office space. We look forward to any comments or concerns you may have about the potential for the proposed action to affect any archaeological sites or properties of cultural or religious significance and your recommendations on ways we might avoid those effects. If we do not hear from you within 30 days we will assume you have no objections to the project and will proceed with planning for the Proposed Action. Please do not hesitate to call me at (813) 828-4444 if you require any additional information.

Sincerely

SNELSON.STEPHE⁴ Digitally signed by
SNELSON.STEPHEN.P.101016612
N.P.1010166124 Date: 2018.08.17 13:41:11 -04'00'

STEPHEN P. SNELSON, Colonel, USAF
Commander

2 Attachments:

1. Figure 1: Proposed and Alternate Locations for the Temporary Modular Facility
Figure 2: Proposed and Alternate Locations for the Permanent Facility
Figure 3: Proposed Relocation of Existing Facilities from Proposed Construction Locations
Figure 4: Possible Construction Locations in Relation to Known Archaeological Sites
Figure 5: Archaeological Survey Data Around Proposed Modular Facility Locations
Figure 6: Archaeological Survey Data Around Proposed Permanent Facility Locations
2. Excerpt from Phase I Archaeological Survey of CDC Parking Lot at MacDill AFB

Attachments to this letter are included in the administrative record.



**DEPARTMENT OF THE AIR FORCE
6TH AIR MOBILITY WING (AMC)
MACDILL AIR FORCE BASE, FLORIDA**

Colonel Stephen P. Snelson
6th Air Mobility Wing Commander
8208 Hangar Loop Drive, Suite 1
MacDill Air Force Base, Florida 33621-5407

Mr. Lewis Johnson
Assistant Chief
Seminole Nation of Oklahoma
PO Box 1498
Wewoka, OK 74884

Dear Mr. Johnson

Headquarters United States Special Operations Command needs additional office space on MacDill Air Force Base to consolidate Department of Defense support of worldwide operations. The Air Force is initiating consultation with you on our proposal to meet that need to ensure you have a reasonable opportunity to comment on the proposed construction. We do not expect the proposed action to have any effect on archaeological resources or properties of cultural or religious significance.

Additional office space would initially be accomplished by installing a 35,000 square foot temporary modular facility which would also include two acres of parking. Two possible locations for the modular facility and parking area have been identified and are presented in Attachment 1 (Figure 1). Construction of a permanent facility is planned for completion by 2025. The permanent facility is anticipated to be a multi-story building that provides 100,000 square feet of administrative space. The permanent facility will also require construction of a parking area. The three locations considered for the permanent facility are presented in Figure 2. Construction of a permanent facility at all three locations would require demolition of the existing building(s) at those locations, construction of the additional office space and parking at that location, and construction of a replacement facility at another on-base location for the displaced building(s) as shown in Figure 3. The location of each area being evaluated for the temporary and permanent facilities is provided in Figure 4 which also shows the general location of all known archaeological sites on MacDill.

A base-wide Phase I archaeological survey was conducted across the eastern portion of MacDill in 2017. Both of the locations being considered for installation of the temporary modular facility are within the area evaluated in the survey. The final report for the survey is not yet available, but data from the survey showing the archaeological probability and shovel test locations and results of those tests around both areas are provided in Figure 5. Shovel testing is somewhat limited across the specific locations being considered for installation of the modular facility. However, prior to installation of the modular facility, fill would be placed across the area to raise the finish floor elevation above the 100-year floodplain. Extensive subsurface excavation would not be needed to provide structural support for

MISSION FOCUSED...VALUED AIRMEN

the modular facility. Consequently, we do not believe we are likely to encounter archaeological resources at either of the proposed locations of the temporary facility.

All six of the locations being evaluated for possible construction of permanent facilities are located within areas of the installation that have been built-over, disturbed, or modified extensively. Therefore the likelihood of encountering undisturbed archaeological sites at any of these six locations is considered to be very unlikely. For example, the May 2017 archaeological survey for the CDC Parking Lot project, which is also located in the northeastern portion of the base, found that all of the shovel tests encountered 'highly disturbed stratigraphy'. The final archaeological survey for the CDC Parking Lot project was submitted to you earlier this year and an excerpt from the survey report is provided in Attachment 2. Likewise, the survey team that completed the 2017 base-wide archaeological survey stated the northeastern portion of the base was visually inspected during pedestrian walkover but very few shovel tests were excavated because the landscape was so heavily modified by urban development during base construction. A figure showing the archaeological probability and shovel test locations around the northeast portion of the base is provided in Attachment 1 (Figure 6).

The Air Force values your views on our proposed plan for constructing additional office space. We look forward to any comments or concerns you may have about the potential for the proposed action to affect any archaeological sites or properties of cultural or religious significance and your recommendations on ways we might avoid those effects. If we do not hear from you within 30 days we will assume you have no objections to the project and will proceed with planning for the Proposed Action. Please do not hesitate to call me at (813) 828-4444 if you require any additional information.

Sincerely

SNELSON.STEPH
EN.P.1010166124⁴
Digitally signed by
SNELSON.STEPHEN.P.101016612
Date: 2018.08.17 13:40:45 -04'00'

STEPHEN P. SNELSON, Colonel, USAF
Commander

2 Attachments:

1. Figure 1: Proposed and Alternate Locations for the Temporary Modular Facility
Figure 2: Proposed and Alternate Locations for the Permanent Facility
Figure 3: Proposed Relocation of Existing Facilities from Proposed Construction Locations
Figure 4: Possible Construction Locations in Relation to Known Archaeological Sites
Figure 5: Archaeological Survey Data Around Proposed Modular Facility Locations
Figure 6: Archaeological Survey Data Around Proposed Permanent Facility Locations
2. Excerpt from Phase I Archaeological Survey of CDC Parking Lot at MacDill AFB

Attachments to this letter are included in the administrative record.

1 **APPENDIX E – ERP SITE SUMMARY**

2 The following pages provide an ERP site summary for SWMU-02 and SWMU-03.

Site Summary: SWMU 2

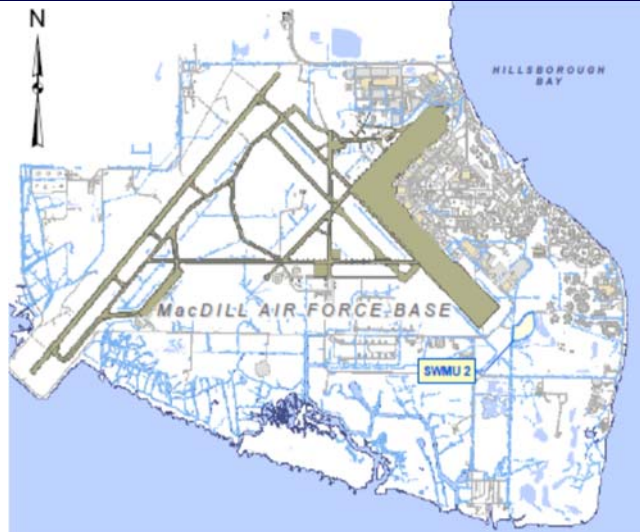
Environmental Restoration Program, MacDill AFB, FL

Site ID: SWMU 2 (LF002)

Site Name: Former Landfill at the Golf Course

Site Acreage: 9.41 acres

Institutional Controls: Land Use Controls for soils and Groundwater-No monitoring



Contaminants of Concern (CoCs):

Groundwater: Iron, manganese, arsenic

Soils: Arsenic, benzo(a)pyrene equivalent, Landfill Material

Surface Water: Barium

Sediments: None

Point of Contact:

Tish Matty, Program Manager
 AFCEC 6 CES/CZOE
 7621 Hillsborough Loop Dr. (Bldg 30)
 MacDill AFB, FL 33621
 P: 813-828-0776
 C: 813-833-1997

Physical Setting:

SWMU 2 is located on the southeastern section of the Base, approximately 3,500 ft west of Hillsborough Bay, south of McClelland Drive, and west of Lake McClelland. The site is bordered by an open grassy field and McClelland Drive to the north, Lake McClelland and the 15th and 16th fairways of the golf course to the east, the golf course to the south and southeast, and a canal to the west.

Buildings Located on Site:

None

Site History:

Former Landfill at the Golf Course (approximately 11.3 acres), is mainly covered by a portion of the North Golf Course. The landfill was active from approximately 1940 to 1950 and reportedly received concrete rubble and general refuse. Trees killed during a frost in 1965 or 1966 were also reportedly buried at this site. No known industrial or hazardous wastes were disposed of in this landfill; however, such activities could have occurred. Upon deactivation, the landfill was covered with native soil and graded level. The approved remedy in the SoB (MAFB, June 2006) for SWMU 2 is no further investigation with ICs. Nonresidential LUCs have been applied to SWMU 2 to protect human health. These controls represent a mutually agreed upon course of action to effectively prevent the exposure of potential future residents and workers to landfill materials and groundwater that exceeds State of Florida GCTLs (FDEP, April 2005). Engineering considerations must be undertaken before any construction on or development of the area within SWMU 2 boundaries, since SWMU 2 is a former landfill.

Remedial Actions to Date:

Monitored Natural Attenuation

Exit Strategy:

Institutional Controls = Land Use Controls for soil and groundwater with no monitoring

Requirements for Handling of Contaminated Media

a. Dewatering on Contaminated Sites. Produced groundwater is not to be discharged back to the site. The Contractor must contain and test all removed groundwater, and share test results with 6 CES/CEVR prior to any action. Based on the test results, the Contractor has the following options:

1. If the test results are below FDEP Groundwater Cleanup Target Levels (GCTLs), the Contractor may discharge the groundwater to stormwater drainage system in accordance with the requirements of the FDEP;
2. If the test results are above FDEP GCTLs, the contaminated groundwater must be transported off-site for disposal/treatment;

b. Soil Removal on Contaminated Sites. On sites where contamination has been left in place above residential FDEP Soil Cleanup Target Levels (SCTLs), the soil may be placed back where it was excavated from. If there not enough space in the excavation area to replace all the removed soil, it must be hauled off site for treatment and disposal at the contractor's expense. The contaminated soil may not be placed on another area of the site

Groundwater Monitoring Well Procedures:

1. The government has tried to identify as many wells as possible, however, more wells may exist in the project area than are shown in the MacDill GeoBase system. Therefore, the contractor must survey the site prior to start of work for exact locations of all wells. Great care must be taken to protect and not damage all the wells found in the project area in accordance with FAR 52.236-9. If any of these wells are damaged during this project, it is the contractor's responsibility to either repair or abandon and reinstall the well in accordance with the MacDill AFB Basewide Environmental Restoration Work Plan, at their expense. The determination as to whether the well can be repaired or must be properly abandoned and a new well installed will be made by MacDill AFB Environmental Restoration Personnel. Appendix A of the MacDill AFB Basewide Environmental Restoration Work Plan, Standard Operating Procedures (SOP) Numbers 4 and 6 are attached to this specification. SOP Number 4 is Investigation Derived Waste (IDW) Management and SOP Number 6 is Well Installation, Development, and Abandonment Procedures.

2. If the work is such that damage to a well is unavoidable, the well must be properly abandoned prior to construction activities and a new well installed upon completion of construction activities at the contractors expense. Groundwater monitoring well abandonment and installation shall be performed in accordance with procedures mentioned above. The contractor shall coordinate the well abandonment and reinstallation activities with MacDill AFB Environmental Restoration Personnel (ERP) to ensure monitoring requirements and schedules are acceptable to regulators before construction activities take place. MacDill AFB ERP will determine the location of any replacement wells to be installed.



Updated By: Tish Matty

Date Updated: 29 August 2017

Site Summary: SWMU 3

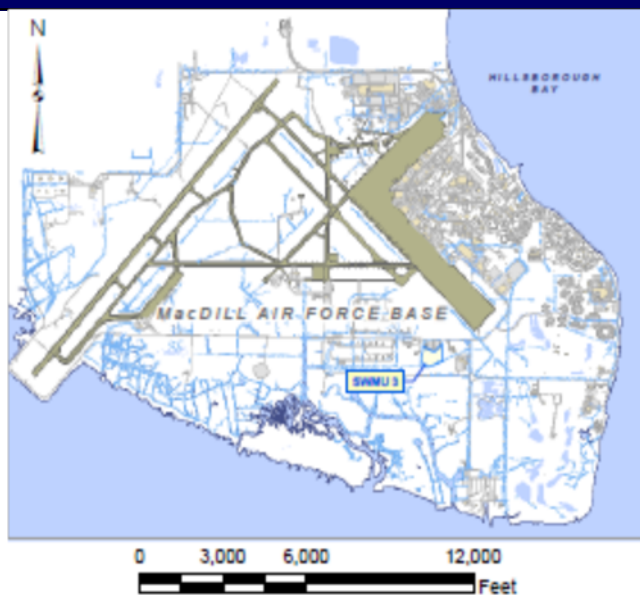
Environmental Restoration Program, MacDill AFB, FL

Site ID: SWMU 3 (LF003)

Site Name: Former Landfill at Dog Kennel

Site Acreage: 14.41 acres

Institutional Controls: Land Use Controls for soils and Groundwater Use Restrictions



Contaminants of Concern (CoCs):

Groundwater: Arsenic, Iron

Soils: Landfill Materials

Surface Water: None

Sediments: None

Point of Contact:

Tish Matty, Program Manager
 6 CES/CEVR
 7621 Hillsborough Loop Dr. (Bldg 30)
 MacDill AFB, FL 33621
 P: 813-828-0776
 C: 813-833-1997

Physical Setting:

SWMU 3 is located east of munitions storage and the dog kennel, between Golf Course Avenue and South shore Road. The site is covered with grass and is bordered to the south and west by drainage ditches, to the north by South shore Road, and to the east by Building 1750.

Buildings Located on Site:

1775

Site History:

The Former Landfill at the Dog Kennel (approximately 11.3 acres), is believed to have received wastes from 1950 to the 1960s; however, the exact dates of operation are unknown. The landfill was reported to contain municipal-type refuse, construction debris, and possibly small quantities of hazardous wastes. No written documentation of specific materials deposited in the landfill exists. The disposal of industrial or hazardous wastes in the landfill could have occurred. Following the investigation of contamination at the site, annual monitoring for metals began in March 2006. Initially, arsenic, iron, and manganese were the COCs at SWMU 3. However, during the SoB process, manganese was removed from the COC list because it did not significantly contribute to risk. Therefore, only arsenic and iron remained as COCs during the annual groundwater monitoring events since April 2007. The approved remedy in the SoB is monitored natural attenuation (MNA) for groundwater, groundwater use restrictions, and the implementation of nonresidential LUCs for SWMU 3. However, annual monitoring at SWMU 3 has shown that the plume is stable and not migrating off site. Therefore, the recommendation in the Tenth Annual Basewide Groundwater Monitoring Report (HGL, 2016) was to continue annual LUC surveillance and discontinue groundwater monitoring. The report was approved in a FDEP letter dated November 11, 2016.

Remedial Actions to Date:

Monitored Natural Attenuation (MNA)

Exit Strategy:

Institutional Controls = Land Use Controls for soil and groundwater with no monitoring

Requirements for Handling of Contaminated Media

a. Dewatering on Contaminated Sites. Produced groundwater is not to be discharged back to the site. The Contractor must contain and test all removed groundwater, and share test results with 6 CES/CEVR prior to any action. Based on the test results, the Contractor has the following options:

1. If the test results are below FDEP Groundwater Cleanup Target Levels (GCTLs), the Contractor may discharge the groundwater to stormwater drainage system in accordance with the requirements of the FDEP;
2. If the test results are above FDEP GCTLs, the contaminated groundwater must be transported off-site for disposal/treatment;

b. Soil Removal on Contaminated Sites. On sites where contamination has been left in place above residential FDEP Soil Cleanup Target Levels (SCTLs), the soil may be placed back where it was excavated from. If there not enough space in the excavation area to replace all the removed soil, it must be hauled off site for treatment and disposal at the contractor's expense. The contaminated soil may not be placed on another area of the site

Groundwater Monitoring Well Procedures:

1. The government has tried to identify as many wells as possible, however, more wells may exist in the project area than are shown in the MacDill GeoBase system. Therefore, the contractor must survey the site prior to start of work for exact locations of all wells. Great care must be taken to protect and not damage all the wells found in the project area in accordance with FAR 52.236-9. If any of these wells are damaged during this project, it is the contractor's responsibility to either repair or abandon and reinstall the well in accordance with the MacDill AFB Basewide Environmental Restoration Work Plan, at their expense. The determination as to whether the well can be repaired or must be properly abandoned and a new well installed will be made by MacDill AFB Environmental Restoration Personnel. Appendix A of the MacDill AFB Basewide Environmental Restoration Work Plan, Standard Operating Procedures (SOP) Numbers 4 and 6 are attached to this specification. SOP Number 4 is Investigation Derived Waste (IDW) Management and SOP Number 6 is Well Installation, Development, and Abandonment Procedures.

2. If the work is such that damage to a well is unavoidable, the well must be properly abandoned prior to construction activities and a new well installed upon completion of construction activities at the contractors expense. Groundwater monitoring well abandonment and installation shall be performed in accordance with procedures mentioned above. The contractor shall coordinate the well abandonment and reinstallation activities with MacDill AFB Environmental Restoration Personnel (ERP) to ensure monitoring requirements and schedules are acceptable to regulators before construction activities take place. MacDill AFB ERP will determine the location of any replacement wells to be installed.



Updated By: Tish Matty

Date Updated: 29 August 2017