

FINAL

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

**PROPOSED CONSTRUCTION PROGRAM
AND BEDDOWN OF C-27J AIRCRAFT AT THE
175TH WING**

**MARYLAND AIR NATIONAL GUARD
MARTIN STATE AIRPORT**

**AIR NATIONAL GUARD BASE
BALTIMORE, MARYLAND**

**ASSET MANAGEMENT DIVISION
NATIONAL GUARD BUREAU**

FINAL

ACRONYMS AND ABBREVIATIONS

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter	HAZMART	Hazardous Material Pharmacy
175 WG	175 th Wing	HVAC	heating, ventilating, and air conditioning
ACAM	Air Conformity Applicability Model	IDA	Intensely Developed Area
AFI	Air Force Instruction	IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
AGE	air ground equipment	ISR	Intelligence, Surveillance, and Reconnaissance
ALP	Airport Layout Plan	ISWMP	Integrated Solid Waste Management Plan
ANG	Air National Guard	kWh	kilowatt hours
AOC	Area of Concern	LAMS	Large Area Maintenance Shelter
AT/FP	Anti-Terrorism/Force Protection	LBP	lead-based paint
BASH	bird/wildlife aircraft strike hazard	LID	low-impact development
BCPS	Baltimore County Public Schools	LQG	large quantity generator
BEA	Bureau of Economic Analysis	LRS	Logistics Readiness Squadron
BMP	best management practice	MAA	Maryland Aviation Administration
CAA	Clean Air Act	MARC	Maryland Area Regional Commuter
CBCA	Chesapeake Bay Critical Area	mcf	thousand cubic feet
CEQ	Council on Environmental Quality	MDANG	Maryland Air National Guard
CFR	Code of Federal Regulations	MDE	Maryland Department of the Environment
CO	carbon monoxide	MDNR	Maryland Department of Natural Resources
CO ₂	carbon dioxide	MHT	Maryland Historical Trust
CO ₂ e	carbon dioxide equivalent	MILCON	Military Construction
COMAR	Code of Maryland Regulations	MOU	Memorandum of Understanding
CZMA	Coastal Zone Management Act	NAAQS	National Ambient Air Quality Standards
CWA	Clean Water Act	NEPA	National Environmental Policy Act
Cyber/ISR	cyber/intelligence, surveillance, and reconnaissance	NGB	National Guard Bureau
DD Form	Department of Defense Form	NO	nitric oxide
DoD	Department of Defense	NO ₂	nitrogen dioxide
EA	Environmental Assessment	N ₂ O	nitrous oxide
EIAP	Environmental Impact Analysis Process	NOAA	National Oceanic and Atmospheric Administration
EISA	Energy Independence and Security Act	NOI	notice of intent
EO	Executive Order	NO _x	nitrogen oxides
ERP	Environmental Restoration Program	NPDES	National Pollutant Discharge Elimination System
ESD	Environmental Site Design		
FAA	Federal Aviation Administration		
FOD	foreign object debris		
FONPA	Finding of No Practicable Alternative		
FONSI	Finding of No Significant Impact		
FY	Fiscal Year		
GHG	greenhouse gas		
GWP	global warming potential		

**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
FINDING OF NO SIGNIFICANT IMPACT**

Martin State Airport
Middle River, Maryland

Maryland Air National Guard Proposed Construction Program and Beddown of C-27J Aircraft at
the 175th Wing

- 1. Introduction.** This document is a Finding of No Significant Impact (FONSI) on the environment as a result of the proposed National Guard Bureau (NGB), Maryland Air National Guard (MDANG), *Construction Program and Beddown of C-27J Aircraft at the 175th Wing (175 WG)*. The Maryland Air National Guard is a tenant of the Maryland Aviation Administration (MAA), owner and operator of Martin State Airport (MTN). The MDANG 175 WG Base occupies approximately 175 acres of the northeastern portion of Martin State Airport, which the U.S. Air Force leases from MAA. The MDANG, in turn, licenses the property from the Air Force.

The NGB amended the Environmental Assessment (EA) for Proposed *Construction Program and Beddown of C-27J Aircraft at the 175th Wing (175 WG)* (June 2010), herein referred to as the 2010 EA, with updated mission requirements. The 2010 EA examined the environmental impacts resulting from the potential construction of several new facilities, relocation of the Main Gate, demolition, and roadway expansions, as well as the beddown of C-27J aircraft at the 175 WG of the MDANG). This Supplemental EA examined replacing the C-27J mission with a cyber/intelligence, surveillance, and reconnaissance (Cyber/ISR) mission and amending the proposed construction program. No new aircraft will be relocated to the Base as part of the Cyber/ISR mission.

The NGB, as the lead federal agency, prepared the Supplemental EA in March 2014 and issued a Finding of No Significant (FONSI) for the proposed project on November 13, 2014. The Federal Aviation Administration (FAA) is a Cooperating Agency on this Supplemental EA and has independently evaluated the information contained in NGB's EA and takes full responsibility for the scope and content that addresses the FAA actions.

In accordance with the Council on Environmental Quality's (CEQ's) Regulations for Implementing the Procedural Provisions of NEPA (Regulations), Title 40, Code of Federal Regulations, Part 1506.3, and FAA Order 1050.1E, Environmental Impacts: Policies and Procedures, Paragraph 404d, and FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions, Paragraph, 704(b), stating that the FAA may adopt another agency's EA, the FAA adopts NGB's *Construction Program and Beddown of C-27J Aircraft at the 175th Wing*, the Supplemental EA to the June 2010 EA.

The FAA must comply with the National Environmental Policy Act of 1969 (NEPA) before being able to take the federal action of further processing of an application for Federal assistance in funding various airport development and/or for approval of the Airport Layout Plan (ALP) that depicts the proposed airport development projects. Approval of the ALP is authorized by the Airport and Airway Improvement Act of 1982, as amended (Public Laws 97-248 and 100-223). The issuing of this FONSI does not

constitute a commitment by the FAA to provide federal financial assistance for these actions.

2. **Project Purpose and Need.** Following publication of the 2010 EA, the U.S. Air Force decided to replace the C-27J mission with a Cyber/ISR mission at the 175 WG. The purpose of the proposed action is to provide the 175 WG with properly sized and configured facilities that are required to effectively accomplish its mission and would comply with Air National Guard (ANG) Instruction 32-1023, *Criteria and Standards for Air National Guard Construction*, Air Force Handbook 32-1084, *Facility Requirements* and ANG Handbook 32-1084, *Facility Space Standards*. The construction is also necessary to replace outdated facilities and to provide security of assets. New facilities will adhere to *Department of Defense (DoD) Minimum Antiterrorism Standards for Buildings* as presented in Unified Facilities Criteria (UFC) 4-010-01, effective 9 February 2012, Change 1, 1 October 2013.
3. **Proposed Project.** The following is a listing of the various components of the proposed project:
 - Construct Cyber/Intelligence, Surveillance, and Reconnaissance Facility
 - Expand Hercules Road
 - Construct new Mobile Fuel Tanker Parking Area
 - Construct Vehicle Parking Areas
 - Construct A-10 Flight Simulator Building
 - Construct Logistics Readiness Squadron Warehouse
 - Repair A-10 Drop Tank Storage Area/Access Road and Large Area Maintenance Shelter
 - Repair Taxiway Tango
 - Emergency Management/Building Manager Storage Facility
4. **Reasonable Alternatives Considered.** As described in Section 4 of the attached Supplemental Environmental Assessment (EA), alternatives, to include the no action alternative, were evaluated for the proposed project.
5. **Assessment.** The attached EA addresses the effect of the proposed project on the quality of the human and natural environmental, and is made a part of this finding. The following impact analysis highlights the more thorough analysis presented in the EA prepared in March 2014.

Air Quality. Direct emissions associated with the proposed project will be limited to the duration of the proposed project, and were calculated to be below *de minimis* levels specified in 40 CFR Part 93.153 pursuant to Section 176(c) of the Clean Air Act Amendments of 1990. Additional emissions associated with the operation of the new facility are negligible, and accounted for within the background emissions levels in the State Implementation Plan. No indirect emissions are anticipated as a result of this project (EA-Table 3 & Appendix C).

Coastal Resources. The project area falls within the Maryland Coastal Zone Management area and therefore must comply with Federal and State Coastal Zone regulations. A Federal Consistency review was submitted as part of the draft EA.

Maryland Department of the Environment concurred that the proposed action is consistent with the Maryland Coastal Zone Management Program (EA-Appendix B).

- 6. **Public Participation.** The Draft Supplemental EA was made available for public review from April 3, 2014 to May 2, 2014 (EA-Appendix A).
- 7. **Mitigation Measures.** The FAA requires that the MAA implement the following conservation measures, if the Tenant decides to pursue the proposed project:
 - a. Develop and implement erosion and sediment control measures in accordance with the latest version of the Maryland Standards and Specifications for Erosion and Sediment Control Handbook and Maryland Stormwater Management Laws and Regulations.
 - b. Best management practices (BMPs) will be followed to avoid and minimize any potential impacts to the environment.
 - c. All required permits and approved plans for the proposed project must be obtained prior to construction.
 - d. Construction contract provisions must contain the provisions of FAA AC 150/5370-10E, *Standards for Specifying Construction of Airports* item P-156, temporary air, water pollution, soil erosion and siltation control and FAA AC 150/5320-5C, *Airport Drainage*.

8. **Finding of No Significant Impact**

I have carefully and thoroughly considered the facts contained in the attached EA. Based on that information I find that the proposed Federal action is consistent with existing national environmental policies and objectives as set forth in section 101(a) of the National Environmental Policy Act of 1969 (NEPA). I also find the proposed Federal Action, with the required mitigation referenced above will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to section 102 (2)(C) of NEPA. As a result, FAA will not prepare an EIS for this action.

APPROVED:



 Matthew J. Thys, Manager
 Washington Airports District Office

12/19/14

 Date

DISAPPROVED:

 Matthew J. Thys, Manager
 Washington Airports District Office

 Date

**FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR
PROPOSED CONSTRUCTION PROGRAM AND BEDDOWN OF C-27J AIRCRAFT AT
THE 175TH WING (175 WG), MARTIN STATE AIRPORT AIR NATIONAL GUARD
BASE, BALTIMORE, MARYLAND**

The National Guard Bureau (NGB) proposes to amend the *Environmental Assessment (EA) for Proposed Construction Program and Beddown of C-27J Aircraft at the 175th Wing (175 WG)* (June 2010), herein referred to as the 2010 EA, with updated mission requirements. The 2010 EA examined the environmental impacts resulting from the potential construction of several new facilities, relocation of the Main Gate, demolition, and roadway expansions, as well as the beddown of C-27J aircraft at the 175 WG of the Maryland Air National Guard (MDANG), located at the Martin State Airport in Middle River, Maryland. This Supplemental EA examines replacing the C-27J mission with a cyber/intelligence, surveillance, and reconnaissance (Cyber/ISR) mission and amending the proposed construction program. No new aircraft will be relocated to the Base as part of the Cyber/ISR mission.

PURPOSE/NEED: Following publication of the 2010 EA, the U.S. Air Force decided to replace the C-27J mission with a Cyber/ISR mission at the 175 WG. The purpose of the Proposed Action is to provide the 175 WG with properly sized and configured facilities that are required to effectively accomplish its mission and would comply with Air National Guard (ANG) Instruction 32-1023, *Criteria and Standards for Air National Guard Construction*, Air Force Handbook 32-1084, *Facility Requirements* and ANG Handbook 32-1084, *Facility Space Standards*. The construction is also necessary to replace outdated facilities and to provide security of assets. New facilities will adhere to *Department of Defense (DoD) Minimum Antiterrorism Standards for Buildings* as presented in Unified Facilities Criteria (UFC) 4-010-01, effective 9 February 2012, Change 1, 1 October 2013.

PROPOSED ACTION: Under the Proposed Action, the 175 WG would implement the following projects:

#	Title	Project #	Action Year
1	Construct Cyber/Intelligence, Surveillance, and Reconnaissance Facility	PJMS129058	2014
2	Expand Hercules Road	TBD	2016
3	Construct new Mobile Fuel Tanker Parking Area	PJMS132450	2016
4	Construct Vehicle Parking Areas	TBD	2015
5	Construct A-10 Flight Simulator Building	PJMS119034	2014
6	Construct Logistics Readiness Squadron Warehouse	PJMS072001	2014
7	Repair A-10 Drop Tank Storage Area/Access Road and Large Area Maintenance Shelter	PJMS072001	TBD
8	Repair Taxiway Tango	PJMS032044	TBD
9	Emergency Management/Building Manager Storage Facility	TBD	TBD

TBD = to be determined

NO ACTION ALTERNATIVE: Under the No Action Alternative, the 175 WG would not implement the projects describe in the table. However, the 175 WG would continue to implement required projects identified in the 2010 EA. Following publication of the 2010 EA, the U.S. Air Force decided to replace the C-27J mission with a Cyber/ISR mission at the 175 WG, and as a result, not all projects originally proposed in the 2010 EA are still planned. (A list of active projects from the 2010 EA is included in Section 2.4 of the EA. None of the current projects were considered as part of the 2010 EA.) Under the No Action Alternative, identified deficiencies would continue to impair the 175 WG's ability to successfully conduct their mission and to maintain wartime readiness and training.

SUMMARY OF FINDINGS

Potential impacts associated with the Proposed Action have been assessed with regard to the following environmental resource areas:

Air Quality – Under the Proposed Action, annual emissions from construction activities would cause minimal change in current criteria air pollutant emissions. Particulate matter with an aerodynamic diameter of less than or equal to 10 microns (PM₁₀) would have the highest annual emission rate, which would amount to less than 0.07 percent of Baltimore County average annual emissions.

The Base is located in an area designated as attainment for all criteria pollutants except for the 8-hour ozone and PM_{2.5} standard. Consequently, a conformity applicability analysis was performed for 8-hour ozone and PM_{2.5}. Based on the analysis, conformity thresholds would not be exceeded for ozone precursors (nitrous oxides and volatile organic compounds) or for particulate matter with an aerodynamic diameter of less than or equal to 2.5 microns (PM_{2.5}). The slight increase in emissions from construction activities would be temporary, short-term, and localized to the project area and there would be no significant impacts to regional air quality from implementation of the Proposed Action.

Biological Resources – Construction activities would occur on currently developed property, or intensely disturbed areas within the Chesapeake Bay Critical Area (CBCA). No sensitive habitats or refuges exist within proposed construction footprints and no sensitive habitats would be disturbed from the Proposed Action. Forested and vegetated areas would be largely avoided by new building placement.

No Federally listed endangered or threatened species are known to exist on airport property or within a 2-mile radius of the airport, and no critical habitats have been designated in the vicinity of the Base. Bald Eagles are present on the Base; however, neither the eagles nor their nests would be directly or indirectly affected by the Proposed Action. Consequently, no significant

impacts are expected to occur to wildlife, threatened, endangered, or other sensitive species under the Proposed Action.

Land Use – Proposed construction activities would occur within the Base property and would have no adverse effects on surrounding land uses. The existing land use category for the proposed locations of all projects, except for two of the vehicle parking areas associated with Project #4, would change from open space to a mix of Command and Support, Aircraft Maintenance, and Industrial.

The proposed construction activities would result in beneficial impacts since they would serve to support the operational needs of the new Cyber/ISR mission, consolidate ongoing activities, improve functionality, and correct operational inefficiencies. Each construction project would also be consistent with MDANG planning policies and guidelines and long-range development plans. Under the Proposed Action, no noise sensitive areas would be adversely affected and no significant adverse land use impacts would occur.

Socioeconomic Resources – Actions described under the Proposed Action would not be anticipated to exceed any thresholds that would result in a significant impact to socioeconomic resources or result in a disproportionate impact to minority, low-income populations or pose a special risk to children. There would be minor and temporary beneficial impacts anticipated to socioeconomic resources due to the increase in the number of personnel at the 175 WG and due to construction activities.

Solid Debris and Hazardous Materials and Wastes – The Proposed Action would have no significant impacts with respect to solid debris and hazardous materials and wastes. Petroleum products and other hazardous materials (e.g., paints and solvents) would be used during construction activities. These materials would be stored in proper containers, employing secondary containment as necessary to prevent and limit accidental spills. No change to hazardous waste generator status or management would be required. Since no demolition or significant renovation is part of the Proposed Action, there is no anticipated adverse impact regarding asbestos and/or lead-based paint.

One Environmental Restoration Program (ERP) site is located near a project associated with the Proposed Action. The site has been closed with no further action required; however, construction activities near this ERP site would be coordinated with the Environmental Management Office.

Construction activities would result in the generation of solid wastes, including construction materials from buildings, concrete, and asphalt rubble. Approximately 190 tons of construction debris would be generated from the Proposed Action. Construction contractors would recycle and/or reuse building materials when possible. Overall, sufficient landfill capacity exists in

Baltimore County to accommodate the additional solid waste generated as a result of construction activities.

Utilities – The Proposed Action would have minimal utility impacts, and no adverse impacts would occur. Using existing consumption rates, electricity usage for newly constructed facilities would increase by 44,926 kilowatt-hours per month (a 12 percent increase over current usage). Similarly, natural gas consumption would increase by 99.0 million cubic feet per month (a 12 percent increase). However, the newly constructed facilities would be expected to operate using more energy efficient equipment. Additionally, because some existing buildings are being demolished as part of a separate action, the overall energy consumption associated with the Proposed Action would likely be less than estimated above. Electrical and natural gas connections would occur via existing supply lines and no significant adverse impacts would occur.

The Proposed Action would add 269 personnel to the Base, resulting in an additional 57,297 gallons of water usage per month (an 18 percent increase over current usage). Since new facilities would incorporate water-efficient and low-flow fixtures to conserve water, the overall water use would likely be less than estimated. Water and sewer lines would be extended to the new buildings as needed

Executive Order (EO) 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, sets numerous Federal energy requirements and goals that should be considered in the design, construction, and operation of the renovation projects that are part of the Proposed Action. Measures that would be incorporated into the design for the building projects to help meet the goals of EO 13514 include high-efficiency lighting upgrades; heating, ventilation, and air conditioning (HVAC) efficiency improvements; building automation and controls; water-efficient and low-flow fixtures; weather sealing; and replacement of windows doors. Consequently, implementation of the Proposed Action would not be expected to have a significant impact on utilities.

Water Resources – The Proposed Action would not significantly affect water resources. Projects #1 and #2 would occur in areas identified as susceptible to wind and/or water erosion, which pose an increased potential for erosion and sedimentation due to grading, removal of vegetation, and exposure of soil during construction. These impacts would be minimized by the appropriate use of best management practices for controlling runoff, erosion, and sedimentation.

Approximately 310,164 square feet (SF) of new impervious surface area would occur within the CBCA (portions of Projects #1, #2, #6, and #8). As described in the 2010 EA, because the Proposed Action is classified as a redevelopment activity, the 175 WG would implement practices to reduce water quality impacts associated with stormwater runoff to a level at least

10 percent below the load generated by the same site prior to development for construction occurring within the CBCA.

The 175 WG would comply with the Maryland Department of the Environment (MDE) stormwater regulations by implementing Environmental Site Design over at least 50 percent of the existing impervious area, such that 1 inch of rainfall would be treated, or would employ one or more of several other alternative options per the March 2010 Guidance for Implementation of Local Stormwater Management Programs. Projects #4, #5, #7, and #8 would potentially disturb less than 5,000 SF of land and are, therefore, exempt from this requirement.

For construction activities that disturb 1 or more acres (Projects #1 and #2), the 175 WG would file a Notice of Intent to obtain coverage under the state's National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Associated with Construction Activity prior to implementation of individual construction projects. The permit requires an approved Soil Erosion and Sediment Control Plan prior to soil disturbance. The general permit requires that permittees obtain approval for the Stormwater Management Plan from MDE prior to beginning soil disturbance.

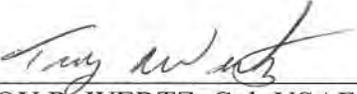
The Energy Independence and Security Act (EISA) Section 438, requirements, as incorporated in UFC 3-210-10, were not applicable at the time of the 2010 EA. However, because this requirement now applies, those 2010 EA projects with gross construction footprints greater than 5,000 SF (in addition to proposed Projects #1, #2, #3, #6, and #9) would require EISA low-impact development (LID) integrated management practices. LID is a stormwater management strategy designed to maintain site hydrology and mitigate the adverse impacts of stormwater runoff and non-point source pollution. The overall design objective is to maintain predevelopment hydrology and prevent any net increase in stormwater runoff. Accordingly, project site design options would prioritize integrated management practices that are proven within the regional area.

MITIGATION: No mitigation measures would be necessary to reduce significant adverse impacts to less than significant levels.

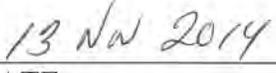
PUBLIC NOTICE: The National Environmental Policy Act (NEPA), 40 Code of Federal Regulations (CFR) 1500-1508, and 32 CFR 989 require public review of the EA before approval of the Finding of No Significant Impact (FONSI) and implementation of a proposed action. The Draft Supplemental EA for this Proposed Action was mailed to 18 agencies and organizations (see Appendix A for agency responses/comments). A notice of availability for public review was published in the *Baltimore Sun* on April 3, 2014. The Draft EA was made available for public review at the Essex Branch of the Baltimore County Public Library (Essex, Maryland). No public comments were received.

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

Based on my review of the facts and analysis in this EA, I conclude that the Proposed Action would not have a significant impact on the quality of the human or natural environment or generate significant controversy either by itself or considering cumulative impacts. Accordingly, the requirements of NEPA, the Council on Environmental Quality, and 32 CFR 989, *et seq.*, have been fulfilled, and an Environmental Impact Statement is not necessary and will not be prepared.



TROY R. WERTZ, Col, USAF
Chief, Asset Management Division



DATE

Note: Martin State Airport is a Federal Aviation Administration (FAA) federally-obligated airport owned and operated by the Maryland Aviation Administration, therefore FAA will need to adopt/issue a Finding of No Significant Impact (FONSI) as well prior to any action of the proposed projects taking place.

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1. PURPOSE AND NEED

1.1 INTRODUCTION

The National Guard Bureau (NGB) proposes to amend the *Environmental Assessment (EA) for Proposed Construction Program and Beddown of C-27J Aircraft at the 175th Wing (175 WG)* (June 2010), herein referred to as the 2010 EA, with updated mission requirements. The 2010 EA examined the environmental impacts resulting from the potential construction of several new facilities, relocation of the Main Gate, demolition, and roadway expansions, as well as the beddown of C-27J aircraft at the 175 WG of the Maryland Air National Guard (MDANG), located at the Martin State Airport in Middle River, Maryland. This Supplemental EA examines replacing the C-27J mission with a cyber/intelligence, surveillance, and reconnaissance (Cyber/ISR) mission and amending the proposed construction program. No new aircraft will be relocated to the Base as part of the Cyber/ISR mission.

This EA identifies any applicable management actions, mitigation measures and best management practices (BMPs) that would avoid or minimize environmental impacts relevant to the implementation of the Proposed Action and alternatives (to include the No Action Alternative).

The 2010 EA addressed construction of several new facilities, demolition, and roadway expansions. Chapter 2 includes a list of projects evaluated as part of the 2010 EA, as well a discussion of projects evaluated as part of this amendment.

The NGB, as the lead agency, has prepared this Supplemental EA to consider the potential consequences to the human and natural environment that may result from implementation of these projects. This Supplemental EA has been developed in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321-4347), Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] §§ 1500-1508), and 32 CFR 989, et seq., Environmental Impact Analysis Process (formerly promulgated as Air Force Instruction [AFI] 32-7061) and with Federal Aviation Administration (FAA) Order 1050.1E, 5050.4B.

1.2 PURPOSE AND NEED FOR THE ACTION

Following publication of the 2010 EA, the U.S. Air Force decided to replace the C-27J mission with a Cyber/ISR mission at the 175 WG. The purpose of the Proposed Action is to provide the 175 WG with properly sized and configured facilities that are required to effectively accomplish its mission and would comply with Air National Guard (ANG) Instruction 32-1023, *Criteria and Standards for Air National Guard Construction*, Air Force Handbook 32-1084, *Facility*

Requirements and ANG Handbook 32-1084, *Facility Space Standards*. The construction is also necessary to replace outdated facilities and to provide security of assets. New facilities will adhere to *Department of Defense (DoD) Minimum Antiterrorism Standards for Buildings* as presented in Unified Facilities Criteria (UFC) 4-010-01, effective 9 February 2012, Change 1, 1 October 2013.

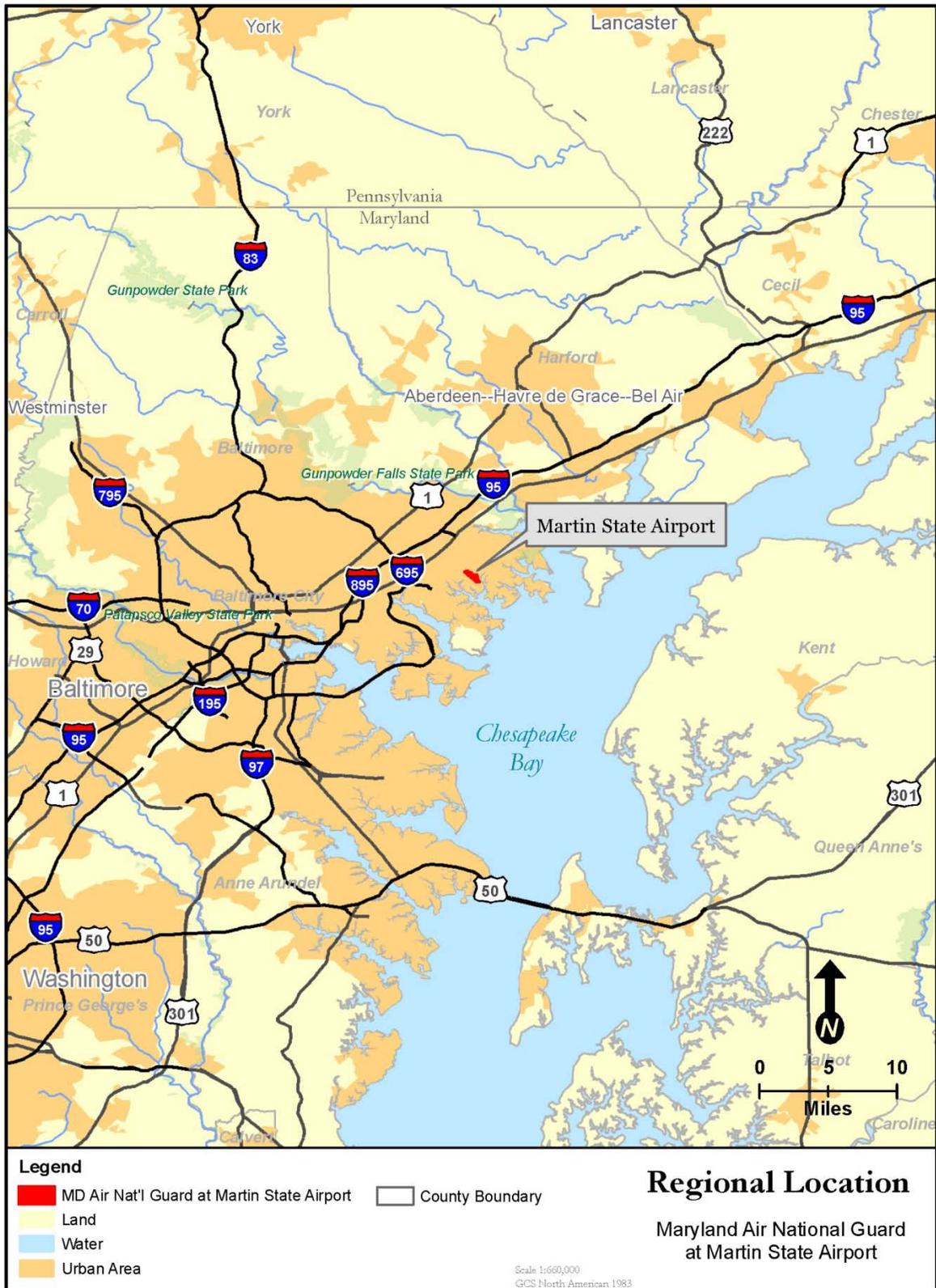
1.3 LOCATION AND DESCRIPTION OF THE 175 WG

The 175 WG is located at Martin State Airport, approximately 12 miles east of Baltimore, in Middle River, Maryland, along the western edge of Frog Mortar Creek (Figure 1-1). The MDANG 175 WG Base occupies approximately 175 acres of the northeastern portion of the Martin State Airport, which the U.S. Air Force leases from the Maryland Aviation Administration (MAA). MDANG, in turn, licenses the property from the Air Force. As a composite wing, the 175 WG currently operates and supports the A-10C “Thunderbolt II” attack aircraft and the C-130J “Hercules” tactical airlifters. The mission of the 175 WG is to provide world class combat capability, excel as a community leader, and foster a culture of continuous improvement. In addition, the mission of MDANG is to provide air combat forces and theater airlift aircraft to America’s Unified Combatant Commands. As a unit of the MDANG, the 175 WG also provides personnel, equipment, and facilities to protect life and property and preserve public safety for the state of Maryland. While the 175 WG comprises two flying units, it also maintains support units including security forces, engineers, communications, logistics, aerial port, and administrative support functions among others.

1.4 ENVIRONMENTAL RESOURCE AREAS NOT CARRIED FORWARD FOR DETAILED ANALYSIS

The determination of which issues to analyze in detail is part of the EA process as described in 40 CFR 1501.7(a)(3), which states that issues addressed in prior environmental review, or that are not significant, may be eliminated from discussion in the EA. The following environmental resource areas were found to have no applicability to the Proposed Action or No Action Alternative, as there would be no potential for direct, indirect, or cumulative impacts. Therefore, these environmental resource areas were not carried forward for detailed analysis.

Cultural resources. Cultural resources are any prehistoric or historic district, site, or building. In compliance with National Historic Preservation Act Section 106, the 175 WG consulted with the Maryland Historical Trust (MHT), and MHT concurred with the 175 WG determination that the 2010 EA Proposed Action, *as well as the nine projects associated with the current Proposed Action*, would have no adverse effect on historic properties (please see Appendix A for a copy of the MHT coordination letters).



**Figure 1-1. Regional Location of the MDANG 175 WG
 Martin State Airport, Baltimore, Maryland**

There is always the possibility that previously unknown or unrecorded archaeological resources could be present beneath the ground surface, sometimes underneath existing development. In the unlikely event that previously unrecorded or unevaluated cultural resources are encountered during construction, all activities at that location would be halted until the find is evaluated by a qualified professional archaeologist in compliance with Federal and state laws, as well as Air Force regulations.

Prior consultation with the Maryland Commission on Indian Affairs did not identify any Native American resources at the MDANG 175 WG. Therefore, the Proposed Action would have no impacts on Native American resources.

Geological resources. Geological resources can be defined in terms of drainage capacity, erodibility, composition, and topography. While ground disturbance is anticipated as a result of the Proposed Action, no change in topography would occur. Potential impacts to drainage capacity and erodibility are included in the water resources sections.

Noise. There would be temporary construction noise associated with proposed activities. This noise would not differ from the construction noise impacts evaluated in the 2010 EA. This noise would be considered minor when compared to noise from typical airport operations. Additionally, no sensitive noise receptors are located near proposed construction sites. Therefore, detailed analysis of construction noise is not included in this EA. Additionally, associated mission changes at the Base would result in an overall reduction in aircraft noise, as aircraft operations would be decreasing from conditions described in the 2010 EA.

Safety. Construction safety procedures described in the 2010 EA would be applicable to the Proposed Action; therefore, detailed analysis of safety is not included in this EA. Additionally, Proposed Action projects would not be located with existing explosive clear zones or impact explosive quantity-distances. Also, proposed projects would require no changes to existing explosive site plans. Consequently, potential impacts associated with explosive safety are not discussed further.

Transportation. The 2010 EA identified potential transportation-related issues relevant to the creation of a new entrance to the Base, expansion of existing roadways, and installation of a new traffic signal. That EA determined that proposed activities would have no significant negative impacts on transportation and would actually improve overall traffic flow and traffic safety. Additionally, proposed parking projects in the 2010 EA would improve the existing parking situation. The proposed projects as part of this Supplemental EA, including the expansion of Hercules Road and the construction of additional parking areas, would not change the basic traffic pattern on the Base. These projects would further improve traffic flow, traffic safety, and

the vehicle parking environment. Therefore, the Proposed Action would not have a negative impact on transportation and a detailed analysis is not included in this EA.

Visual resources. Visual resources are defined as the natural and manufactured features that constitute the aesthetic qualities of an area. New construction and renovated structures associated with the Proposed Action would be located within the existing developed area of the Base and would be visually consistent with surrounding existing structures. The available view of 175 WG facilities from off-site would remain limited, and the visual environment of the 175 WG does not constitute a unique or sensitive view shed. Therefore, detailed analysis of visual resources is not included in this EA.

1.5 ENVIRONMENTAL RESOURCE AREAS CARRIED FORWARD FOR DETAILED ANALYSIS

After preliminary analyses of potential environmental issues, the following resource areas were carried forward for further analysis due to the potential for direct, indirect, or cumulative impacts.

Air Quality. The analysis addresses the potential for fugitive dust and combustive emissions from construction to affect air quality.

Biological Resources. The analysis addresses the potential for construction and demolition activities to affect vegetation and wildlife, including threatened and endangered species. In addition, development activities within the Chesapeake Bay Critical Area (CBCA) are required to establish forest conservation plans and limit tree removal.

Land Use. Construction activities would alter the current land use classification, and they would occur in open space. The analysis addresses the potential impacts resulting from changes in land use.

Socioeconomic Resources. There would be an increase in personnel at the Base from implementation of the Proposed Action. The analysis addresses potential effects to socioeconomic resources including disproportionate impacts to sensitive populations such as children, minorities, and low-income communities, as mandated by Executive Orders (EOs) 13045 and 12898.

Solid Debris and Hazardous Materials and Wastes. The analysis addresses debris generated from construction and demolition.

Utilities. The Proposed Action would change the overall building square footage and, therefore, utilities usage would change.

Water Resources. The analysis addresses potential effects to surface water from erosion. The analysis also evaluates stormwater permitting requirements. In addition, portions of the Proposed Action fall within the CBCA, which requires development and redevelopment projects to address techniques to reduce water quality impacts associated with stormwater runoff. Effects to groundwater are not anticipated from implementation of the Proposed Action.

Table 1-1 summarizes major environmental requirements applicable to this EA based on the resource areas carried forward for further analysis.

Table 1-1. Summary of Major Environmental Requirements Applicable to this EA

NATIONAL ENVIRONMENTAL POLICY ACT
<p>NEPA requires Federal agencies to consider the potential environmental consequences of proposed actions in their decision-making process. The intent of NEPA is to protect, restore, and enhance the environment through well-informed Federal decisions. The Council on Environmental Quality (CEQ) was established under NEPA to implement and oversee Federal policy in this process. The CEQ subsequently issued <i>Regulations for Implementing the Procedural Provisions of NEPA</i> (40 Code of Federal Regulations [CFR] Sections 1500–1508) (CEQ 1978). The activities addressed within this document constitute a Federal action and, therefore, must be assessed in accordance with NEPA. The Air Force implementing procedures for NEPA are contained in 32 CFR 989 et seq., Environmental Impact Analysis Process.</p>
AIR QUALITY REGULATORY REQUIREMENTS
<p>The Clean Air Act (CAA) (42 United States Code [USC] §§ 7401–7671, as amended) provided the authority for the U.S. Environmental Protection Agency to establish nationwide air quality standards to protect public health and welfare. Federal standards, known as the National Ambient Air Quality Standards (NAAQS), were developed for criteria pollutants. The act also requires that each state prepare a State Implementation Plan (SIP) for maintaining and improving air quality and eliminating violations of the NAAQS.</p> <p>Under the CAA Amendments of 1990, Federal agencies are required to determine whether their undertakings conform with the applicable SIP and demonstrate that their actions will not cause or contribute to a new violation of the NAAQS; increase the frequency or severity of any existing violation; or delay timely attainment of any standard, emission reduction, or milestone contained in the SIP.</p>
BIOLOGICAL RESOURCES REGULATORY REQUIREMENTS
<p>The Endangered Species Act (ESA) of 1973 (16 USC §§ 1531–1544, as amended) established measures for the protection of plant and animal species that are Federally listed as threatened and endangered, and for the conservation of habitats that are critical to the continued existence of those species. Federal agencies must evaluate the effects of proposed actions through a set of defined procedures, which can include the preparation of a Biological Assessment and can require formal consultation with the U.S. Fish and Wildlife Service (USFWS).</p> <p>The Bald Eagle Protection Act of 1940 (16 USC 668-668d, 54 Stat. 250) provides protection for the bald eagle and the golden eagle, prohibiting the taking, possession, or commerce of these birds. Under the ESA, Federal agencies consulted with USFWS on major Federal actions that had potential impacts to bald eagles. When the bald eagle was delisted from the ESA, the mechanism for consultation was briefly suspended, but reinstated through additional provisions added to the Bald Eagle Protection Act in 2009. Key to the 2009 changes is the definition of “disturbance,” which is defined in the <i>Federal Register</i> in September of 2009 as “to agitate or bother a Bald or Golden Eagle to the degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior” (50 CFR 22.3).</p>

Table 1-1. Summary of Major Environmental Requirements Applicable to this EA, Cont'd

In addition, EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds* (2001), recognized the ecological and economic importance of migratory birds to this and other countries. It requires Federal agencies to evaluate the effects of their actions and plans on migratory birds (with an emphasis on species of concern) in their NEPA documents. Species of concern are those identified in (1) the report entitled *Migratory Nongame Birds of Management Concern in the United States*, (2) priority species identified by established plans such as those prepared by Partners in Flight, or (3) listed species in 50 CFR 17.11, Endangered and Threatened Wildlife.

WATER RESOURCES REGULATORY REQUIREMENTS

The Clean Water Act (CWA) of 1977 (33 USC § 1251 et seq.) regulates pollutant discharges that could affect aquatic life forms or human health and safety. Section 404 of the CWA and Executive Order (EO) 11990, *Protection of Wetlands*, regulate development activities in or near streams or wetlands. Section 404 also regulates development in streams and wetlands and requires a permit from the U.S. Army Corps of Engineers (USACE) for dredging and filling in wetlands. EO 11988, *Floodplain Management*, requires Federal agencies to take action to reduce the risk of flood damage; minimize the impacts of floods on human safety, health, and welfare; and to restore and preserve the natural and beneficial values served by floodplains. Federal agencies are directed to consider the proximity of their actions to or within floodplains. The 175 WG would be required to submit a Finding of No Practicable Alternative stating that no alternatives existed for construction of facilities within the floodplain and wetland.

The CBCA legislation was enacted by the Maryland General Assembly in 1984. The law identified “Critical Area” as all land within 1,000 feet of the mean high water line of tidal waters or the landward edge of tidal wetlands and all waters of and lands under the Chesapeake Bay and its tributaries. The law also created a statewide Critical Area Commission to oversee the development and implementation of local land use programs directed towards the Critical Area in order to minimize adverse impacts on water quality resulting from runoff; conserve fish, wildlife, and plant habitat; and establish land use policies for development. Within the Critical Area are three land use classifications: Resource Conservation Areas, Limited Development Areas, and Intensely Developed Areas (IDAs). Each category maintains different constraints and management practices for development activities. The Martin State Airport is generally considered an area of intense development and is subject to the regulations of IDAs. For development or redevelopment activities within IDAs, practices to reduce water quality impacts associated with stormwater runoff must be capable of reducing stormwater pollutant loads from the development site to a level at least 10 percent below the load generated by the same site prior to development. The CBCA also requires the establishment of a minimum buffer of 100 feet of natural vegetation landward from the mean high water line of tidal waters and from the landward edge of tidal wetlands and tributary streams.

The Maryland Department of the Environment (MDE) implemented the Stormwater Management Act of 2007, which requires environmental site design (ESD), through the use of better site design techniques, alternative surfaces, nonstructural techniques, and microscale practices, be implemented to the maximum extent practicable. The 2007 Act provides specific requirements for redevelopment activities where redevelopment means any construction, alteration, or improvement performed on sites where existing land use is commercial, industrial, or multifamily residential and the existing site impervious area exceeds 40 percent. Redevelopment projects shall reduce existing impervious area within the limit of disturbance by at least 50 percent according to the design manual or implement ESD to the maximum extent possible to provide water quality treatment for at least 50 percent of the existing impervious area within the limit of disturbance or a combination of these two options for at least 50 percent of the existing site impervious area.

Table 1-1. Summary of Major Environmental Requirements Applicable to this EA, Cont'd

OTHER REGULATORY REQUIREMENTS
<p>Additional regulatory legislation that potentially applies to the implementation of this proposal includes guidelines promulgated by EO 12898, <i>Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations</i>, to ensure that citizens in either of these categories are not disproportionately affected. Additionally, potential health and safety impacts that could disproportionately affect children are considered under the guidelines established by EO 13045, <i>Protection of Children from Environmental Health Risks and Safety Risks</i>.</p> <p>Also applicable would be State of Maryland EO 01.01.2012.29, <i>Climate Change and "Coast Smart" Construction</i>, which is an initiative to increase the state's long-term resiliency to storm-related flooding and sea level rise. The EO enacts a number of policy directives, including directing all state agencies to consider the risk of sea level rise, flooding, and extreme weather to be taken into account in the construction or reconstruction of all state buildings and facilities and structures to be elevated 2 or more feet above the 100-year base flood level.</p>

CAA = Clean Air Act; CEQ = Council on Environmental Quality; CFR = Code of Federal Regulations; CWA = Clean Water Act; EO = Executive Order; ESA = Endangered Species Act; ESD = environmental site design; IDA = Intensely Developed Area; MDE = Maryland Department of the Environment; NAAQS = National Ambient Air Quality Standards; NEPA = National Environmental Policy Act; SIP = State Implementation Plan; USACE = U.S. Corps of Engineers; USFWS = U.S. Fish and Wildlife Service

1.6 FEDERAL AVIATION ADMINISTRATION PARTICIPATION

Because this Supplemental EA addresses development projects at MAA, the FAA is a cooperating agency on the document. FAA Order 1050.1E provides FAA policy and procedures to ensure agency compliance with the requirements set forth in CEQ regulations for implementing the provisions of NEPA. This order specifies resource areas that should be evaluated in NEPA documents (when applicable). FAA Order 1050.1E also includes significance threshold criteria and factors that should be considered when evaluating environmental impacts associated with these resource areas. Additionally, FAA Order 5050.4B provides NEPA-implementing instructions for projects located at airports. To facilitate the review of this document, Table 1-2 cross-references how FAA-specific resource areas are addressed within this Supplemental EA.

1.7 PUBLIC INVOLVEMENT/ENVIRONMENTAL COORDINATION

EO 12372, *Intergovernmental Review of Federal Programs*, requires intergovernmental notifications prior to making any detailed statement of environmental impacts. Through the process of Interagency and Intergovernmental Coordination for Environmental Planning, the proponent must notify concerned Federal, state, and local agencies and allow them sufficient time to evaluate potential environmental impacts of a Proposed Action. Comments from these agencies are subsequently incorporated into the Environmental Impact Analysis Process.

In its October 1999 annotated *Department of Defense American Indian and Alaska Native Policy*, formulated to address DoD responsibilities to tribes derived from a number of Federal statutes and policies, DoD has clarified its policy for interacting and working with Federally

recognized American Indian and Alaska Native governments. Under this policy guidance, proponents must provide timely notice to, and consult with, tribal governments prior to taking any actions that have the potential to affect protected tribal resources, tribal rights, or Indian lands. Tribal input must be solicited early enough in the planning process that it may influence the decision to be made.

Table 1-2. Cross-Reference of FAA Resource Areas

Resource Area^a (per FAA Order 1050.1E)	Evaluated in EA	Notes
Air Quality	Yes	See air quality resources section.
Coastal Resources	Yes	See water resources section.
Compatible Land Use	Yes	See land use resource area.
Construction Impacts- Noise, Air, Solid Waste, and Water	Yes	Impacts are integrated throughout the EA into the respective resource sections.
Department of Transportation Act: Section 4(f)	No	Not applicable. Action does not require the Secretary of Transportation to approve use of publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge on national, State, or local significance.
Farmlands	No	Not applicable. No farmlands affected.
Fish, Wildlife, and Plants	Yes	See biological resources section.
Floodplains	Yes	See water resources section. Floodplains are addressed in Chapter 3.7, <i>Affected Environment, Water Resources</i> ; however, the proposed projects are not within the 100-year floodplain and therefore, environmental consequences do not include impacts to floodplains.
Hazardous Materials, Pollution Prevention, and Solid Waste	Yes	See solid debris and hazardous materials and wastes section.
Historical, Architectural, Archeological, and Cultural Resources	No	Not applicable. Concurrence of no impacts previously obtained from Maryland Historical Trust.
Light Emissions and Visual Impacts	No	Not applicable. No new lighting is proposed and visual impacts are limited to within the boundary of the Base.
Natural Resources and Energy Supply	Yes	See utilities resources section.
Noise	No	Not applicable. Noise impacts would not differ from those previously analyzed in the 2010 EA.
Secondary (Induced) Impacts	No	Not applicable. No secondary impacts such as shifts in population movement or public service demands.
Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks	Yes	See socioeconomics resources section.
Water Quality	Yes	See water resources section.
Wetlands	Yes	See water resources section. Wetlands are addressed in Chapter 3.7, <i>Affected Environment, Water Resources</i> ; however, the proposed projects are not within or adjacent to wetlands; therefore, no environmental impacts to wetlands are expected.
Wild and Scenic Rivers	No	Not applicable. No wild or scenic rivers affected.

EA = Environmental Assessment; FAA = Federal Aviation Administration

a. Source: FAA Order 1050.1E, dated 20 March 2006.

1.8 SUSTAINABILITY AND LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN

Sustainable strategies and energy reduction practices for military construction (MILCON) projects will be incorporated into the Proposed Action facilities as part of the Air Force sustainability policy and Leadership in Energy and Environmental Design requirements. Guidance for these strategies is presented in Engineering Technical Letter 08-13, *Incorporating Sustainable Design and Development and Facility Energy Attributes in the Air Force Construction Program*, which explains that sustainable strategies are driven by the following regulations:

- EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, 24 January 2007
- Energy Policy Act of 2005, 8 August 2005
- Energy Independence and Security Act (EISA) of 2007, 19 December 2007
- Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding, 17 January 2006
- CFR, Title 10, Part 433 (10 CFR 433), Energy Efficiency Standards for the Design and Construction of New Federal Commercial and Multi-family High-rise Residential Buildings
- 10 CFR 434, Energy Code for New Federal Commercial and Multi-Family High-Rise Residential Buildings
- 10 CFR 436, Federal Energy Management and Planning Programs, Life Cycle Cost Analysis, Subpart A – Methodology and Procedures
- Annual Supplement to Handbook 135, *Energy Price Indices and Discount Factors for Life-Cycle Cost Analysis*, April 2008 (or current version)

Similarly, analysis of the Proposed Action addresses requirements of the EO dated October 2009 (*Federal Leadership in Environmental, Energy, and Economic Performance*), which mandates identifying and analyzing impacts from energy usage and alternative energy sources.

2. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

This chapter details the Proposed Action to construct several new facilities and expand a roadway at the 175 WG at Martin State Airport in Middle River, Maryland. Details of the Proposed Action form the basis for the analyses of potential environmental impacts. This chapter includes discussion of the considerations used to identify candidate alternatives, as well as the No Action Alternative.

The Air Force decided to replace the 2010 EA proposed C-27J mission with a Cyber/ISR mission. The Proposed Action includes the implementation of improvements that would include construction projects to accommodate the new Cyber/ISR mission of the 175 WG. These projects are further detailed in Section 2.3.

2.2 PROPOSED ACTION

The Proposed Action would include updates to the construction program at the 175 WG and address the construction of new facilities, including any supporting infrastructure. The following projects would not change from the 2010 EA. (Note: Project 1 is not included in the list because it has been completed.)

- Project 2: Lynbrook Road Improvement
- Project 3: Operations and Medical Training Building
- Project 4: Building 1080
- Project 5: Munitions Storage Area Parking Area and Walkway Improvement
- Project 6: Security Forces Facility
- Project 7: Dining Hall
- Project 8: Base Supply Warehouse
- Project 9: Chemical, Biological, Radiological, Nuclear, and Explosives Classroom and Storage
- Project 10: A-10 Fuel Tank Containment Area

Table 2-1 lists the nine new construction projects evaluated as part of this EA. The table includes the implementation time frame as well as the justification for each project; project locations are depicted in Figure 2-1 and Figure 2-2. In addition to the new projects, 269 additional personnel would be assigned to the Base to support the new Cyber/ISR mission; the 2010 EA did not include personnel changes.

The 175 WG would operate in the new facilities in the same capacity as it does currently. Because of their limited scope and potential environmental impacts, proposed projects associated with interior-only building renovations are not included in the scope of this EA.

A MILCON project programming form, DoD Form 1391 (Department of Defense Form [DD Form] 1391), has not been developed for all of the projects; however, one would be completed before each project was implemented. The DoD uses DD Form 1391 to submit requirements and justification to Congress to support MILCON funding requests. Additionally, the Martin State Airport Layout Plan (ALP) is currently in revision; the proposed projects would be incorporated into the revision of the plan. The proposed action for FAA must also include unconditional approval of the ALP.

Table 2-1. Projects Associated with the Proposed Action at the 175 WG

#	Title/Project #/ Implementation Year*	Description	Need
1	Construct new Cyber/Intelligence, Surveillance, and Reconnaissance (ISR) Facility Project #: PJMS129058 Year: 2014	The project would construct a single-or two-story facility with reinforced concrete foundation and floor slab, with steel-framed masonry walls and a steel roof structure. The project would include interior infrastructure and utilities. A portion of the facility would be designed to meet Sensitive Compartmented Information Facility (SCIF) requirements. Exterior work includes installation of utilities and parking and pavements, site and drainage improvements, and installation of communication support.	The Base requires adequately sized and configured space in support of a new ISR Group (206 personnel), plus an additional 70 personnel for the existing Network Warfare Squadron. The mission of the ISR Group is to provide planning, analysis and targeting intelligence support to Cyber. Cyber presents a set of capabilities, expertise, and facilities to support the operational need for an always-on, net-speed awareness, and integrated operational response operations platform with global reach. The mission of the NWS is to provide an enhanced network warfare capability.
2	Expand Hercules Road Project #: TBD Year: 2016	The project would widen and lengthen the current roadway by an additional 30,346 SF. The project would include resurfacing and widening of the road bed and reconstruction of associated shoulders and drainage structures.	The expansion is required to support the projected traffic associated with new Lynbrook Road entry gate. The expansion is also required to provide access to proposed facilities, such as the Cyber/ISR Facility (Project #1).

Table 2-1. Projects Associated with the Proposed Action at the 175 WG, Cont'd

#	Title/Project #/ Implementation Year*	Description	Need
3	Construct new Mobile Fuel Tanker Parking Area Project#: PJMS132450 Year: 2016	The project would construct a new 32,280-SF, concrete-paved parking area to store the five R-11 mobile fuel tankers. The parking area would be designed with integral secondary containment to capture potential releases of petroleum. Approximately half (16,140 SF) of the proposed parking area would be constructed on existing pavement.	The current mobile tanker parking area at the Petroleum, Oil, and Lubricant (POL) Facility does not meet safety requirements; it is located too closely to the fill station. It also does not have an impervious surface to prevent potential releases as it is asphalt paved. Finally, the area cannot adequately contain the five R-11 tankers (undersized by approximately 5,400 SF).
4	Construct Vehicle Parking Areas Project #: TBD Year: 2015	The project would construct two new vehicle parking areas capable of accommodating 25 (4,250 SF), and 75 (12,750 SF) vehicles. The parking areas would be constructed on existing pavement at the current location of Buildings 1080 and 1120, which are being demolished.	The Base currently lacks adequate parking to accommodate the approximate 1,400 personnel that are temporarily assigned during the monthly drill weekends. The shortage of available parking would be further exacerbated by the 269 additional personnel that would be assigned at the Base to support the new Cyber/ISR mission (see Project #1).
5	Construct A-10 Flight Simulator. Bldg. 2042 Project #: PJMS119034 Year: 2014	The purpose of this facility is to house and facilitate the operation of two A-10 flight simulators. Space is provided for a two-bay simulator room, instructor and technician stations, and two debriefing rooms. Each bay will be designed to accommodate an eight- channel, 360-degree full field of view display with adequate space for servicing. Adjacent to the flight simulator bay will be an office for an instructor and a separate office for a technician. Both of these rooms will have interior windows viewing the simulator bay.	The base has an area of 1,888 SF that can accommodate only one simulator. This was constructed in 2006 when only one simulator bay was planned. The base is targeted to receive a second simulator. The ANG is purchasing a second full mission training simulator equipment. The simulator equipment delivery date is scheduled for late 2013. The space cannot be modified or expanded for the second simulator area. Therefore, it is necessary to construct a new area for both sets of equipment.
6	Construct Logistics Readiness Squadron (LRS) Warehouse, Bldg. 4020 Project #: PJMS109083 Year: 2014	The project involves installing a prefabricated and insulated metal building with overhead roll up doors, interior lights, heating, ventilating, and air conditioning (HVAC) and fire protection. Exterior work includes constructing access pavement and a loading dock; installing utilities, communications and fire protection support; and construction of proper stormwater runoff and drainage measures.	Since the storage volume is not available, the supplies and equipment are stored in aisles, stacked haphazardly in closets and utility rooms, in office and training areas, and outside in the open or in CONEX containers, temporary wooden or metal sheds, and other makeshift containers. Effective material control does not exist. The large numbers of containers degrade the base appearance and result in poor housekeeping. The makeshift storage areas have resulted in numerous fire, health, and safety code violations.

Table 2-1. Projects Associated with the Proposed Action at the 175 WG, Cont'd

#	Title/Project #/ Implementation Year*	Description	Need
7	Repair A-10 Drop Tank Storage Area/Access Road and LAMS (Large Area Maintenance Shelter) Facility Project #: PJMS072001 Year: TBD	The project will repair an asphalt storage lot with required environmental spill protection and site clearances. The maximum size of the asphalt area to be repaired will be 11,520 square feet. The project would also consist of installing a pre-constructed canopy over the existing pavement.	The refueling parking area must be repaired to comply with Air Force Instruction 23-201, Current Uniform Building Code, to ensure that potential releases from refueling trucks are contained.
8	Repair Taxiway Tango Project #: PJMS032044 Year: TBD	The project will repair the concrete base layer and asphalt overlay of the approximate 1.34-mile long Taxiway Tango. Tango is a taxiway owned by the airport (not part of the ANG leased land) but used almost exclusively by the ANG for the assigned A-10 and other transient military aircraft. The project would comprise approximately 59,175 SY (535,500 SF), and would involve removing and replacing existing concrete pavements and asphalt overlays.	The base requires a fully-functioning and foreign object debris (FOD)-free system of taxiways. MAA does not have significant commercial traffic. Most of the aircraft traffic is charter, cargo aircraft and corporate flights. The ANG base is on one side of the runway, and the commercial operations are on the other side. Other than Taxiway Tango, there are no other taxiways that connect the ANG ramp to the runway ends. Taxiway Tango and other connecting taxiways require repairs. MAA agrees that the pavements require repair work; however, they are not able to provide funding because of low use by general airport traffic. Evaluations by external pavements teams in 2009 and 2001 found that failing patches and spalls along joints are a source of water infiltration and potential FOD; load related rutting requires replacements; some pavements portions require complete overlay and others require mill and overlay.
9	Emergency Management/Building Manager Storage Facility (EM/BM Storage) Project #: TBD Year: TBD	The project would install two 5,000-SF pre-engineered storage buildings.	The base requires additional storage to house miscellaneous base needs related to Civil Engineering and Emergency Management.

*Note: For projects where the implementation year has not been determined, FAA Order 5050.4B, Section 140, would require that NGB prepare a written re-evaluation if more than three (3) years elapse between the date of the Final EA and project implementation. The re-evaluation would focus on the document's continued adequacy, accuracy, and validity.

ANG = Air National Guard; ISR = Intelligence, Surveillance, and Reconnaissance; MAA = Maryland Aviation Administration; NWG = Network Warfare Group; NWS = Network Warfare Squadrons; SCIF = Sensitive Compartmented Information Facility; SF = square feet; SY = square yards; TBD = to be determined; WG = Wing.

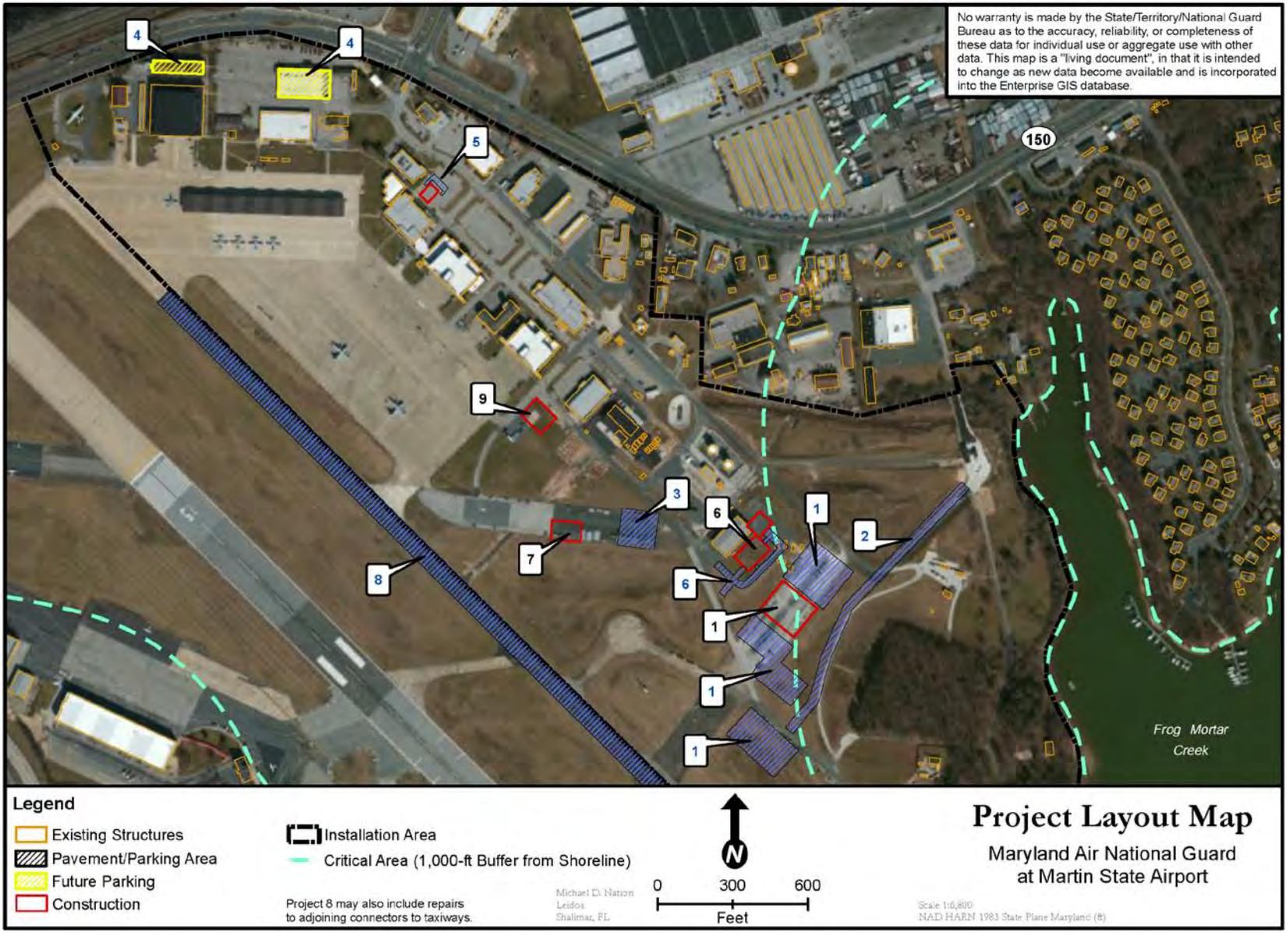


Figure 2-1. Location of Projects at the 175 WG

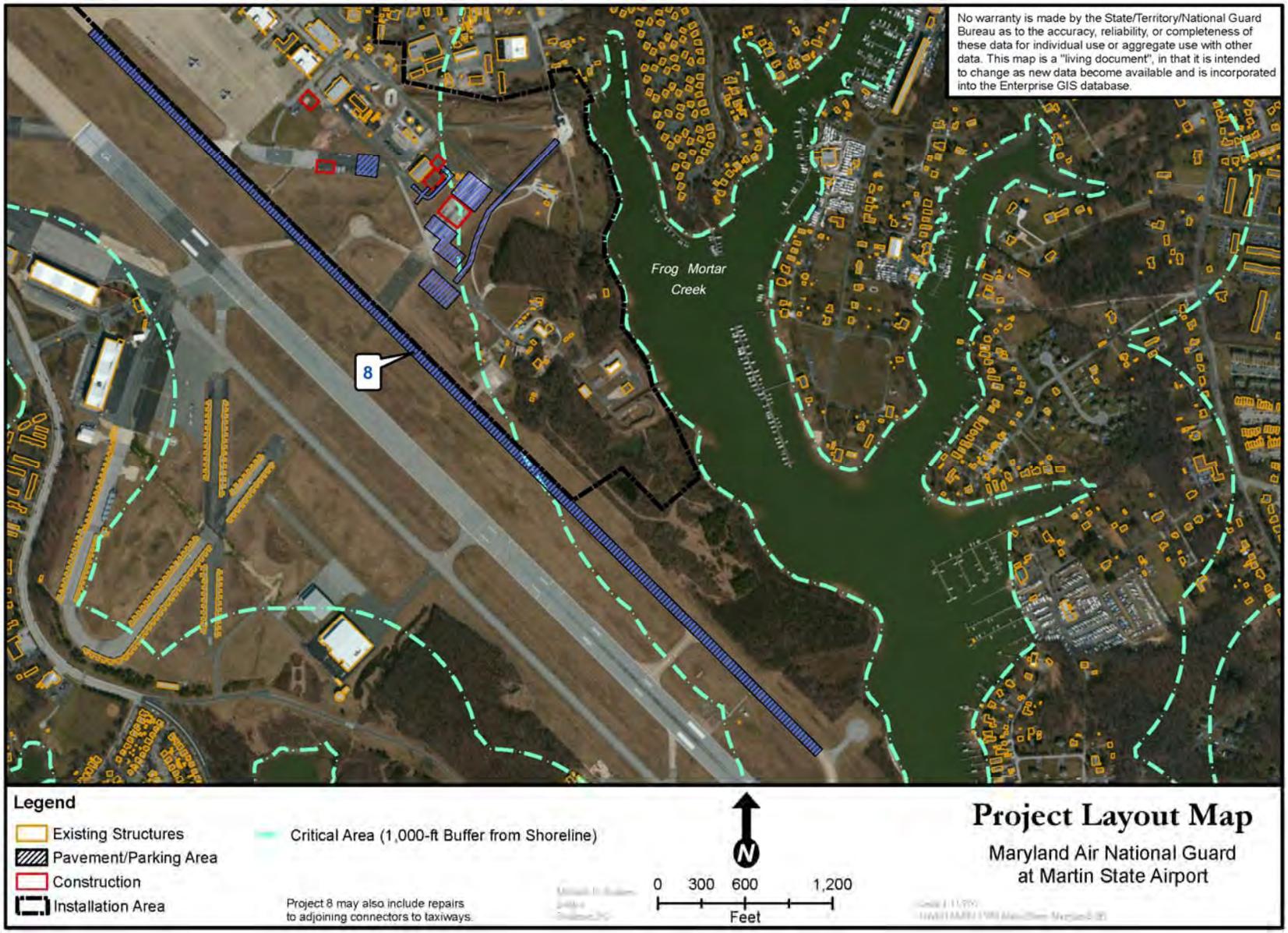


Figure 2-2. Location of Project #8, Repair of Taxiway Tango

Table 2-2 describes the construction footprint and impervious surface associated with the Proposed Action.

Table 2-2. Pavements and Building Footprints – Net New Impervious Surface (Square Feet)

	Project Area	New Pavement	New Building Footprint	Existing Impervious Surface	Demolished Building Footprint	Total New Impervious Surface	Chesapeake Bay Critical Area
1. Construct new Cyber/ISR Facility	146,785	69,484	27,500 ^a	77,301	0	69,484	49,110
2. Expand Hercules Road	47,324	30,346	0	16,978	0	30,346	45,154
3. Mobile Fuel Tanker Parking Area	32,280	16,140	0	16,140	0	16,140	0
4. Construct Vehicle Parking Areas	17,000	0	0	17,000	0	0	0
5. A-10 Flight Simulator. Bldg. 2042	4,010	0	2,810 ^b	4,010	0	0	0
6. Construct LRS Warehouse, Bldg. 4020	31,530	11,849	15,740 ^c	19,690	0	11,840	1,815
7. Repair A-10 Drop Tank Storage Area/ Access Road and LAMS	11,520	0	0	11,520	0	0	0
8. Repair Taxiway Tango	2,022,291	0	0	2,022,291	0	0	214,085
9. Emergency Management/ Building Manager Storage Facility	10,000	6,650	10,000 ^d	3,350	0	0	0
Total (SF)	2,322,740	134,469	56,050	2,188,280	0	127,810	310,164

ISF = Intelligence, Surveillance, and Reconnaissance; LAMS = Large Area Maintenance Shelter; LRS = Logistics Readiness Squadron; SF = square feet

a. Entire building footprint will be over existing impervious surface.

b. Building would be constructed over existing pavement.

c. 6,754 SF of 15,742 SF is over existing impervious surface. The building would be prefabricated.

d. 3,350 SF of 10,000 SF is over existing impervious surface. The two 5,000-SF buildings would be prefabricated.

2.3 ALTERNATIVE SELECTION PROCESS

2.3.1 CRITERIA

During the project siting phase, alternative locations for the construction projects were evaluated and the best possible solution for project siting was selected based on numerous criteria, such as:

- Site alternatives and all facilities must be located within the MDANG 175 WG Base.
- Site alternatives must not be within the explosive safety quantity distance arcs.
- Portions of four of the proposed projects are located within the CBCA. There were no other viable options/locations outside the CBCA for these projects. In the case of Project #1 (Cyber/ISR Facility), size requirements prevented the siting of the proposed building within other heavily developed/congested areas of the Base. Projects #2 (Expand Hercules Road) and #8 (Repair Taxiway Tango) are associated with improvements for road/taxiways currently in the CBCA buffer zone and Project #6 (Construct LRS Warehouse, Building 4020) is associated with an existing warehouse adjacent to the CBCA.
- Site alternatives need to be suitable for construction without significant environmental impacts or development constraints that would result in excessive construction costs or schedule delays.
- Facilities must meet new *DoD Minimum Antiterrorism Standards for Buildings*.

2.4 NO ACTION ALTERNATIVE

The CEQ regulation 40 CFR Section 1502.14(d) specifically requires analysis of the No Action Alternative in all NEPA documents. Under the No Action Alternative, the 175 WG would not implement the actions described above. However, the 175 WG would continue to implement required projects identified in the 2010 EA. Following publication of the 2010 EA, the U.S. Air Force decided to replace the C-27J mission with a Cyber/ISR mission at the 175 WG, and as a result, only the following projects originally proposed in the 2010 EA are still planned:

- Project 1: Gate House and Vehicle Inspection (completed)
- Project 2: Lynbrook Road Improvement
- Project 3: Operations and Medical Training Building
- Project 4: Building 1080
- Project 5: Munitions Storage Area Parking Area and Walkway Improvement
- Project 6: Security Forces Facility

- Project 7: Dining Hall
- Project 8: Base Supply Warehouse
- Project 9: Chemical, Biological, Radiological, Nuclear, and Explosives Classroom and Storage
- Project 10: A-10 Fuel Tank Containment Area

Consequently, potential impacts would be limited to those identified in the 2010 EA. Under the No Action Alternative, the deficiencies identified in Chapter 1 would continue to impair the 175 WG's ability to successfully conduct their mission and to maintain wartime readiness and training.

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3. AFFECTED ENVIRONMENT

3.1 AIR QUALITY

3.1.1 DEFINITION OF RESOURCE

Air quality is determined by the type and concentration of pollutants in the atmosphere, the size and topography of the air basin and the prevailing meteorological conditions. The significance of a pollutant concentration in a region or geographical area is determined by comparing it to Federal and/or state ambient air quality standards. Under the authority of the Clean Air Act (CAA), the U.S. Environmental Protection Agency (USEPA) has established nationwide air quality standards to protect public health and welfare, with an adequate margin of safety. These Federal standards, known as the National Ambient Air Quality Standards (NAAQS), represent the maximum allowable atmospheric concentrations and were developed for seven “criteria” pollutants: ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter with an aerodynamic diameter of less than or equal to 10 microns (PM₁₀), particulate matter with an aerodynamic diameter of less than or equal to 2.5 microns (PM_{2.5}), and lead (Pb). Ozone is not usually emitted directly into the air, but at ground-level is created by a chemical reaction between nitrogen oxides (NO_x), which includes both nitric oxide (NO) and NO₂, and volatile organic compounds (VOCs) in the presence of sunlight (USEPA 2013a).

Therefore, the analysis will evaluate these precursors rather than evaluating O₃ emissions directly. The levels of pollutants are generally expressed on a concentration basis in units of parts per million (ppm) or micrograms per cubic meter (µg/m³) over various periods of time (averaging periods). Short-term standards (1-hour, 8-hour, or 24-hour periods) were established for pollutants with acute health effects and generally may not be exceeded more than once a year. Long-term standards (annual periods) were established for pollutants with chronic health effects and may never be exceeded. Based on measured ambient criteria pollutant concentrations, the USEPA designates areas of the U.S. as having air quality equal to or better than the NAAQS (attainment) or worse than the NAAQS (nonattainment). Once a nonattainment area meets the standards and redesignation requirements in CAA Section 107(d)(3)(E), USEPA will designate the area as a “maintenance area.” Those areas that cannot be classified based on available information as meeting or not meeting the NAAQS for a particular pollutant are “unclassifiable” and are treated as attainment until proven otherwise.

Under the CAA, state and local agencies may establish air quality standards and regulations of their own, provided that these are at least as stringent as the Federal requirements. In the case of Maryland, the state has incorporated the NAAQS. For nonattainment regions, all states with nonattainment areas are required to develop a State Implementation Plan (SIP) that is designed to

eliminate or reduce the severity and number of NAAQS violations, with an underlying goal of bringing (and maintaining) the state’s air quality conditions into compliance with the NAAQS by specific deadlines. The SIP is the primary means for the implementation, maintenance, and enforcement of the regulatory measures needed to attain and maintain the NAAQS in each state.

The region of influence (ROI) for air quality consists of Baltimore County, where the 175 WG is located.

3.1.2 EXISTING CONDITIONS

3.1.2.1 Climate

The climate in Middle River, Maryland, is warm during the summer and very cold during the winter months, average temperatures in the 70s and 30s, respectively. The warmest month of the year is July with an average maximum temperature of 87.4° Fahrenheit, while the coldest month of the year is January with an average minimum temperature of 24.8° Fahrenheit. The annual average precipitation at Middle River is 51.53 inches. Rainfall is fairly evenly distributed throughout the year, with the wettest month of the year being May with an average rainfall of 5.57 inches (IDcide 2013).

3.1.2.2 Local Air Quality

The 175 WG is located at the Martin State Airport in Middle River, Maryland, in Baltimore County. This county is in serious nonattainment for 8-hour ozone and nonattainment for PM_{2.5} (USEPA 2013b). Ozone and particle pollution show distinctive seasonal patterns; ozone pollution typically reaches a maximum from June through August while particle pollution reaches two maximums during the months of February and July through August (Maryland Department of Environment [MDE] 2013).

Emissions for Baltimore County obtained from the 2011 version 1 National Emissions Inventory are shown in Table 3-1.

Table 3-1. Baseline Emissions Inventory for Baltimore County

Source	Criteria Pollutants (tons/year)					
	CO	NO _x	PM ₁₀	PM _{2.5}	SO ₂	VOCs
Mobile Sources	94,518	17,312	1,087	877	606	8,149
Stationary Sources	26,700	6,109	8,663	3,044	7,672	13,182
Total	121,218	23,421	9,750	3,921	8,278	21,331

Source: USEPA 2014

CO = carbon monoxide; NO_x = nitrogen oxides; PM₁₀ = particulate matter with an aerodynamic diameter of less than or equal to 10 microns; PM_{2.5} = particulate matter with an aerodynamic diameter of less than or equal to 2.5 microns; SO₂ = sulfur dioxide; VOC = volatile organic compound

According to the 2007 Air Conformity Applicability Analysis Report, the 175 WG has potential emissions of all criteria pollutants and Hazardous Air Pollutants below CAA major source thresholds and therefore, remains a minor source. Accordingly, the 175 WG is neither subject to the Title V permit program nor the Aerospace Surface Coating National Emission Standards for Hazardous Air Pollutants requirements (MDANG 2007). As a result, Hazardous Air Pollutants are not discussed further.

3.1.2.3 Greenhouse Gas

Greenhouse gases (GHGs) are chemical compounds in the earth’s atmosphere that trap heat in the atmosphere, thus regulating the Earth’s temperature. Gases exhibiting greenhouse properties come from both natural and human sources. Water vapor, carbon dioxide (CO₂), methane, and nitrous oxide are examples of GHGs that have both natural and manmade sources, while other gases such as those used for aerosols are exclusively manmade.

The six primary GHGs, which are internationally recognized and regulated under the Kyoto Protocol, are CO₂, methane, nitrous oxide (N₂O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Each GHG has an estimated global warming potential (GWP), which is a function of its atmospheric lifetime and its ability to absorb and radiate infrared energy emitted from the Earth’s surface. The GWP allows GHGs to be compared to each other by converting the GHG quantity into the common unit “carbon-dioxide equivalent” (CO₂e). Table 3-2 presents baseline annual GHG emissions for Baltimore County, Maryland.

Table 3-2. Baseline Greenhouse Gas Emissions for Baltimore County

GHG Emissions (tons/year)			
CO ₂	CH ₄	N ₂ O	CO ₂ e
5,034,271	254	150	5,086,245

Source: USEPA 2014

CO₂ = carbon dioxide; CO₂e = carbon dioxide equivalent; CH₄ = methane; N₂O = nitrous oxide

3.2 BIOLOGICAL RESOURCES

3.2.1 DEFINITION OF RESOURCE

Biological resources include native or naturalized plants and animals and the habitats in which they occur. Existence and preservation of biological resources are both intrinsically valuable and provide essential aesthetic, recreational, and socioeconomic values to society. This section focuses on vegetation, wildlife, and threatened, endangered, and protected species.

Federal regulatory requirements applicable to biological resources can be found in Chapter 1, Table 1-1. Species of regional concern that may or may not be adopted as state or Federally

threatened or endangered are also considered. At present, these species receive no legal protection under the Endangered Species Act, although some may be protected under other laws such as the *Bald Eagle Protection Act of 1940* (16 USC 668-668d, 54 Stat. 250), the *Migratory Bird Treaty Act of 1918* and *Responsibilities of Federal Agencies to Protect Migratory Birds* (EO 13186). Further, the U.S. Fish and Wildlife Service (USFWS) released the National Bald Eagle Management Guidelines, which specifies protective measures for given situations (USFWS 2007).

The *Maryland Forest Conservation Act* stipulates that activities requiring an application for a subdivision, grading permit, or sediment control permit on areas 40,000 square feet (SF) or greater also require a Forest Stand Delineation and an associated Forest Conservation Plan. Construction plans for all projects greater than 40,000 SF in size are reviewed by the Maryland Department of Natural Resources (MDNR), regardless of whether the land is forested or not (MDNR 2004). If forest resources could be affected by the Proposed Action, the MDANG would be required to prepare a Forest Conservation Plan that identifies mitigation and protection measures for the affected areas.

The FAA Advisory Circular (AC) 150/5200-33B, *Hazardous Wildlife Attractants on or Near Airports*, lists wildlife attractants, particularly feeding or loafing areas used by birds or large mammals (e.g., deer), that pose a threat to aircraft safety and describe methods for preventing wildlife hazards at or near airports. A Wildlife Hazard Assessment for Martin State Airport, including the Martin State ANGB, was completed in August 2000 by the U.S. Department of Agriculture (USDA) Wildlife Services Division. Subsequently, a Wildlife Hazard Management Plan for Martin State Airport was completed and approved by FAA in September 2002. MDANG and MAA continue to work with USDA to minimize wildlife attractants at the Base (MDANG 2003a). Additionally, MAA is conducting an update to the Wildlife Hazard Assessment, which will be complete in the spring of 2014 and findings/recommendations will be reflected in the annually updated Wildlife Hazard Management Plan (Bowie 2014).

The ROI for biological resources consists of lands within the vicinity of the proposed project areas at the 175 WG that would be directly or indirectly affected by any land clearing and construction activities.

3.2.2 EXISTING CONDITIONS

3.2.2.1 Vegetation and Forestry

The 175 WG is characterized by primarily urban land and landscaped grassland with minimal forested area and natural vegetation. Aircraft runways cover a substantial portion of land area on the Base. Developed land accounts for approximately 60 percent of Base lands. The remaining

area is composed of grassland covering about 25 percent of Base lands and wetlands, natural vegetation, forest and scrub-shrub habitats covering about 15 percent of land area.

Natural vegetation within the project area includes deciduous forest, shrubland, grassland, and wetland plant communities. Deciduous forests, composed of trees that seasonally shed their leaves, include sweet gum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), black cherry (*Prunus serotina*), pin oak (*Quercus palustris*), American holly (*Ilex opaca*), and box elder (*Acer negundo*). The understory, or level of vegetation below the canopy of the forest, consists of shrub and herbaceous species such as common greenbrier (*Smilax rotundifolia*), southern arrowwood (*Viburnum dentatum*), multiflora rose (*Rosa multiflora*), honeysuckle (*Lonicera sp.*), poison ivy (*Toxicodendron radicans*), Virginia creeper (*Parthenocissus quinquefolia*), and blackberry (*Rubus sp.*). Shrubland plant communities that occur along forest edges include red-panicked dogwood (*Cornus racemosa*), multiflora rose, black cherry (*Prunus serotina*), tree of heaven (*Ailanthus altissima*), European honeysuckle (*Lonicera periclymenum*), poison ivy, Japanese honeysuckle (*Lonicera japonica*), common reed (*Phragmites australis*), Canada goldenrod (*Solidago canadensis*), and blackberry (MDANG 2003a).

3.2.2.2 Wildlife

Forested and vegetated areas on the Base are small in size and separated from each other and, therefore, do not support an abundance of wildlife. In addition, the airport and Base environment, with its frequent human activity and disturbance, tend to attract those species that adjust well to human presence. Wildlife species that occur at the Base include opossum (*Didelphis marsupialis*), eastern cottontail (*Sylvilagus floridanus*), woodchuck (*Marmota monax*), white-tailed deer (*Odocoileus virginianus*), raccoon (*Procyon lotor*), gray squirrel (*Sciurus carolinensis*), and red fox (*Vulpes vulpes*). Typical birds observed include American Robin (*Turdus migratorius*), Eastern Meadowlark (*Sturnella magna*), Song Sparrow (*Melospiza melodia*), Canada Goose (*Branta canadensis*), Ring-billed Gull (*Larus delawarensis*), Killdeer (*Charadrius vociferus*), Herring Gull (*Larus argentatus*), Great Black-backed Gull (*Larus marinus*), and American Crow (*Corvus brachyrhynchos*) (MDANG 2003a).

3.2.2.3 Threatened, Endangered, and Protected Species

Because of the developed nature of the Base, it is unlikely that any threatened or endangered species would occur. One Bald Eagle (*Haliaeetus leucocephalus*) nest has been sighted within the project area; however the sighted location is not near any of the newly proposed construction activities. Construction for the proposed CBRNE Building (Project #9 from the 2010 EA) is located approximately 400 feet from the Bald Eagle nest (MDANG 2010). Due to a dramatic recovery in population, the Bald Eagle was removed from the Federally endangered list effective August 8, 2007 (72 Federal Register 37346). Over 500 nesting pairs of Bald Eagles are

estimated to occur in Maryland annually (MDNR 2013). This species is still protected under the Bald Eagle Protection Act (16 USC 668) and the Migratory Bird Treaty Act. The Peregrine Falcon, a Federally listed bird species, has historically been observed flying over the Base, but there is no habitat on the Base or nearby areas to support breeding, wintering, or other long-term uses by this species.

Bald Eagles are susceptible to human activity particularly during breeding and young rearing periods. Bald Eagles typically lay one to two eggs during the breeding season and result in usually one chick to successfully fledge or leave the nest. Disruptions to habitat, or disturbances near nesting and foraging areas, can have negative effects to Bald Eagles, resulting in decreased number of young that successfully fledge. Bald Eagles are most sensitive to human activity during nest building season (mid-October – January in the Chesapeake Bay Region). Very sensitive time periods to human activity are during egg laying and incubation (January – April), and fledging (May – July), whereas hatching and rearing young (February – June) are moderately sensitive time periods (USFWS 2007).

Bald Eagles often return to the same roosting site on consecutive years. In addition to an active nest, a territory may include alternate nests built or maintained by the eagles but not necessarily used for nesting in a given year. They may abandon a site if nests are destroyed by weather only later to return and rebuild at the same site a few seasons later. The USFWS recommends preserving a known nesting site for up to three breeding seasons (USFWS 2007).

3.3 LAND USE

3.3.1 DEFINITION OF RESOURCE

Land use generally refers to the management and use of land by people. The attributes of land use include general land use patterns, land ownership, land management plans, and special use areas. General land use patterns characterize the types of uses within a particular area. Specific uses of land typically include residential, commercial, industrial, agricultural, military, and recreational. Land use also includes areas set aside for preservation or protection of natural resources, wildlife habitat, vegetation, or unique features. Management plans, policies, ordinances, and regulations determine the types of uses that protect specially designated or environmentally sensitive uses.

The ROI for land use is defined as the boundary of the 175 WG and area adjacent to the Base.

3.3.2 EXISTING CONDITIONS

3.3.2.1 Local Land Use

Land use surrounding the 175 WG and the Martin State Airport is a mixture of residential, commercial, and industrial uses located along the major roadways. North of the Base across Eastern Boulevard and the railroad line is space consisting primarily of undeveloped forested area. Nearby residential areas are located to the east across Frog Mortar Creek and south of the airport along Wilson Point Road. The Chesapeake Industrial Park adjoins the Martin State Airport to the west and the Middle River Federal Depot is located just north of the Base along Eastern Boulevard.

3.3.2.2 Base Land Use

Martin State Airport and the 175 WG are located in Middle River, Maryland, approximately 8 miles east of the city of Baltimore. Martin State Airport is generally bounded on the north by Eastern Boulevard, on the east by Frog Mortar Creek, on the south by Stansbury Creek, and on the west by Wilson Point Road. The existing airport property is about 775 acres with the 175 WG occupying approximately 175 acres on the northeast side of the Martin State Airport. Land use for the 175 WG is guided by the Base Master Plan (GRW Engineers 1992). The existing Master Plan for the 175 WG is being revised and will reflect the projects that are part of the Proposed Action.

Land use is divided into eight general land use categories:

- Safety Zones (59 acres) – includes apron setback, runway 4/22 easement, liquid oxygen safety radius, and explosive clear zone.
- Airfield Pavement (20 acres) – includes aircraft parking apron and power check pad.
- Aircraft Maintenance (12 acres) – includes hangars, engine shop, air ground equipment (AGE), and other maintenance facilities.
- Aircraft Operations (3 acres) – includes the Fire Station, Squadron Operations, and Aerial Port.
- Industrial (14 acres) – includes Base Supply; Civil Engineering; Motor Pool; Petroleum, Oil, and Lubricant (POL); and storage.
- Command and Support (9 acres) – includes Headquarters, Clinic, Security Police, Dining Hall, Audio Visual, Photo Lab, and the Pavilion on Frog Mortar Creek.

- Special Categories (0.5 acre) – includes munitions storage and AGE hazardous materials storage.
- Open Space (58 acres).

The existing land use category for most of the areas proposed for new construction is primarily open space. The Cyber/ISR Facility (Project #1), Mobile Fuel Tanker Parking Area (Project #3), and the A-10 Drop Tank Storage Area/Access Road (Project #7) are all located on and/or partially on the abandoned runway areas (see Figure 2-1). The Hercules Road Expansion (Project #2) is located in previously disturbed areas. The A-10 Flight Simulator (Project #5) is located on existing storage pad/parking areas. The LRS Warehouse Facility (Project #6) would be located in a disturbed area adjacent to an existing warehouse. The two new vehicle parking areas associated with Project #4 would be constructed on existing pavement at the current location of Buildings 1080 and 1120, which are being demolished. The existing land use associated with Building 1080 is command and support, while the land use category for Building 1120 is industrial.

3.4 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

3.4.1 DEFINITION OF RESOURCE

Socioeconomic resources are defined as the basic attributes associated with human activities. In addition to the proposed construction projects, the new Cyber/ISR mission would be associated with an overall increase of 269 personnel at the base. Therefore, the following resources are addressed under socioeconomics as the indicators that could potentially be impacted by the Proposed Action: population and housing, economic activity (employment and expenditures), and educational services.

Concern that certain disadvantaged communities may bear a disproportionate share of adverse health and environmental effects compared to the general population led to the enactment in 1994 of EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. This EO directs Federal agencies to address disproportionate environmental and human-health effects in minority and low-income communities. In addition, 32 Code of Federal Regulations (CFR) 989, *Environmental Impact Analysis Process*, addresses the need for consideration of environmental justice issues in compliance with NEPA. EO 12898 applies to Federal agencies that conduct activities that could substantially affect human health or the environment. The evaluation of environmental justice is designed to:

- Focus attention of Federal agencies on the human health and environmental conditions in minority communities and low-income communities with the goal of achieving environmental justice.

- Foster nondiscrimination in Federal programs that may substantially affect human health or the environment.
- Give minority communities and low-income communities greater opportunities for public participation in, and access to, public information on matters relating to human health and the environment.

Environmental justice analysis also addresses the protection of children, as required by EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks (Protection of Children)*, issued in 1997 to identify and address issues that affect the protection of children. According to the EO, all Federal agencies must assign a high priority to addressing health and safety risks to children, to coordinating research priorities on children’s health, and to ensuring that their standards take into account special risks to children. The EO states that, “... ‘environmental health risks and safety risks’ mean risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air we breathe, the food we eat, the water we drink or use for recreation, the soil we live on, and the products we use or are exposed to).”

As stated in Section 2.3.1, *Criteria*, all site alternatives and all facilities would be located within the boundaries of the 175 WG Base and would have no capacity to affect sensitive populations, such as children, minorities, or low-income communities, as identified in EOs 13045 and 12898 and, therefore, are not further analyzed.

The ROI for this analysis has been defined as Baltimore County, Maryland.

3.4.2 EXISTING CONDITIONS

3.4.2.1 Population and Housing

In 2010, the population in the ROI was 805,029 (U.S. Census Bureau 2010). Baltimore County is the third largest county in the state of Maryland. Between 2000 and 2010, the population increased at an average annual rate of 0.65 percent with a total increase of nearly 50,737 persons (U.S. Census Bureau 2000, 2010). The 2012 population estimate for Baltimore County was approximately 817,455; representing an increase of 1.5 percent from 2010 levels (U.S. Census Bureau 2013).

As of 2012, there were approximately 1,500 personnel associated with the 175 WG (Chesapeake Guardian 2012). There is no housing for personnel at the 175 WG; therefore, all personnel and their families reside off-base. As of 2010, there were approximately 335,622 housing units in Baltimore County with approximately 18,907 vacant housing units (5.6 percent) of which 8,112 were rental units (2.4 percent) (U.S. Census Bureau 2010).

3.4.2.2 Economic Activity

In 2011, the most recent data available, Baltimore County had a total estimated employment of 3,395,660 (Bureau of Economic Analysis [BEA] 2012). The largest source of employment was Government and Government Enterprises which accounted for approximately 16.8 percent of the total employment in the county. Other major industries included health care and social assistance and professional, scientific, and technical services (BEA 2012). In 2011, the construction industry accounted for nearly 6 percent of total employment (BEA 2012). The annual average unemployment rate for Baltimore County during 2012 was 7.3 percent (Bureau of Labor Statistics 2012).

The MDANG has a significant economic impact on the local communities within the ROI and the state (see Table 3-3). During fiscal year FY 2012, the total economic impact of the MDANG was approximately \$130.94 million (Chesapeake Guardian 2012). As shown in Table 3-3, approximately 0.6 percent was associated with military construction.

Table 3-3. Expenditures and Economic Impact of the MDANG (in dollars)

Expenditure	FY 2009	FY 2010	FY 2011	FY 2012
Full-time employee salaries	29,663,055	28,449,151	41,047,354	40,278,612
Drill pay	22,626,721	17,047,837	15,147,660	23,044,679
Other Federal operating expenses	15,210,602	16,497,303	10,721,766	14,431,273
Aviation fuel	91,30,492	16,066,752	16,066,752	16,675,057
Military construction	NA	NA	12,157,700	785,507
Total expenditures	76,630,870	78,111,043	95,141,232	95,215,128
Estimated off-base jobs	602	582	579	558
Total Economic Impact	\$111,318,110	\$118,083,422	\$131,212,932	\$130,936,648

Source: Chesapeake Guardian 2010, 2011a, 2011b, 2012

FY = fiscal year; NA = not available

3.4.2.3 Education

The Baltimore County Public School District is the 26th largest school system in the U.S. and the 3rd largest in the state of Maryland. The total enrollment during the 2012-2013 school year was 106,927 with a projected enrollment during the 2013-2014 school year of 108,442 students (Baltimore County Public Schools [BCPS] 2013). As of 2013, there were 18,783 employees including 8,792 classroom teachers for a current student to teacher ratio of 12 to 1. There are 107 elementary schools, 28 middle schools, 27 high schools, in addition to 12 charter and alternative schools in the county (BCPS 2013).

3.5 SOLID DEBRIS AND HAZARDOUS MATERIALS AND WASTES

3.5.1 DEFINITION OF RESOURCE

The terms “hazardous materials” and “hazardous waste” refer to substances defined as hazardous by the Comprehensive Environmental Response, Compensation and Liability Act and the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA).

In general, hazardous materials include substances that, because of their quantity concentration, or physical, chemical, or infectious characteristics, may present substantial danger to public health or the environment when released into the environment.

Hazardous wastes are regulated under RCRA and defined as any solid, liquid, contained gaseous, or semisolid waste, or any combination of wastes that either exhibit one or more of the hazardous characteristics of ignitability, corrosivity, toxicity, or reactivity, or are listed as a hazardous waste under 40 CFR Part 261. Petroleum products include petroleum-based fuels, oils, and their wastes.

Maryland is authorized by the USEPA to implement RCRA and regulate hazardous waste in the state. The MDE, under Title 26, Subtitle 13 of the Code of Maryland Regulations (COMAR) (COMAR 26.13.01 through 26.13.10), regulates the generation, transportation, storage, treatment, disposal, and management of hazardous waste within the state. Maryland hazardous waste regulations are similar to the Federal regulations. Because Maryland has state authorization from the USEPA for its hazardous waste management, compliance with both state and Federal regulations is required. Where there are differences between the two, the most stringent regulation will apply.

Maryland defines “solid waste” to mean garbage, refuse, or other materials originating from private residences, schools, institutions, businesses, commercial enterprises, or as the result of community activities but does not include solids or dissolved material in domestic sewage or sewage sludge, nor does it include waste classified as hazardous waste. Solid wastes are regulated under COMAR 26.04.07.00 through 26.04.07.27. The requirements for asbestos, construction/demolition debris are defined in COMAR 26.04.07.13. Other special wastes are defined in COMAR 26.03.03.03 as solid wastes that are either difficult or dangerous to manage and may include, bulky wastes such as automobiles. Solid wastes which are not considered hazardous wastes are defined in COMAR 26.13.02.04-1.

The affected resources include USAF Environmental Restoration Program (ERP) sites. The ERP is used by the Air Force to identify, characterize, clean up, and restore sites contaminated with toxic and hazardous substances, low-level radioactive materials, petroleum products, or other

pollutants and contaminants. The ERP has established a process to evaluate past disposal sites, control the migration of contaminants, identify potential hazards to human health and the environment, and remediate the sites. The ROI for hazardous materials and hazardous waste is defined as the boundary of 175 WG, to include ERP/contaminated sites and other areas where hazardous materials would be utilized and hazardous wastes generated as part of the Proposed Action.

Asbestos and LBP are not addressed in this EA, as no renovation or demolition of buildings or structures is required as part of the Proposed Action.

3.5.2 EXISTING CONDITIONS

3.5.2.1 Hazardous Materials Management

A variety of products containing hazardous materials are used by the Base as part of day-to-day operations. To administer these materials, the 175 WG has implemented a comprehensive hazardous material management process for the management of these products. A key component of this process is the use of a Hazardous Material Pharmacy (HAZMART), located in Building 1150 (MDANG 2012a).

The HAZMART encompasses both a storage facility and an established set of procedures designed to control the acquisition, storage, issue, and disposition of serviceable hazardous materials. Working in coordination with the Environmental Management Office, the HAZMART ensures that only approved products are purchased and stored, and that they are only issued to authorized users. In addition, the HAZMART helps to minimize waste by ensuring residual materials are returned to use until the products are exhausted. The system is also designed to substitute, whenever possible, less hazardous or more environmentally friendly chemicals, and to ensure that unserviceable hazardous materials (expired shelf life items, contaminated, etc.) are properly turned in and disposed (MDANG 2012a).

Hazardous materials also comprise POLs stored throughout the Base. This includes storage of fuels (e.g., JP-8 and diesel) and oil contained within large equipment, such as electric transformers. At this time, there are no fuel storage tanks or other bulk POL containers, such as transformers, associated with any projects identified as part of the Proposed Action. If any transformers need to be moved or installed, then the 175 WG will contact the Baltimore Gas and Electric Company, who owns and maintains the transformers. Secondary containment is impractical for oil-filled transformers; instead spill response and use of absorbent materials are the primary means employed to contain any oil releases (MDANG 2012b).

The 175 WG has developed programs to comply with all Federal and state hazardous materials reporting requirements. This effort includes submission to the state and local emergency planning committees and local fire departments annual Tier II forms, which include updated inventories of hazardous materials (e.g., fuel) or extremely hazardous substances in excess of specific threshold limits (MDANG 2012c).

3.5.2.2 Hazardous Waste Management

A byproduct of the use of hazardous materials and Base operations is the generation of hazardous wastes. The Base is officially designated as a large quantity generator (LQG) of hazardous waste under USEPA Identification Number MDD083501023. Hazardous waste is generated by aircraft, vehicle, and aerospace ground equipment maintenance activities and from POL management and distribution. These operations include corrosion control, nondestructive inspection, fuel cell maintenance, and equipment maintenance. Types of hazardous and POL (nonhazardous) waste generated include used oil and filters, used antifreeze, used solvent, used sealants, reclaimed JP-8, waste diesel and MOGAS, waste JP-8 and fuel filters, paint waste, spent hydraulic fluid, waste corrosives, sludge from parts washers and oil/water separators, and lamps/batteries (both managed as universal waste) (MDANG 2012a).

Hazardous wastes are initially stored at Satellite Accumulation Points (SAPs) at approximately 48 different work locations. No more than 55 gallons of hazardous waste or 1 quart of acutely hazardous waste can be accumulated at these points. Once the storage limit is reached, the waste is transferred to the Central Accumulation Point (Building 5040) and stored until an approved contractor removes the waste for disposal. As an LQG, the Base is allowed to accumulate hazardous waste at Building 5040 for up to 90 days. The waste is then transported to an approved off-Base treatment, storage, or disposal facility where it is managed in accordance with all applicable local, state, Federal, ANG, and DoD regulations (MDANG 2012a).

The 175 WG has implemented a Hazardous Waste Management Plan that identifies hazardous waste generation areas and addresses the proper packaging, labeling, storage, and handling of hazardous wastes. The plan also addresses record keeping; spill contingency and response requirements; and education and training of appropriate personnel in the hazards, safe handling, and transportation of these materials (MDANG 2012a). Additionally, since the 175 WG is a LQG of hazardous waste, the Base also maintains a Hazardous Waste Contingency Plan (MDANG 2012c). Also, Maryland requires all LQGs to submit a Biennial Hazardous Waste Report by March 1 of each even numbered year, which includes the types and amounts of hazardous waste stored and/or disposed during the preceding calendar year.

3.5.2.3 ERP

There are a total of 16 ERP sites resulting from past activities at the Base. These ERP sites are associated with former underground or aboveground storage tanks, hazardous waste accumulation areas, wash racks, and fire training areas (see Figure 3-1). All of the 16 ERP sites have been concurred with for No Further Action by the State (MDE) (Moore 2014).

Additionally, under the new Compliance Restoration Program, which is a continuation of the ERP; as of November 2013, additional Preliminary Assessment/Site Investigations (PA/SI) were initiated for the following nine new Areas of Concern (AOCs):

- Building 5045 Leach Field
- Building 5100 Leach Field
- Former Hydraulic Vehicle Lift (1) in Building 2110
- Former hydraulic Vehicle Lift (2) in Building 2110
- Acid Neutralization Pit at Building 2110
- Oil/water Separator at Building 1130
- 2 Battery Rooms at Building 1130
- Former Hydraulic Vehicle Lift in Building 1130
- Battery Shop at Building 1060

At this time it is not known whether these new AOCs will in fact move forward to become actual ERP sites. The PA/SI sampling data will be accomplished in the spring of 2014, and subsequently it will be determined whether any of the AOCs have contaminant levels above the regulatory levels, which would then make them actual ERP sites (BB&E 2011).

3.5.2.4 Solid Wastes

AFI 32-7042, Solid and Hazardous Waste Compliance, establishes municipal solid waste management and compliance at Air Force and ANG Bases. AFI 32-7042 also requires each base to have an Integrated Solid Waste Management Plan (ISWMP). The 175 WG ISWMP contains guidance for managing municipal solid waste, munitions-related waste, compost materials, recycling, construction and demolition debris, and industrial solid waste (U.S. Air Force 2013). The plan identifies compliance requirements and local procedures for the management of solid waste, but excludes wastes specifically exempted from RCRA rules such as domestic sewage and industrial wastewater, and radioactive waste (except mixed waste), which are managed separately under other programs. AFI 32-7080, Pollution Prevention Program, addresses source reduction, resource recovery, and recycling of solid waste.

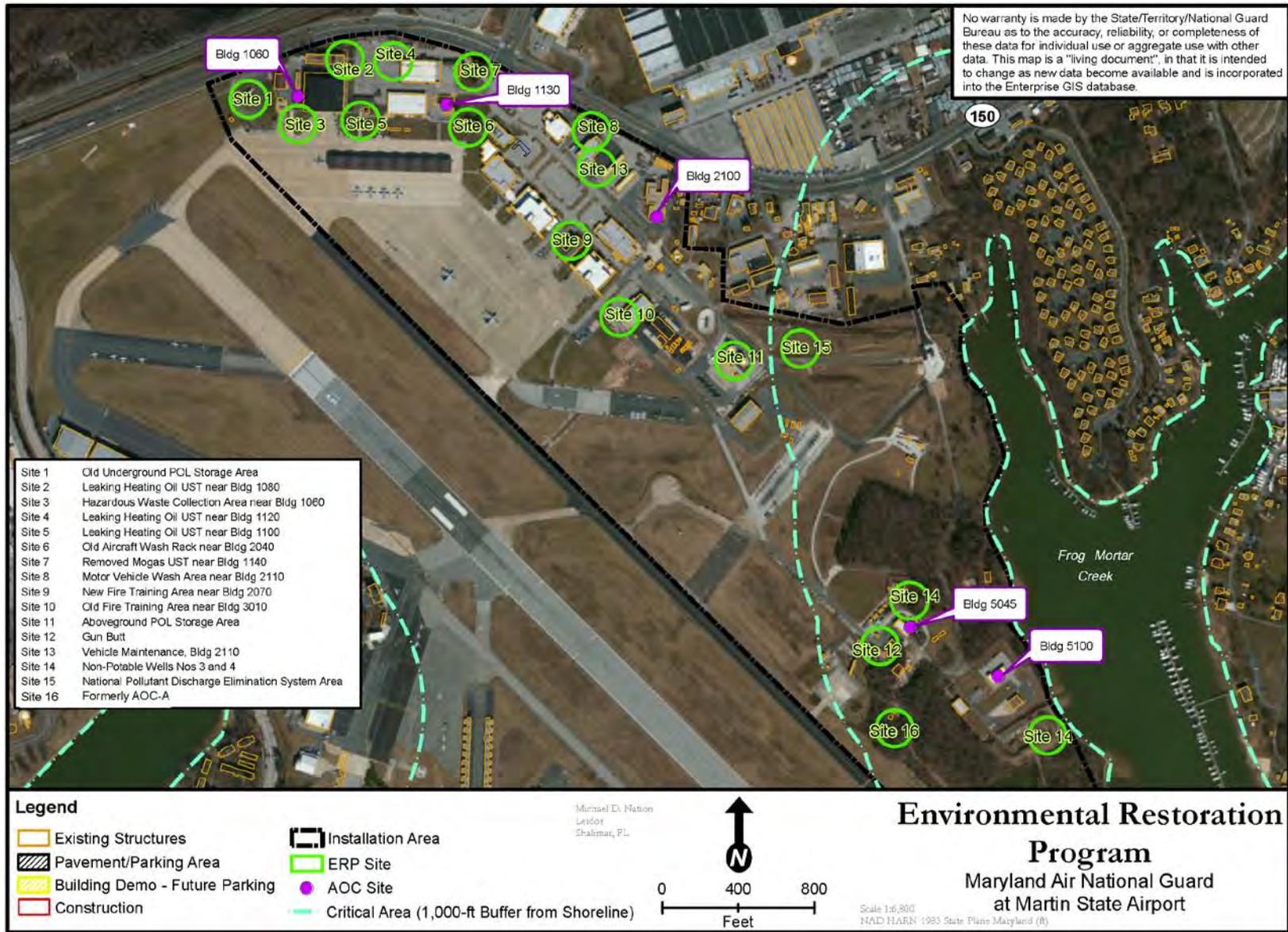


Figure 3-1. Environmental Restoration Program Sites

It is ANG policy to make every effort to divert nonhazardous solid waste from landfills and incinerators through reuse, recycling, composting, or donating, while ensuring integrated nonhazardous solid waste management programs provide an economic benefit. In accordance with AFI 32-7080, Pollution Prevention Program, and AFI 32-7042, Waste Management, the ANG requires its installations to strive to divert/recycle the following additional items from the waste stream as cost effectively as possible: asphalt, metals, plastic, glass, used oil, lead acid batteries, and tires. Bases are encouraged to add other commodities to the list of items that are economically feasible to divert and/or recycle.

Municipal solid waste collection at the Base is contracted to Waste Management, Inc., and disposed at the Eastern Landfill in White Marsh, Maryland. The landfill disposed approximately 137,697 tons of municipal solid waste in 2011, and is expected to remain in operation until at least 2042 (MDE 2012a). Although disposal of construction and demolition debris generated during such projects is primarily the responsibility of contractors operating on the Base, ANG installations are still required to track and report their amounts (tons disposed/ diverted/ recycled/ mulched) and associated costs. Contractors must provide this information to the Base and ensure that they adhere to the Base's ISWMP.

3.6 UTILITIES

3.6.1 DEFINITION OF RESOURCE

The utilities described and analyzed for potential impact resulting from the implementation of the Proposed Action include electricity, natural gas, potable water, and wastewater. The description of the each utility focuses on existing infrastructure (e.g., wells, water systems, wastewater treatment plants), current utility use, and any predefined capacity or limitations as set forth in permits or regulations.

3.6.2 EXISTING CONDITIONS

3.6.2.1 Electricity and Natural Gas

Electrical power and natural gas distribution is provided to the 175 WG by Baltimore Gas and Electric. Pepco Energy Services Incorporated provides third party supply of electrical power for Buildings 1070, 1080, 1110, 2030, 2040, 2050, 2080, and 2120 while Washington Gas Energy Services provides third party supply for the remaining electrical power and all natural gas (MDANG 2010). The average monthly 175 WG electricity consumption for fiscal year (FY) 2012 was 365.8 megawatt hours while the average monthly natural gas consumption was 803 thousand cubic feet (mcf). The energy consumption rates include service to 58 facilities with 413,978 SF (Bigesby 2013), which results in effective average rates of 0.88 kilowatt hours (kWh) per SF for electricity and 1.94 cubic feet per SF for natural gas.

3.6.2.2 Potable Water and Wastewater

The City of Baltimore provides potable water to the 175 WG. In FY 2012, the 175 WG consumed a monthly average of 0.32 million gallons of potable water. Potable water is supplied to 58 facilities with 413,978 SF, which results in an effective average rate of 0.77 gallons per SF per month. However, typically potable water consumption is dependent on the number of personnel versus building square footage. Using a 2012 Base population of 1,500 personnel, the average monthly potable water consumption is approximately 213 gallons per person.

Baltimore County provides wastewater treatment to the 175 WG; however, wastewater is not metered from the Base (MDANG 2010).

3.7 WATER RESOURCES

3.7.1 DEFINITION OF RESOURCE

Water resources analyzed in this EA include surface water, wetlands, and floodplains. Surface water resources include lakes, rivers, and streams and are important for a variety of reasons including irrigation, power generation, recreation, flood control, and human health.

The Federal Coastal Zone Management Act (CZMA) of 1972, as amended (16 USC §§ 1451) encourages coastal states and territories to develop comprehensive coastal management programs. The program is administered by the Secretary of Commerce, who in turn has delegated this responsibility to the National Oceanic and Atmospheric Administration's (NOAA's) National Ocean Service. The CZMA requires that Federal actions within or outside the coastal zone that affect any land or water use of natural resource of the coastal zone shall be carried out in a manner which is consistent with the enforceable policies of approved state coastal management programs. This concept is known as "Federal consistency." The Maryland Coastal Zone Management program received Federal approval in 1979. Counties that border the Chesapeake Bay or its tidal tributaries are included in the coastal zone. Within this zone, coastal areas, tidal tributaries, and tidal wetlands are protected under the CZMA. The Federal consistency requirements are enforced through the Coastal Zone Consistency Division in the Wetlands and Waterways Program of the Water Management Administration in the MDE. On 8 May 2013, the State of Maryland and DoD signed a Memorandum of Understanding (MOU) concerning Federal consistency requirements of the CZMA and the application and implementation of enforceable policies of Maryland's Coastal Zone Management Program. In addition, Maryland prepared and NOAA approved on 18 March 2011 a Routine Program Change to Maryland's Enforceable Coastal Policies.

Under the Clean Water Act (CWA), it is illegal to discharge pollutants from a point source into any surface water without a National Pollutant Discharge Elimination System (NPDES) permit. Under CWA Section 401, applicants for a Federal license or permit to conduct activities that may result in the discharge of a pollutant into waters of the U.S. must obtain certification from the state in which the discharge would originate, or if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate. Therefore, all projects that have a Federal component and may affect state water quality (including projects that require Federal agency approval [such as issuance of a Section 404 permit]) must also comply with CWA Section 401. The state of Maryland has authority to implement and enforce the provisions of the CWA, while the USEPA retains oversight responsibilities.

In December 2007, Congress enacted the EISA; Section 438 of this act establishes stormwater runoff requirements for Federal development and redevelopment projects. In January 2010, the Deputy Under Secretary of Defense, Installation and Environment, issued a memorandum directing DoD components to implement EISA Section 438 using low-impact development (LID) techniques. As a result, the policy has been incorporated into the UFC 3-210-10, *Low Impact Development*. UFC 3-210-10 provides the technical criteria, technical requirements, and references for the planning and design of applicable projects to comply with stormwater requirements under EISA Section 438 (EISA Section 438 requirements are independent of NPDES permit requirements.). LID is a stormwater management strategy designed to maintain site hydrology and mitigate the adverse impacts of stormwater runoff and non-point source pollution (DoD 2010). While the criteria and design standards in UFC 3-210-10 apply to all DoD construction, EISA Section 438 requirements apply to a project where the construction footprint is greater than 5,000 SF. The overall design objective is to maintain predevelopment hydrology and prevent any net increase in stormwater runoff. Project site design options would prioritize integrated management practices that are proven within the regional area and have the greatest cost benefit/ lowest life cycle costs. Stormwater retention/reuse would typically include bioretention areas, permeable pavements, cisterns/recycling, and green roofs.

Sites where soils are exposed to environmental variables (i.e., water and wind) can have erosion and sedimentation problems. Sedimentation occurs when soil particles are suspended in surface runoff or wind and are deposited in streams or other water bodies. Sediments affect water clarity, decrease oxygen levels in water, and transport pollutants. Construction activities that disturb the ground surface can accelerate erosion by removing vegetation, compacting or disturbing the soil, changing natural drainage patterns, and by covering the ground with impermeable surfaces (pavement, concrete, buildings). When the land surface is impermeable, stormwater can no longer infiltrate, resulting in larger amounts of water that can move more quickly across a site and that can carry larger amounts of sediment and other pollutants into

stormwater drains and drainage basins and, ultimately, into streams and rivers. As soil quality declines, adverse impacts to on-site and off-site environments increase. Therefore, the maintenance of soil quality is important for efficient and productive land management and utilization. Soil drainage, texture, strength, and erodibility all determine the suitability of the ground to support man-made structures, facilities, and military activities.

Maryland's Stormwater Management Act of 2007 requires environmental site design (ESD) through the use of better site design techniques, alternative surfaces, nonstructural techniques, and microscale practices, be implemented to the maximum extent practicable. As a result of implementation of the 2007 Stormwater Management Act, MDE updated the Maryland Stormwater Design Manual. Fourteen general performance standards for Stormwater Management are included in the 2009 revision of the Maryland Stormwater Design Manual. Standards include requirements such as:

- Water quality management shall be provided through the use of ESD practices. (*Standard 4*)
- Structural BMPs used for new development shall be designed to remove 80 percent of the average annual post development total suspended solids load and 40 percent of the average annual post development total phosphorous load. (*Standard 5*)
- Stormwater discharges to critical areas with sensitive resources (e.g., Chesapeake Coastal Bay Critical Area - Appendix D.4 of the Manual) may be subject to additional performance criteria or may need to utilize or restrict certain BMPs. (*Standard 8*)
- Redevelopment, defined as any construction, alteration or improvement on sites where existing land use is commercial, industrial, institutional or multi-family residential and site impervious area exceeds 40 percent, is governed by special stormwater sizing criteria depending on the amount of increase or decrease in impervious area created by the redevelopment. (*Standard 11*)

Baltimore County adopted Article 33 Title 4 in response to the Stormwater Management Act of 2007 requiring ESD to the maximum extent practicable; three sequential plan submissions and reviews (Concept Stormwater Management Plan, Development Stormwater Management Plan, and Final Stormwater Management Plan); 50 percent reduction in impervious surface or equivalent water quality management for redevelopment projects; and no grading or building permits issued until sediment control and stormwater management plans are signed as some of the major changes adopted. Development that disturbs less than 5,000 SF of land is exempt from this requirement.

The CBCA legislation was enacted by the Maryland Assembly in 1984. The CBCA law identifies the "critical area" as all land within 1,000 feet of the Mean High Water Line of tidal

waters or the landward edge of tidal wetlands and all waters of and lands under the Chesapeake Bay and its tributaries. The CBCA legislation requires the establishment of a minimum buffer of 100 feet of natural vegetation landward from the Mean High Water Line of tidal waters or the edge of tidal wetlands and tributary streams. In addition, the remainder of land within the CBCA is categorized by its predominant use and the intensity of its development. Each category poses different constraints and management programs for activities conducted within the CBCA boundary. For development or redevelopment activities within intensely developed areas (IDAs), practices to reduce water quality impacts associated with stormwater runoff must be capable of reducing stormwater pollutant loads from the development site to a level at least 10 percent below the load generated by the same site prior to development, a practice known as the 10 percent rule. Pollutant loads reduction requirements are quantified as pounds of total phosphorus per year.

The CBCA Protection Act was amended in 2002 and 2008 to strengthen provisions to protect water quality. In 2010, the Critical Area Commission issued new regulations for the Critical Area Buffer (applicable to all projects approved on 8 March 2010 or thereafter) including how they are to be established in forest vegetation and new requirements for a 200-foot buffer for all new subdivisions or site plans within the Resource Conservation Area. The commission staff along with the Chesapeake Stormwater Network has developed a draft stormwater guidance manual “Environmental Site Design for the Maryland Critical Area” that provides instructions on using the Stormwater Spreadsheet Tool and guidance on compliance.

Wetlands are defined by the U.S. Army Corps of Engineers (USACE) and USEPA as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include marshes, bogs, and similar areas.” Wetlands provide a variety of functions including groundwater recharge and discharge; flood flow attenuation; sediment stabilization; sediment and toxicant retention; nutrient removal and transformation; aquatic and terrestrial diversity and abundance; and uniqueness. Three criteria are necessary to define wetlands: vegetation (hydrophytes), soils (hydric), and hydrology (frequency of flooding or soil saturation). Section 404 of the CWA established a program to regulate the discharge of dredged and fill material into waters of the U.S., including wetlands. The USACE, the lead agency in protecting wetland resources, maintains jurisdiction over Federal wetlands (33 CFR 328.3) under Section 404 of the CWA (30 CFR 320-330) and Section 10 of the Rivers and Harbors Act (30 CFR 329).

Furthermore, EO 11990, *Protection of Wetlands*, requires Federal agencies to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. EO 11990 requires Federal agencies to avoid, to the extent

possible, the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. Wetlands are not present near the proposed projects and therefore, further discussion on potential impacts to wetlands is not be included (Figure 3-2).

Floodplains are defined by EO 11988, *Floodplain Management*, as “the lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum, the area subject to a 1 percent or greater chance of flooding in any given year” (that area inundated by a 100-year flood). Floodplains and riparian habitat are biologically unique and highly diverse ecosystems providing a rich diversity of aquatic and terrestrial species, as well as promoting stream bank stability and regulating water temperatures. EO 11988 requires Federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative. A review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps for the Base indicates no proposed projects are within the 100-year floodplain and therefore, further discussion on potential impacts to floodplains will not be included (FEMA 2008).

The ROI for water resources is the 175 WG and waters immediately adjacent to the 175 WG with focus on stormwater drainage and retention.

3.7.2 EXISTING CONDITIONS

3.7.2.1 Coastal Zone Consistency Determination

The actions defined within the 2010 EA were determined to be consistent with the State’s Coastal Zone Management Plan contingent upon the issuance of all State permits, approvals that are necessary for the proposed activities, including compliance with the State’s Chesapeake and Atlantic Coastal Bays Critical Area Protection Program (MDE 2010a).

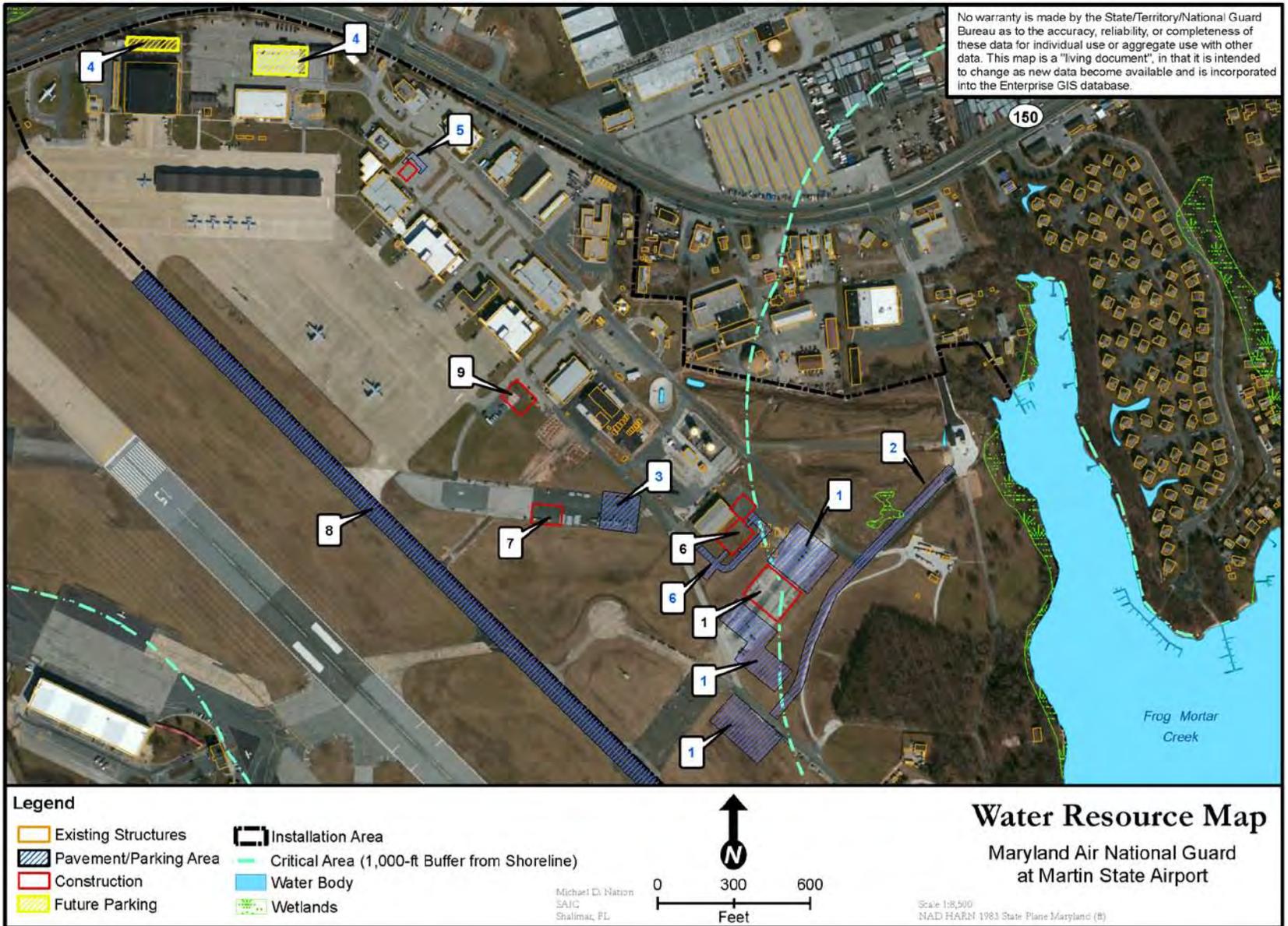


Figure 3-2. Water Resources Within the Project Area

3.7.2.2 Soils – Sediment Potential

The primary soil types identified within the proposed project area are Udorthents, Mattapex-Urban land, and Urban land. Udorthents have a high potential for surface water runoff, Mattapex-Urban land complex has a medium to very high potential for surface water runoff, and Urban land has a very high potential for surface water runoff (NRCS 2010a). In addition Mattapex-Urban land complex soils are moderately susceptible to sheet and rill erosion by water as well as wind erosion, Udorthents have a low susceptibility to sheet and rill erosion by water but are moderate to highly susceptible to wind erosion, and Urban land does not carry an erosion rating (NRCS 2010b). As a general rule, urban fill soils produce greater runoff rates and allow less infiltration than undisturbed soils of the same type; while the NRCS cautions that urban soils cannot be assigned into any hydrologic soil group, most practitioners assign them to hydrologic soil group “D”, which has the greatest runoff response (Chesapeake Stormwater Network 2011). Udorthents and Mattapex-Urban land have a *somewhat limited* rating for small commercial building construction with no basements, three stories or less, and concrete slabs that consist of spread footings of reinforced concrete at a depth of 2 feet or depth of frost penetration (NRCS 2010c). Udorthents also have a *somewhat limited* rating for local road and street construction (assumed to have an all-weather surface and carry automobile and light truck traffic all year) while Mattapex-Urban land carries a *very limited* rating for local road and street construction (NRCS 2010d). Urban land does not carry a rating for either small commercial building or road construction. A *somewhat limited* rating indicates that the soil has features that are moderately favorable for the specified use; limitations can be overcome or minimized by special planning, design, or installation. A *very limited* rating indicates that the soil has one or more features that are unfavorable for the specified use and would require special design and/or major soil reclamation. In the case of Mattapex-Urban within the ROI, the *very limited* rating for road/street construction is based on low soil strength and the potential for frost action.

3.7.2.3 Surface Water – Potential Receiving Waters

The Base is located adjacent to Frog Mortar Creek, which is connected to the larger Middle River; Middle River is listed on the 2012 Maryland Integrated 303(d)/305(b) List of Impaired Waters with Polychlorinated Biphenyls in fish tissue as the listed impairment (MDE 2012b). The Middle River discharges into the Chesapeake Bay over one mile east of the airport. The portion of the Chesapeake Bay (Northern Chesapeake Bay) where the Middle River discharges is listed on the 2012 Maryland Integrated 303(d)/305(b) List of Impaired Waters with Total Phosphorus and Total Nitrogen as the listed impairments (MDE 2012c). In addition, MDE classifies waters of Frog Mortar Creek and Middle River as Use II waters, suitable for water contact sports, leisure activities involving direct contact with surface water, fishing, growth and

propagation of fish and shellfish, agricultural and industrial water supply, and other seasonal use permissible to the Chesapeake Bay and its tidal tributaries (MDE 2010b).

MDE's Land Restoration Program, through its Controlled Hazardous Substance Enforcement Division, is overseeing Lockheed Martin Corporation's environmental assessment and cleanup activities related to the release of chlorinated solvents and metals from areas around the Martin State Airport; in connection with this assessment, MDE issued a water contact advisory for the waters adjacent to the shoreline of the airport, near the 175 WG, due to the presence of chlorinated solvents in some surface water samples at levels that exceeded MDE recommended lifetime risk screening levels (MDE 2012d). Lockheed Martin and MDE have established an on-going surface water monitoring program for Frog Mortar Creek where 40 water samples are collected 6 times a year, focusing on the summer swimming months (Lockheed Martin 2013a). Combined sampling from Frog Mortar Creek in June and July 2013 (most recent sampling) revealed average vinyl chloride concentrations slightly above the MDE screening level and concentrations of trichloroethene and cis-1,2-dichloroethene below their screening levels (Lockheed Martin 2013b).

3.7.2.4 Critical Area

Four proposed projects are all or partially located within the Critical Area (Figure 3-2). All land within the Critical Area, except for land owned by the Federal government, is assigned one of the three land classifications: Resource Conservation Areas, Limited Development Areas, and IDAs. IDAs are defined as areas of 20 or more adjacent acres where residential, commercial, institutional or industrial land uses predominate and little natural habitat occurs. As a tenant to MAA, the 175 WG coordinates and manages the Base as an IDA to the extent practicable.

3.7.2.5 Stormwater

There are two categories of general permits for stormwater discharges related to activities at the Base: operational activities and construction activities. To obtain permit coverage under a stormwater general permit, the 175 WG must file a Notice of Intent (NOI) to be covered under the respective permit; the Base is currently covered under the NPDES General Stormwater Permit for Industrial Activity, Permit Number 02-SW issued by MDE on 1 December 2002 and effective through 30 November 2007 but administratively continued for facilities covered at the time it expired. Under this permit, the 175 WG manages stormwater collection and discharge in accordance with a Stormwater Pollution Prevention Plan. MDE is in the process of replacing General Permit Number 02-SW with General Permit Number 12-SW; the Base will need to file an NOI for coverage under the new permit and comply with the new permit requirements.

The 175 WG is located within the Frog Mortar Creek drainage area immediately west of Frog Mortar Creek with all drainage areas going into Frog Mortar Creek. For the purpose of the Base's industrial activity stormwater permit (02-SW), there are seven primary industrial drainage basins and corresponding outfalls at the Base. Base personnel make annual observations of these outfalls for color, odor, clarity, solids, oil, or foam. As necessary, the Base implements BMPs to adhere to permit requirements for maintaining acceptable stormwater quality. Proposed projects would occur in drainage areas 04 and 05.

Construction activities that disturb one or more acres must obtain coverage under the state's NPDES General Permit for Stormwater Associated with Construction Activity, Permit Number 14GP, effective 1 January 2014 through 31 December 2018. Construction activities covered under the current General Permit (09GP) that would continue earth disturbance after 31 December 2013, must obtain coverage under the new General Permit. In addition, construction activities (earth disturbance) that would occur after 31 December 2013 would require the 175 WG to submit an NOI for coverage under the new General Permit and require compliance such as the completion of a final erosion and sediment control plan and stormwater management plan, prior to land-disturbing activities.

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4. ENVIRONMENTAL CONSEQUENCES

4.1 AIR QUALITY

4.1.1 SIGNIFICANCE CRITERIA

The main contributors to air quality effects would be emissions associated with construction. In order to evaluate air emissions and their impact on the ROI, the emissions associated with project activities were compared with the total emissions on a pollutant-by-pollutant basis for the ROI's 2008 NEI data. Potential impacts to air quality are evaluated with respect to the extent, context, and intensity of the impact in relation to relevant regulations, guidelines, and scientific documentation. CEQ defines significance in terms of context and intensity in 40 CFR 1508.27 (Table 4-1). This requires that the significance of the action be analyzed with respect to the setting of the Preferred Alternative and based relative to the severity of the impact. CEQ NEPA Regulations (40 CFR 1508.27(b)) provide 10 key factors to consider in determining an impact's intensity.

Table 4-1. Summary of Significance Thresholds for Air Quality

Standard Significance Threshold	FAA Significance Threshold
Air quality pollutant emissions from the proposed action compared to the regional emissions. Emissions greater than 10 percent of the regional emissions are considered significant for attainment areas.	Potentially significant air quality impacts from the proposed action would exceed one or more of the NAAQS for any of the time periods analyzed.

Source: FAA 2006

FAA = Federal Aviation Administration; NAAQS = National Ambient Air Quality Standards

A general conformity applicability analysis is required for areas of nonattainment or maintenance where a Federal action is proposed. The action can be shown to conform by demonstrating that the total direct and indirect emissions are below the *de minimis* levels and/or by showing that the Proposed Action emissions are within the state- or Tribe-approved budget of the facility as part of the SIP or Tribal Implementation Plan (USEPA 2013c). Since the ROI is designated as attainment for all criteria pollutants except for the 8-hour ozone and PM_{2.5} standard, a conformity analysis is required for 8-hour ozone and PM_{2.5}. Preferred Alternative emissions are assessed against conformity standards *de minimis* thresholds of 100 tons per year (tpy) for PM_{2.5} and 50 tpy for NO_x and VOCs, as stipulated by 40 CFR 93. The remaining criteria pollutants are compared to Baltimore County emissions, which are in attainment.

To ensure NAAQS are met and maintained, a pre-construction permitting program entitled *New Source Review* was developed. This program comprises two separate processes known as Nonattainment New Source Review and Prevention of Significant Deterioration (PSD). Major new or modified stationary sources of air emissions must meet more stringent permitting standards so that air quality is not degraded further. Typically, new or modified sources compare their projected emissions with the significant emissions rate (SER) thresholds for the area. These SER thresholds can vary depending on the severity status of the nonattainment area, which can be rated between moderate and severe. Sources with projected emissions that exceed the nonattainment SER are required to install lowest achievable emissions rate air pollution control technology to help reduce the impact of the new or modified source on the region’s air quality.

In attainment areas, major new or modified stationary sources of air emissions on and in the area are subject to PSD review to ensure that these sources are constructed without causing significant adverse deterioration of clean air in the area. A major new source is defined as one that has the potential to emit any regulated Clean Air Act pollutant regulated in amounts equal to or exceeding specific major source thresholds (100 or 250 tpy based on the source’s industrial category). A major modification is a physical change or change in the method of operation at an existing major source that causes a significant *net emissions increase* at that source of any regulated pollutant. Table 4-2 lists the PSD SER thresholds for selected criteria pollutants (USEPA 1990).

Table 4-2. Criteria Pollutant SER Increases Under PSD Regulations

Pollutant	Significant Emissions Rate (tons/year)
PM ₁₀	15
PM _{2.5}	10
TSP	25
SO ₂	40
NO _x	40
Ozone (VOCs)	40
CO	100

Source: USEPA 1990

CO = carbon monoxide; NO_x = nitrogen oxides; PM_{2.5} = particulate matter less than 2.5 microns in diameter; PM₁₀ = particulate matter less than 10 microns in diameter; PSD = Prevention of Significant Deterioration; SER = significant emissions rate; SO₂ = sulfur dioxide; TSP = total suspended particulates; VOC = volatile organic compound

Sources subject to PSD review are required by the Clean Air Act to obtain a permit before commencing construction. The permit process requires an extensive review of all other major sources within a 50-mile radius and all Class I areas within a 62-mile radius of the facility.

Emissions from any new or modified source must be controlled using best available control technology. The air quality, in combination with other PSD sources in the area, must not exceed the maximum allowable incremental increase identified in Table 4-3. Air dispersion modeling is used to ensure that PSD incremental concentrations are not exceeded. National parks and wilderness areas are designated as Class I areas, where any appreciable deterioration in air quality is considered significant. Class II areas are those where moderate, well-controlled industrial growth could be permitted. Class III areas allow for greater industrial development. Currently, there are no designated Class III areas in the United States.

Table 4-3. Federal Allowable Pollutant Concentration Increases Under PSD Regulations

Pollutant	Averaging Time	Maximum Allowable Concentrations ($\mu\text{g}/\text{m}^3$)		
		Class I	Class II	Class III
PM ₁₀	Annual	4	17	34
	24-hour	8	30	60
SO ₂	Annual	2	20	40
	24-hour	5	91	182
	3-hour	25	512	700
NO ₂	Annual	2.5	25	50

Source: Title 40 Code of Federal Regulations Part 51

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; NO₂ = nitrogen dioxide; PM₁₀ = particulate matter less than 10 microns in diameter; PSD = Prevention of Significant Deterioration; SO₂ = sulfur dioxide

Specific details regarding the assumptions and analysis calculations are shown in more detail in Appendix C.

Calculated air emissions were compared to the annual emission totals from Baltimore County.

The air quality analysis focused on emissions associated with any construction, activities that would occur and emissions were compared to regional (Baltimore County) emissions, *de minimis* thresholds for ozone precursors and PM_{2.5} as part of the general conformity analysis, and all criteria air pollutant emissions are compared to the NAAQS as indicated in Table 4-1.

4.1.2 PROPOSED ACTION

Under the Proposed Action, construction activities include site preparation (grading), construction worker trips, stationary equipment (generators or saws), mobile equipment, and architectural coatings. Air pollutant emissions would primarily be caused by combustion of fossil fuels from the use of machinery and fugitive dust emissions from ground disturbance and other physical disturbances. Emissions would also occur from the use of additional facility space heating. Emissions were calculated assuming all projects occurred during a single year as a worst case scenario.

As show in Table 4-4, the individual pollutant emissions resulting from the Proposed Action would not exceed one percent of the total Baltimore County emissions for each corresponding pollutant. Additionally, conformity thresholds would not be exceeded for ozone precursors (NO_x and VOCs) or PM_{2.5}. The slight increase in emissions would be temporary, short term, and localized to the project area.

Table 4-4. Proposed Action Emissions Compared to County Emissions and *de minimis* Thresholds

Annual Emissions Source	Criteria Pollutant (tons/year) ^a					
	CO	NO _x	PM ₁₀	PM _{2.5}	SO ₂	VOCs
Direct Emissions						
Construction	1.84	0.17	8.02	0.01	0	0.56
Indirect Emissions						
Construction	5.65	0.25	0	0	0	0.25
Point Sources	0.05	0.24	0.01	0	0	0.0
Mobile	0.13	0.01	0	0	0	0.01
Total	7.67	0.67	8.03	0.01	0	0.82
<i>de minimis</i> thresholds ^c		50		100		50
Baltimore County ^d	172,147	28,453	12,266	4,002	28,297	21,530
Percent of ROI	0.01%	0.00%	0.07%	0.0%	0.0%	0.0%

Source: USEPA 2013a

CO = carbon monoxide; NO_x = nitrogen oxides; PM₁₀ and PM_{2.5} = particulate matter with diameter less than or equal to 10 and 2.5 microns, respectively; ROI = region of influence; SO_x = sulfur dioxide; VOC = volatile organic compound

a *De minimis* thresholds are shown only for marginal nonattainment 8-hour precursors (NO_x and VOCs).

Table 4-5 shows that emissions would not exceed Federal NAAQS as described as significant impacts under FAA guidelines. During any construction work, reasonable precaution would be taken to prevent particulate matter, such as fugitive dust, from becoming airborne; this may include the application of water to unpaved road surfaces.

In addition to criteria pollutants, implementation of the Preferred Alternative would also generate greenhouse gas emissions as a result of fossil fuel combustion. At this time, a threshold of significance has not been established for the emissions of GHGs, but the CEQ has released the *Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions*, which suggests that proposed actions that would reasonably emit 25,000 metric tons or more of carbon-dioxide-equivalent gases should be evaluated by quantitative and qualitative assessments. This is not a threshold of significance, but rather a minimum level that would require consideration in NEPA documentation.

Greenhouse gas emissions would not approach the limit of 25,000 metric tons under the Proposed Action.

Table 4-5. Proposed Action Emissions Compared to NAAQS

Criteria Pollutant	Averaging Time	NAAQS (ppm)	Calculated Concentration (ppm)
CO	1-Hour	35	<0.01
	8-Hour	9	<0.01
NO _x	1-Hour	0.1	<0.01
	Annual	0.053	<0.01
SO ₂	1-Hour	0.075	<0.01
	3-Hour	0.5	<0.01
	24-Hour	0.14	<0.01
	Annual	0.03	<0.01
PM ₁₀	24-Hour	150 µg/m ³	2,349 µg/m ³
PM _{2.5}	24-hour	35 µg/m ³	0 µg/m ³
	Annual	15 µg/m ³	0 µg/m ³

CO = carbon monoxide; NAAQS = National Ambient Air Quality Standards; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter; PM₁₀ = particulate matter less than or equal to 10 microns in diameter; ppm = parts per million; SO₂ = sulfur dioxide; µg/m³ = micrograms per cubic meter

There would be no significant impacts to local or regional air quality from activities at Martin State ANG associated with implementation of the Proposed Action.

4.1.3 NO ACTION ALTERNATIVE

Under the No Action Alternative there would be no change to the regional air quality as no new construction would take place over those construction activities identified in Section 2.4. No significant impacts result from the No Action Alternative.

4.2 BIOLOGICAL RESOURCES

4.2.1 SIGNIFICANCE CRITERIA

The biological resources analyzed for potential impacts, resulting from the implementation of the Proposed Action or No Action Alternative, include vegetation, and wildlife, threatened, endangered, and other sensitive species. A summary of significance thresholds for biological resources used as a baseline for analysis is described in Table 4-6. An impact would be considered significant if the implementation of the Proposed Action or No Action Alternative resulted in an exceedance of any thresholds described in Table 4-6.

Table 4-6. Summary of Significance Thresholds for Biological Resources

Standard Significance Threshold	FAA Significance Threshold
<ul style="list-style-type: none"> • Importance of the resource (legal, commercial, recreational, ecological, or scientific) • The rarity of a species or habitat regionally • The sensitivity of the resource to proposed activities • The proportion of the resource that would be affected relative to its occurrence in the region • The duration of the impact. 	<p>Using scientific literature and/or information from agencies on affected species, consider project effects on population dynamics, sustainability, reproduction rates, natural and artificial mortality (e.g., aircraft bird strikes), and the minimum population size needed to sustain an affected population.</p> <p>Additionally, for Federally listed species, when the U.S. Fish and Wildlife Service or the National Marine Fisheries Service determines a proposed action would likely jeopardize a species continued existence or adversely impact or destroy a species critical habitat.</p>

Source: FAA 2006

4.2.2 PROPOSED ACTION

The Proposed Action would not significantly impact biological resources. Potential impacts to vegetation, wildlife, and threatened and endangered and other sensitive species are detailed below.

Vegetation

There would be no significant impacts to vegetation under the Proposed Action. Construction activities would occur on developed property or on intensely developed areas within the CBCA. No sensitive habitats or refuges exist within the construction footprint and therefore would not be disturbed from activities under the Proposed Action. Forested and vegetated areas would be largely avoided by new building placement. However, replacement of permeable vegetative surfaces with impervious surfaces increases the potential for stormwater runoff to affect surface waters. As noted in Table 2-2, approximately 67 percent of the proposed impervious area is within the CBCA. Pursuant to requirements under the Maryland Forest Conservation Act, the 175 WG will coordinate with MDNR prior to initiating any construction; particularly for construction activities outside the CBCA to determine any additional applicable requirements.

Wildlife, Threatened, Endangered, and Other Sensitive Species

No significant impacts are expected to occur to wildlife, threatened, endangered, or other sensitive species under the Proposed Action. No Federally listed endangered or threatened species are known to exist on airport property or within a two-mile radius of the airport and no critical habitats have been designated in the vicinity of the Base. Impacts to migratory birds are prevented or minimized indirectly through the bird/wildlife aircraft strike hazard (BASH) program (MDANG 2003b) which provides guidance for ensuring the safety of aircraft and crewmembers by controlling conditions that may lead to bird and aircraft collisions. The BASH

program implements measures to limit the attractiveness of the airport to birds. Examples of preventive measures include habitat modification with BASH dispersal techniques to minimize the presence of prey or other wildlife species to provide for safer aircraft traffic control. In compliance with FAA's *Hazardous Wildlife Attractants on or Near Airports* (AC 150/5200-33B), the Proposed Action would not result in the creation of hazardous wildlife attractants.

Neither the Bald Eagle nor their nest would be directly affected by the Proposed Action; in addition all newly proposed construction areas are outside of recommended buffer areas surrounding Bald Eagle nests according to the National Bald Eagle Management Guidelines (USFWS 2007). However this species could experience temporary disturbance (e.g., noise) from nearby construction activity of the proposed CBRNE Building (Project #9 from the 2010 EA) located approximately 400 feet from a Bald Eagle nest and thereby management actions presented in the National Bald Eagle Management Guidelines would be applied (MDANG 2010, USFWS 2007).

Significance thresholds would not be exceeded (see Table 4-6) with the implementation of the Proposed Action due to the use of developed areas and compliance of management plans/guidelines (e.g., BASH Plan, National Bald Eagle Management Guidelines).

4.2.3 NO ACTION ALTERNATIVE

Under the No Action Alternative no new construction or demolition in addition to the 2010 EA would occur. However the 175 WG would continue to implement projects identified in the 2010 EA, and thus potential impacts to biological resources would be the same as described in the 2010 EA.

4.3 LAND USE

The methodology to assess impacts on individual land uses requires identifying those uses and determining the degree to which they would be affected by the Proposed Action and No Action Alternative.

4.3.1 SIGNIFICANCE CRITERIA

Significance of potential land use impacts is based on the level of land use sensitivity in areas affected by the Proposed Action or No Action Alternative. A significant impact would occur if implementation of the Proposed Action or No Action Alternative resulted in an exceedance of *any* of the thresholds described in Table 4-7.

Table 4-7. Summary of Significance Thresholds for Land Use

Standard Significance Threshold	FAA Significance Threshold
<ul style="list-style-type: none"> • Be inconsistent or in noncompliance with applicable land use plans or policies; • Preclude the viability of existing land use; • Preclude continued use or occupation of an area; • Be incompatible with adjacent or land uses in the vicinity to the extent that public health or safety is threatened; or • Conflict with airfield planning criteria established to ensure the safety and protection of human life and property. 	<p>When an action, compared to the No Action Alternative for the same time frame, would cause noise sensitive areas located at or above DNL 65 dB to experience a noise increase of at least DNL 1.5 dB. An increase from DNL 63.5 dB to DNL 65 dB is a significant impact. For NEPA purposes, those 3-dBA impacts do not cause significant adverse noise impacts below the DNL 65 dBA contour.</p>

Source: FAA 2006

DNL = day-night level; dB = decibels; dBA = decibels measured on the A-weighted scale; NEPA = National Environmental Policy Act

4.3.2 PROPOSED ACTION

Proposed construction activities would occur within the Base property and would have no adverse effects on surrounding land uses. The existing land use category for the proposed locations of all projects, except for two of the vehicle parking areas associated with Project #4, would change from open space to a mix of Command and Support, Aircraft Maintenance, and Industrial.

The proposed construction activities would result in beneficial impacts since they would serve to support the operational needs of the new Cyber/ISR mission, consolidate ongoing activities, improve functionality, and correct operational inefficiencies. Each construction project would also be consistent with MDANG planning policies and guidelines and long-range development plans. Under the Proposed Action, no noise sensitive areas would be adversely affected and no significant adverse land use impacts would occur.

4.3.3 NO ACTION ALTERNATIVE

Under the No Action Alternative, no new construction or demolition would take place over those construction activities identified in the 2010 EA, thus no change to land use previously analyzed in the 2010 EA would occur. However, existing space constraints and building deficiencies could compromise the 175 WG's ability to accomplish its mission.

4.4 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

4.4.1 SIGNIFICANCE CRITERIA

The analysis focused on how and to what degree the alternatives would affect socioeconomics resources and environmental justice and special risks to children. A significant impact would occur if implementation of the Proposed Action or alternative resulted in an exceedance of *any* of the thresholds described in Table 4-8.

Table 4-8. Summary of Significance Thresholds for Socioeconomics and Environmental Justice

Standard Significance Threshold	FAA Significance Threshold ^a
Socioeconomics	
When an action would cause: <ul style="list-style-type: none"> • Extensive relocation, but sufficient replacement housing is unavailable • Extensive relocation of community businesses that would cause severe economic hardship for affected communities • Disruption of local traffic patterns that substantially reduce the Levels of Service of roads serving the airport and its surrounding communities • A substantial loss in community tax base 	When an action would cause: <ul style="list-style-type: none"> • Extensive relocation, but sufficient replacement housing is unavailable • Extensive relocation of community businesses that would cause severe economic hardship for affected communities • Disruption of local traffic patterns that substantially reduce the Levels of Service of roads serving the airport and its surrounding communities • A substantial loss in community tax base
Environmental Justice and Special Risks to Children	
When an action would cause: <ul style="list-style-type: none"> • Disproportionately high and adverse human health or environmental effects on minority and low-income populations • Disproportionate health and safety risks to children 	When an action would cause: <ul style="list-style-type: none"> • Disproportionately high and adverse human health or environmental effects on minority and low-income populations • Disproportionate health and safety risks to children

FAA = Federal Aviation Administration

a. Source: FAA 2006

4.4.2 PROPOSED ACTION

Actions described under the Proposed Action would not be anticipated to exceed any thresholds described in Table 4-8 that would result in a significant impact to socioeconomics resources or result in a disproportionate impact to minority, low-income populations or pose a special risk to children. There would be minor and temporary beneficial impacts anticipated to socioeconomic resources due to the increase in the number of personnel at the 175 WG and due to construction activities.

4.4.2.1 Population and Housing

Under the Proposed Action, there would be an additional 269 personnel associated with the new Cyber/ISR mission. The personnel would be anticipated to be migrating to the area. Based on the personnel demographics of the current MDANG, approximately 55.2 percent of the incoming personnel would be anticipated to be accompanied by 2.5 dependents for a total increase in population of up to 520 persons to the ROI. This represents a 0.06 percent change from 2010 population levels.

Under the assumption that all 269 incoming personnel would require off base housing units, there could be a demand for 269 housing units in the community. Based on the vacancy rates of housing and rental units in Baltimore County as described in Section 3.4.2.1, *Population and Housing*, there would be sufficient housing available for the incoming personnel within the ROI.

4.4.2.2 Economic Activity

There would be a temporary and minor beneficial impact to the local community associated with the use of local labor and supplies during construction activities under the Proposed Action. Construction projects are anticipated to have a positive effect on sales volume, employment, and income in the ROI and would be distributed over the duration of the construction activities.

4.4.2.3 Education

As stated in Section 4.4.2.1, the addition of 269 personnel would be anticipated to result in a total population change of 520 persons to the ROI. The total change in population was based on the assumption that approximately 55.2 percent of the incoming personnel would be anticipated to be accompanied by 2.5 dependents. To determine the number of dependents that would be of school age, an additional assumption was made that each accompanied personnel had 1 spouse and 1.5 children. Therefore, to determine the number of school aged dependents, 55.2 percent of the 269 incoming personnel were then multiplied by 1.5 persons. Under these assumptions, approximately 223 dependents of school age would be anticipated to enroll in the county public school system. This represents a 0.2 percent change of the total student enrollment in Baltimore County Public Schools. School aged dependents would be anticipated to be of varying ages and would be assigned to a school in the attendance zone in which they live.

4.4.2.4 Environmental Justice and Special Risks to Children

Proposed construction activities would occur within the boundaries of the Martin State Airport and would not have the capacity to affect sensitive populations, such as children, minorities, or low-income communities, as identified in EOs 13045 and 12898.

4.4.3 NO ACTION ALTERNATIVE

Under the No Action Alternative, the 175 WG would maintain their existing facilities and would continue only with implementation of projects identified in the 2010 EA. Therefore, any additional temporary or minor beneficial impact associated with the use of local labor and supplies would not be realized. In addition, there would be no impact on area population or employment. There would also be no affect to sensitive populations, such as children, minorities, or low-income communities, as identified in EOs 13045 and 12898 under the No Action Alternative.

4.5 SOLID DEBRIS AND HAZARDOUS MATERIALS AND WASTES

4.5.1 SIGNIFICANCE CRITERIA

The analysis focused on how and to what degree the alternatives would affect hazardous materials usage/management and hazardous/solid waste generation and management. A significant impact would occur if implementation of the Proposed Action or alternative resulted in an exceedance of *any* of the thresholds described in Table 4-9.

Table 4-9. Summary of Significance Thresholds for Solid Debris and Hazardous Materials and Wastes

Standard Significance Threshold	FAA Significance Threshold ^a
<ul style="list-style-type: none"> • Potential for increased likelihood of an uncontrolled release of hazardous materials (e.g., from petroleum storage tanks) that could contaminate soil, water, or air. • Generation of contractor-generated hazardous/solid waste types or quantities that could not be accommodated by the current management system. • Disturbing the ground in an area with an existing ERP site identified as having contaminated soil or by causing damage to existing site remediation infrastructures. 	<ul style="list-style-type: none"> • Hazardous materials and wastes - When an action involves a property on or eligible for the National Priorities List. • Solid waste - None established.

FAA = Federal Aviation Administration

a. Source: FAA 2006

Thresholds are not expected to be exceeded nor are any adverse impacts anticipated. Contractor hazardous materials brought onsite is expected to be limited. Only minimal contractor-generated hazardous waste is expected to be generated (waste paint and solvent); this waste will be managed in accordance with the current system as will any contractor-generated solid waste. Additionally, no sites on or eligible for the National Priorities List are associated with the Proposed Action.

4.5.2 PROPOSED ACTION

Hazardous Materials

New buildings would be constructed utilizing normal construction methods, which would limit, to the extent possible, the use of hazardous materials. Petroleum products and other hazardous materials (e.g., paints and solvents) would be used during construction and renovation activities.

These materials would be stored in proper containers, employing secondary containment as necessary to prevent and limit accidental spills. All spills and accidental discharges of petroleum products, hazardous materials, or hazardous waste would be reported and mitigated.

The 175 WG has emergency response procedures and site-specific contingency plans for all hazardous materials locations. The Hazardous Waste Management Plan (MDANG 2012a), Hazardous Waste Contingency Plan (MDANG 2012c), and the Oil and Hazardous Substances Spill Prevention and Response Plan (MDANG 2013a) describe procedures and responsibilities for responding to a hazardous material spill or other incidents.

Hazardous materials also comprise POLs stored throughout the Base. There are no fuel storage tanks or other bulk POL containers associated with any projects identified as part of the Proposed Action. Project #3, Construct New Mobile Fuel Tanker Parking Area, will contain up to five R-11 mobile fuel tankers in the future; however, the area will be constructed with secondary containment and designed to contain any releases of petroleum. Addition of any transformers would be coordinated through Baltimore Gas and Electric, which owns and maintains the transformers.

Hazardous Wastes

The 175 WG would manage both hazardous and nonhazardous through the existing waste management system infrastructure. No hazardous waste SAPs are located within the impacted area of the nine projects. If the establishment of a new SAP becomes necessary, then personnel would notify the Environmental Management Office, who would ensure any new SAP would be properly managed by trained personnel.

Management of hazardous and nonhazardous wastes would be performed according to prescribed procedures already in place. Minimal hazardous waste, if any, in the form of waste paint and solvent, could be generated during building construction. No change to permits, hazardous waste generator status, or management would be required and no significant environmental impacts are anticipated from implementation of the Proposed Action.

ERP Sites

Project #4, Construct Vehicle Parking Areas, overlaps ERP Site 2, Leaking Heating Oil UST near Building 1080, and Site 4, Leaking Heating Oil UST near Building 1120 (Figure 4-1). No impacts would be anticipated from the presence of these ERP sites, as all ERP sites have been determined to require no further action and none have land-use restrictions in place (MDANG 2005). Regardless, construction activities located near the ERP site will be coordinated with the Environmental Management Office. In addition, should any unusual odor, soil, or groundwater coloring be encountered during development activities in any areas, construction will cease and the Environmental Management Office will be contacted immediately.

Solid Waste

Construction activities associated with the Proposed Action would result in the generation of solid wastes, including construction materials for buildings, concrete and asphalt rubble, and land-clearing debris. Sampling studies documented in Estimating 2003 Building-Related Construction and Demolition Amounts (USEPA 2009) document the following solid waste generation rates during nonresidential construction:

- Nonresidential construction:
[(4.34 pounds per square foot) × (square footage)] ÷ 2,000 pounds = construction waste
(in tons)

Estimates of construction generation rates from pavement construction were not available; therefore, the analyses assumed that pavement construction would generate 10 percent of construction debris generated during construction (i.e., 0.434 pounds per square foot). Quantities of construction debris associated with construction activities of the Proposed Action are shown in Table 4-10.

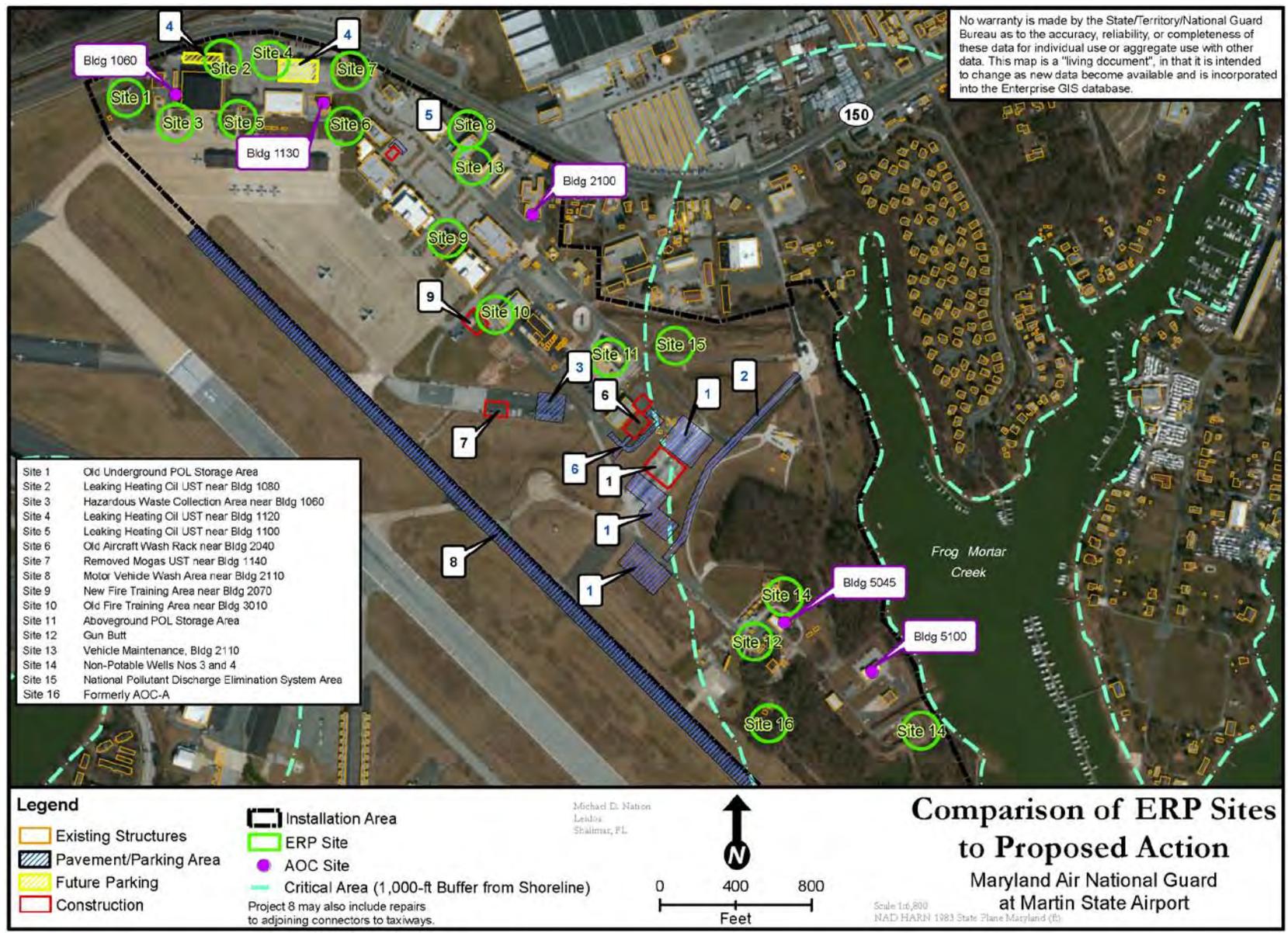


Figure 4-1. Comparison of ERP Sites to Proposed Action

Table 4-10. Construction Debris from Implementation of Proposed Action

Proposed Project	Pavement Construction (SF)	Construction Debris (tons)	Building Construction (SF)	Construction Debris (tons)	Total Debris (tons)
1. Construct new Cyber/ISR Facility	69,484	15.1	27,500 ^a	59.7	74.8
2. Expand Hercules Road	30,346	6.6	0	0.0	6.6
3. Construct new Mobile Fuel Tanker Parking Area	16,140	3.5	0	0.0	3.5
4. Construct vehicle parking areas	8,500	1.8	0	0.0	1.8
5. A-10 Flight Simulator Bldg. 2042	0	0.0	2,810 ^b	6.1	6.1
6. LRS Warehouse Facility Bldg. 4020	11,849	2.6	0 ^c	0.0	2.6
7. Repair A-10 Drop Tank Storage Area/Access Road and LAMS	0	0.0	0	0.0	0.0
8. Repair Taxiway Tango	436,050	94.6	0	0	94.6
9. Emergency Management Building/ Manager Storage Facility	6,650	1.4	0 ^d	0	1.4
Total (tons)					191.4

ISR = Intelligence, Surveillance, and Reconnaissance; LRS = Logistics Readiness Squadron; SCIF = Sensitive Compartmented Information Facility; SF = square feet

a. Entire building footprint will be over existing impervious surface.

b. Building would be constructed over existing pavement.

c. Out of 15,742 SF, 6,754 SF is over existing impervious surface. The building would be prefabricated.

d. 3,350 SF of 10,000 SF is over existing impervious surface. The two 5,000-SF buildings would be prefabricated.

Based on the most intense construction scenario, construction activities would generate approximately 190 tons of construction debris. Construction is designed and required to comply with Federal, state, and local statutes and regulations related to solid waste. It is not anticipated that land clearing and grading activities would generate a need for disposal of soil and woody waste. This is based upon the assumptions that soils generated would be used as fill during construction projects and woody wastes would be used by the wood or wood pulp industry or chipped and reused as mulch or compost. Therefore, these materials would not be expected to

impact solid waste resources. Other remaining construction debris and excess materials may be generated and require disposal.

Short-term impacts to waste disposal services are considered insignificant due to the availability of the nearby Days Cove and Honeygo Run landfills (both located in White Marsh). As of December 2011, these landfills had a combined capacity to accept an additional 5.5 million tons of waste (MDE 2012a). When possible other construction-related solid waste would be recycled to the greatest extent possible.

Construction activities would occur over multiple years, limiting the quantity of debris generated at any one time. Additionally, appropriate management of construction and land clearing debris, including recycling and reuse when possible, would limit any potential adverse impacts. Overall, sufficient landfill capacity exists to accommodate the additional solid waste generated as a result of construction activities.

4.5.3 NO ACTION ALTERNATIVE

Under the No Action Alternative none of the projects listed in Table 2-1 would occur, thus no significant adverse solid debris or hazardous materials or waste impacts would transpire; however, projects identified in the 2010 EA would still occur.

4.6 UTILITIES

This section discusses potential impacts to utilities, which include electricity, natural gas, water supply, and wastewater treatment serving the existing and proposed project areas. Issues evaluated in this section include the potential for the Proposed Action or No Action Alternative to exceed the utility capacity of a water, gas or electrical system and potential problems related to connecting to existing utilities during construction. Impacts to utilities include the potential for disruption or improvement of utility systems and infrastructure and changes in existing levels of utility usage. Effects may include disruption, degradation, or improvement of existing levels of service or potential change in demand for energy or water resources.

EO 13514, Federal Leadership in Environmental, Energy, and Economic Performance, sets numerous Federal energy requirements and goals that should be considered in the design, construction, and operation of the projects that are part of the Proposed Action. These include increasing alternative and renewable energy use, pursuing cost-effective, innovative strategies to minimize consumption of energy, water, and materials within existing building systems, and identifying alternatives to renovation that reduce existing asset deferred maintenance costs.

4.6.1 SIGNIFICANCE CRITERIA

A significant impact would occur if implementation of the Proposed Action or No Action Alternative resulted in an exceedance of *any* of the thresholds described in Table 4-11.

Table 4-11. Summary of Significance Thresholds for Utilities

Standard Significance Threshold	FAA Significance Threshold ^a
High-intensity regional or local impact of a long-term duration resulting from an increase in average and peak utility use and demand beyond the capacity of existing utility infrastructure. Requirements of the Proposed Action necessitate major system upgrades that are beyond those projected by the utility system in their capital improvement plans and are necessary to maintain the existing level of service.	None established.

a. Source: FAA 2006

4.6.2 PROPOSED ACTION

The Proposed Action would have minimal utility impacts and no adverse impacts would occur. Using existing consumption rates, electricity usage for newly constructed facilities would increase by 44,926 kWh per month (a 12 percent increase over current usage). Similarly, natural gas consumption would increase by 99.0 mcf per month (a 12 percent increase). However, the newly constructed facilities would be expected to operate using more energy efficient equipment. Additionally, because some existing buildings are being demolished as part of a separate action, the overall energy consumption associated with the Proposed Action would likely be less than estimated above. Electrical and natural gas connections would occur via existing supply lines and no significant adverse impacts would occur.

The Proposed Action would add 269 personnel to the Base, resulting in an additional 57,297 gallons of water usage per month (an 18 percent increase over current usage). Since new facilities would incorporate water-efficient and low-flow fixtures to conserve water, the overall water use would likely be less than estimated. Water and sewer lines would be extended to the new buildings as needed.

EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, sets numerous Federal energy requirements and goals that should be considered in the design, construction, and operation of the renovation projects that are part of the Proposed Action. Measures that would be incorporated into the design for the building projects to help meet the goals of EO 13514 include high-efficiency lighting upgrades; heating, ventilation, and air conditioning (HVAC) efficiency improvements; building automation and controls;

water-efficient and low-flow fixtures; weather sealing; and replacement of windows doors. Consequently, implementation of the Proposed Action would not be expected to have a significant impact on utilities.

4.6.3 NO ACTION ALTERNATIVE

Under the No Action Alternative, no new construction would occur, thus no change to utilities would occur.

4.7 WATER RESOURCES

4.7.1 SIGNIFICANCE CRITERIA

When land is developed, the hydrology, or the natural cycle of water, can be altered. Replacement of vegetation with an impervious surface, such as concrete, eliminates any potential for infiltration and also speeds up delivery of the water to nearby drainage areas. Impacts on hydrology can result from land clearing activities, disruption of the soil profile, loss of vegetation, introduction of pollutants, new impervious surfaces, and an increased rate or volume of runoff after major storm events. Minimization of soil erosion/stormwater runoff and the siting of facilities in relation to potential soil limitations are considered when evaluating impacts. Impacts are measured by the potential to endanger public health or safety by creating or worsening health hazards or violate laws or regulations adopted to protect or manage water resources. Generally, impacts can be avoided or minimized to a level of insignificance if proper construction techniques, erosion control measures, and structural engineering designs are incorporated into project development.

The analysis focused on how and to what degree the Proposed Action would affect water resources. A significant impact would occur if implementation of the Proposed Action resulted in an exceedance of any threshold described in Table 4-12.

Table 4-12. Significance Criteria for Water Resources

Standard Significance Threshold	FAA Significance Threshold
Coastal Zone	
When an action is not consistent with the requirements contained in the Coastal Zone Management Act or Maryland’s coastal zone management program.	None established.
Water Quality	
When an action would adversely affect water quality conditions or violate established laws or regulations that have been adopted to protect or manage water resources of an area.	When an action would not meet water quality standards. Potential difficulty in obtaining a permit or authorization may indicate a significant impact.

Source: FAA 2006

4.7.2 PROPOSED ACTION

4.7.2.1 Coastal Zone Consistency Determination

The MDANG is required to determine consistency with the Coastal Zone Management Act and Maryland's Coastal Zone Management Program through review of the Proposed Action and affected/unaffected Enforceable Coastal Policy and submit the determination to MDE. The Federal Coastal Consistency Determination follows the format included in the 2013 DoD MOU is included in Appendix B.

4.7.2.2 Soils – Sediment Potential

Projects #1 and #2 would include disruption of Mattapex-Urban land complex soils, and Projects #1, #3, and #6 would include disruption of Urban land. Since Projects #1 and #2 would all occur in areas noted as susceptible to wind and/or water erosion, which would necessitate the use of BMPs during soil disturbance activities. In addition, BMPs and design considerations developed to comply with various stormwater compliance requirements would incorporate these specific soil characteristics to minimize direct and cumulative erosion and sedimentation issues. Increased potential for erosion and sedimentation due to grading, removal of vegetation, and exposure of soil during construction is considered to have short-term, minor adverse effects. These impacts would be minimized by the appropriate use of BMPs for controlling runoff, erosion, and sedimentation. In addition, all proposed projects that include buildings would occur on soils with limitations that can be overcome or minimized by special planning, design, or installation. However, Project #2, which includes a roadway, would occur on soils that carry a very limited rating for local road and street construction and would require special design and/or major soil reclamation; soil strength testing is recommended prior to road construction.

4.7.2.3 Surface Water– Potential Receiving Waters

The proposed construction projects would not occur on or along the shoreline of the existing creek adjacent to the Base. No change in MDE classification of Frog Mortar Creek is anticipated as a result of the implementation of the Proposed Action; however, implementation of the Proposed Action would include ground-disturbing activities (e.g., grading and excavation) that could potentially increase runoff and sedimentation into Frog Mortar Creek. BMPs related to stormwater design are discussed in detail in Section 4.7.2.5.

4.7.2.4 Chesapeake Bay Critical Area (CBCA)

As detailed in Table 2-2, approximately 310,164 SF of new impervious surface area would occur within the CBCA (Projects #1, #2, #6 and #8). As identified in the 2010 EA, because the projects are situated within an IDA, the 175 WG would be required to maintain a 100-foot vegetative buffer landward from the mean high water line of tidal waters, or the edge of tidal wetlands and tributary streams; however, the new requirements for a 200-foot buffer for all new subdivisions or site plans within the Resource Conservation Area would not apply. None of the proposed construction is within 100 feet of the mean high water line, edge of tidal wetlands or tributary streams. In addition, as described in the 2010 EA, because the Proposed Action is classified as a redevelopment activity, the 175 WG would implement practices to reduce water quality impacts associated with stormwater runoff to a level at least 10 percent below the load generated by the same site prior to development for construction occurring within the CBCA. Guidance for application is provided in Appendix D.4 of the Maryland Stormwater Design Manual, Volumes I and II (October 2000, Revised May 2009); as under the 2010 EA, the 175 WG would comply with the application procedures and requirements outline in the guidance.

The draft stormwater guidance manual “Environmental Site Design for the Maryland Critical Area” (24 March 2011) is intended to replace the Appendix D.4 guidance. The draft guidance includes new phosphorous removal rates and in some cases, the need to meet criteria that are more stringent than the 2009 revision of the Maryland Stormwater Design Manual. In addition, the draft guidance recognizes that infiltration, dry swales and regular bioretention areas are acceptable ESD in the critical area and green roofs and permeable pavements are treated as micro-ESD practices. The accompanying spreadsheet tool to the draft guidance enables designers to find the most cost-effective combination of ESD practices that comply with both Critical Area requirements and Maryland Stormwater policies. The draft guidance also identifies the potential for a consolidated review by a single agency for stormwater compliance. Further requirements specific to stormwater management are discussed below.

4.7.2.5 Stormwater

As with 2010 EA, the Proposed Action is subject to ESD requirements which were stated in the Stormwater Management Act of 2007, and became effective May 2009. The Proposed Action is categorized as a “redevelopment” based on the MDE definition as “*any construction, alteration, or improvement performed on sites where existing land use is commercial, industrial, institutional, or multi-family residential and the existing site impervious area exceeds 40 percent.*” MDE stormwater regulations for redevelopment projects require a reduction in impervious surface, implementation of ESD to the maximum extent practical such that 1 inch of rainfall is treated, or a combination of these practices over at least 50 percent of the existing

impervious area (MDE 2010c). Projects #4, #5, #7, and #8 would disturb less than 5,000 SF of land and are therefore exempt from this requirement.

As in the 2010 EA, since the Proposed Action involves an increase in construction, the 175 WG would not be able to employ a net reduction in impervious surface. Instead, the 175 WG would comply by implementing ESD over at least 50 percent of the existing impervious area such that one inch of rainfall would be treated, or would employ one or more of several other alternative options per the March 2010 Guidance for Implementation of Local Stormwater Management Programs (MDE 2010c). These options described in the March 2010 Guidance for Implementation of Local Stormwater Management Programs are a combination of environmental site design and on- or off-site structural BMPs, or any of the following:

- Other types of retrofitting (BMP upgrades, filtering practices, implementing ESD off-site)
- Participation in a stream restoration project
- Pollution trading with another entity
- Watershed Management Plans
- Payment of a fee-in-lieu
- Partial Waiver of the treatment requirement to the extent that ESD is not practicable

The Guidance for Implementation of Local Stormwater Management Programs (MDE 2010c) states “the determination of what alternative stormwater management measures will be available may be made by the local government at the appropriate point in the development review process.” The 175 WG is required to submit phased stormwater management plans/ erosion and sediment control plans, which address concept, site development, and final stormwater manager, to MDE for review and approval. Specific plan content, inspection and maintenance requirements are detailed in the Maryland Stormwater Management Guidelines for State and Federal Projects (April 15, 2010). The 175 WG may opt to develop an *Institutional Management Plan* for the purpose of implementing stormwater management practices to address existing and future development within the contiguous land of the Base; details on the specific requirements are located in Section 3.10 of the Maryland Stormwater Management Guidelines for State and Federal Projects (April 15, 2010).

For construction activities that disturb one or more acres (Projects #1 and #2), the 175 WG would file a Notice of Intent to obtain coverage under the state’s NPDES General Permit for Stormwater Associated with Construction Activity, Permit Number 14GP, effective 1 January 2014 through 31 December 2018, prior to implementation of individual construction projects. The permit requires an approved Soil Erosion and Sediment Control plan, prior to soil disturbance. The General Permit requires that permittees obtain approval for the Stormwater

Management Plan prior to beginning soil disturbance. The 2010 EA projects that have not been completed and would disturb one or more acres would be subject to the NPDES General Permit Number 14GP. As in the 2010 EA, potential impacts from increased runoff would be minimized by implementing BMPs during and after construction. Such BMPs would include the use of well-maintained silt fences or straw wattles, minimizing surficial area disturbed, stabilization of cut/fill slopes, minimization of earth-moving activities during wet weather, covering of soil stockpiles, use of secondary containment for the temporary storage of hazardous liquids, and establishment of buffer areas near intermittent streams, as appropriate. Following construction, disturbed areas not covered with impervious surfaces would be reestablished with appropriate vegetation and native seed mixtures, and managed to minimize future erosion potential. Therefore, it is anticipated that there will be minimal impacts to regulated drainage channels or other surface water bodies as a result of the Proposed Action.

The EISA Section 438 requirements as incorporated in UFC 3-210-10 were not applicable at the time of the 2010 EA. However, because this requirement now applies, those 2010 EA projects with gross construction footprints greater than 5,000 SF, in addition to Projects #1, #2, #3, #6, and #9, would be subject to EISA Section 438 requirements; the LID integrated management practices of UFC 3-210-10 would be implemented. Practices such as bioretention areas, permeable pavements, cisterns/recycling, or green roofs would be utilized in the project design to the extent practical and used in combination with ESD practices; the spreadsheet tool mentioned previously could be used to determine the most cost-effective combination of practices.

4.7.3 NO ACTION ALTERNATIVE

Under the No Action Alternative, the water resource impacts would be limited to those identified in the 2010 EA. In addition, EISA Section 438 requirements would apply to the gross construction footprints of projects in the 2010 EA. Potential stormwater runoff associated with 2010 EA construction would require coverage under the new NPDES General Permit for Stormwater Associated with Construction Activity. Coordination with the Critical Area Commission and submission of the Coastal Consistency Determination would not be required.

5. CUMULATIVE IMPACTS

Cumulative impacts to environmental resources result from incremental effects of proposed actions when combined with other past, present, and reasonably foreseeable future projects in the ROI. Cumulative impacts can result from individually minor but collectively substantial actions undertaken over a period of time by various agencies (Federal, state, and local) or individuals. In accordance with NEPA, a discussion of cumulative impacts resulting from projects that are proposed, or anticipated over the foreseeable future, is required.

5.1 PAST, PRESENT, AND REASONABLY FORESEEABLE ACTIONS IN THE ROI

Completed, ongoing, and planned projects within the next five years at the Martin State Airport and within a one-mile radius of the property were reviewed for potential cumulative impacts. Martin State Airport and their tenants update facilities on a continual basis, as necessary. While it is not practical to catalog all minor projects that could occur over the short-term, a list of major projects in the ROI has been analyzed for the potential to create cumulative environmental impacts. Short- and long-term planning efforts at the 175 WG and Martin State Airport include actions described within this EA, as well as several others that are either ongoing or planned over the short-term. Any other improvements at Martin State Airport would be subject to separate environmental review as applicable.

As noted earlier in this EA, following publication of the 2010 EA, the U.S. Air Force decided to replace the C-27J mission with a Cyber/ISR mission at the 175 WG and as a result, only the following projects originally proposed in the 2010 EA are still planned:

- Project 1: Gate House and Vehicle Inspection (completed)
- Project 2: Lynbrook Road Improvement
- Project 3: Operations and Medical Training Building
- Project 4: Building 1080
- Project 5: Munitions Storage Area Parking Area and Walkway Improvement
- Project 6: Security Forces Facility
- Project 7: Dining Hall
- Project 8: Base Supply Warehouse
- Project 9: Chemical, Biological, Radiological, Nuclear, and Explosives Classroom and Storage
- Project 10: A-10 Fuel Tank Containment Area

MAA is concurrently completing an EA for projects projected after 2015; no projects have been completed at the Martin State Airport since the 2010 EA. The following projects are planned as phase I improvements in the ongoing MAA EA (Bowie 2013):

1. Runway 15/33 Improvements:

- a) The existing pavement is 8,100 feet long by 180 feet wide, with 6996 feet marked, lighted and published as runway available for civil aircraft use. The full 8,100 feet of pavement is available for military aircraft landing on Runway 33 and taking off on Runway 15. This project will rehabilitate the pavement and move the runway ends to result in approximately 7,430 feet of runway available for civil aircraft use. There is no plan to change the military runway use.
- b) Remove on-airport property vegetative obstructions and where feasible, remove/lower manmade objects to clear Part 77 (7:1) transitional surfaces.

2. Runway 15 Modifications:

- a) Relocate existing Runway 15 end approximately 820 feet from the existing landing threshold and remark pavement.
- b) Displace the Runway 15 landing threshold by approximately 225 feet from the proposed runway end and remark pavement.
- c) Remove on-airport property vegetative obstructions and where feasible, remove/lower manmade objects to clear the Part 77 (34:1) approach surface; and remove off-airport property vegetative obstructions to clear the 20:1 threshold siting surface (TSS) and the 18:1 departure obstacle clearance surface. Any tree replacement will be completed with low growth trees.
- d) Lower the AMTRAK catenary line/poles to the lowest level possible, approximately 30-feet above ground level to clear the 20:1 approach TSS.
- e) On off-airport property (south of AMTRAK), remove or lower all other nonvegetative obstructions to be clear of the 20:1 approach TSS.
- f) Relocate or lower street lights and signs as specified in the ALP to clear Part 77 (34:1) where possible, and if unachievable, lower to clear the 20:1 approach TSS.
- g) Construct new blast pad.

3. Runway 33 Modifications:

- a) Relocate the Runway 33 end approximately 380 feet and remark pavement.
- b) Displace the Runway 33 landing threshold by approximately 770 feet from the existing runway end and remark pavement.
- c) Remove on-airport property vegetative obstructions and where feasible, remove/lower manmade objects to clear the Part 77 (50:1) approach surface; and remove off-airport property vegetative/nonvegetative obstructions and restrict the heights of boats in the Frog Mortar Creek channel in the Runway 33 approach to clear the 34:1 TSS, and to clear the glide slope qualification surface (28.6:1) to maintain the existing Instrument Landing System. Any tree replacement will be completed with low growth trees.
- d) Construct new blast pad.

4. Taxiway Improvements

- a) Extend Taxiway F to the approach end of Runway 15.
- b) Add connecting Taxiways C and H.
- c) Remove pavement east of Runway 15/33 (Taxiway D) and west of Runway 15/33 (northernmost aircraft tie-down area, Taxiways B, C and S).
- d) Pave existing and future shoulders to meet Group III requirements per FAA AC 150/5300-13 (change 18).
- e) Relocate Taxiway A to align with the relocated Runway 15 End.
- f) Add new Taxiway from the extended parallel Taxiway F to the existing corporate hangars in the terminal area.
- g) Relocate Taxiway E to align with the relocated Runway 33 End.
- h) Add new short taxiway segments to provide access to the Strawberry Point Complex.
- i) Remove pavement associated with the elimination of aligned taxiways at the ends of Runway 15 and 33.

5. NAVAIDS

- a) Relocate Runway 33 glide slope outside of the runway safety area, runway object free area and taxiway object free area.
- b) Relocate Runway 15 localizer outside of the runway safety area and runway object free area so as to not interfere with the relocated Runway 33 glide slope recognizing that the localizer may be sited in the water on a raised platform to avoid jet blast operating on the entrance taxiway to Runway 33. The associated Localizer Critical Area will require grading/fill to meet clearance standards and signal requirements.
- c) Install medium intensity approach light system off the Runway 33 end.
- d) Relocate the Automated Weather Observation System and remove trees within a 500-foot radius.
- e) Relocate the Pulse Light Approach Slope Indicator for Runway 15 and 33 ends.
- f) Relocate the anemometer due to the extension of Taxiway F.
- g) Relocate runway lighting to accommodate the changes to the Runway 15 and 33 ends.
- h) Relocate the helipad to the southwest end of the airfield on the existing General Aviation apron.
- i) Relocation windsocks for Runway 15 and Runway 33.
- j) Relocate Runway End Identifier Lights for Runway 15 and 33 ends.

6. General Aviation Facilities

- a) Demolish existing pavement and remove/relocate existing t-hangars from the midfield to support future development (described below):
- b) Develop future corporate hangars, Fixed Base Operator, associated apron, and connector taxi lane.
- c) Relocate/reconstruct existing T-hangars in the mid-field area to the southwestern portion of the corporate development area.
- d) Remove existing fuel tanks and demolish existing hangars in the Strawberry Point Complex to accommodate future t-hangars.
- e) Develop additional T-hangars, associated apron and corporate aircraft storage area.

7. Support Facilities

- a) Replace Airport Traffic Control Tower east of Taxiway T.
- b) Relocate existing airfield lighting vault 300 feet south to accommodate future taxi lane.

8. Landside Facilities/Land Use

- a) Reconfigure existing midfield access road, and establish ingress/egress and automobile parking to support future corporate and general aviation facilities.
- b) Add parking to accommodate existing hangar buildings 1-3.
- c) Relocate and add sections of security/perimeter fencing.
- d) Acquire Runway 15 Runway Protection Zone property interest.
- e) Acquire Off-Airport avigation easements for obstruction removal.

The Baltimore County Office of Planning developed a Master Plan in 2010 where the Martin State Airport is defined as part of the Proposed Middle River Redevelopment Area. The Master Plan identifies as actions associated with the Martin State Airport area (Baltimore County 2010):

- Promote a mixed use, transit-oriented development surrounding a train station stop.
- Support the State and County study regarding the expansion of the existing Maryland Area Regional Commuter (MARC) station to improve use of, and access to rail services.

In the 2013 Baltimore County priority project letter to the Maryland Department of Transportation, the County promotes the relocation of the existing MARC train station from the south side of MD 43 to the north side at the former Federal depot site and the use of the south side as the new location for the rail repair facility (Baltimore County 2013). Funding has not been obligated for this effort.

Finally, as mentioned earlier in this EA, Lockheed Martin Corporation proposed a groundwater Interim Remedial Action treatment system to intercept and treat a plume of volatile organic compound – impacted groundwater associated with the former Dump Road Area landfill at the Martin State Airport; the goal of the system is to provide containment and prevent the migration of impacted groundwater into Frog Mortar Creek. The proposed system includes extraction of groundwater, *ex situ* treatment, reinjection of treated groundwater in high concentration areas, discharge of treated water to the publicly owned treatment works or to surface water, monitoring, and land use controls (Lockheed Martin 2013b). The proposed location for the treatment system is adjacent to the southern end of the 175 WG. Until the system is approved and finalized, surface water monitoring will continue in Frog Mortar Creek.

5.1.1 AIR QUALITY

Baltimore County is in serious nonattainment for 8-hour ozone and nonattainment for PM_{2.5}. While the individual pollutant emissions resulting from the Proposed Action would not exceed one percent of the total Baltimore County emissions for each corresponding pollutant, the emissions of the cumulative actions would increase the emission potential for all criteria pollutants. In addition, greenhouse gas emissions would not be expected to approach the limit of 25,000 metric tons. The combustive and fugitive dust emissions typically associated with construction, renovation, and demolition activities would contribute localized, short-term, elevated air pollutant concentrations, and be distributed over several years but would not result in any long-term impacts to the air quality in the region.

5.1.2 BIOLOGICAL RESOURCES

The majority of projects would occur within developed areas. BASH management at the airport minimizes the presence of prey or other wildlife species to provide safer aircraft traffic control. No cumulative impacts to biological resources are anticipated.

5.1.3 LAND USE

While none of the 175 WG would extend beyond the Base boundary, the Martin State Airport proposes to remove off-airport property vegetative/nonvegetative obstructions. The vegetative removal would be a short-term impact as Martin State Airport intends to replace the removed vegetation with low growth and therefore, long-term impacts to land use would not result.

The Lockheed Martin Corporation remedial action would result in land use controls in the area. Imposing land use controls would remove the area from potential development; however, the remediation is not anticipated to impose significant impacts on land use development.

5.1.4 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

Construction activities at Martin State Airport would have minor and temporary beneficial impacts to the community from the use of local labor and supplies. These benefits would last only for the duration of the activity. Although the total expenditures on military construction has declined slightly over the past couple years, it would be anticipated that a similar amount of military construction would continue over future years. The cumulative impacts of continuous short-term military construction expenditures when combined with the construction from the Martin State Airport projects would have a beneficial impact on socioeconomic resources. Construction, renovation, and demolition activities often are required to upgrade facilities with newer safety requirements and regulations which could also benefit environmental justice populations and children.

5.1.5 SOLID DEBRIS AND HAZARDOUS MATERIALS AND WASTES

There is a potential for cumulative impacts resulting from the combined infrastructure improvements associated with the airport and the Proposed Action. All construction program actions would use hazardous materials and generate debris through various stages of construction. As discussed in Chapter 4, construction activities would occur over multiple years, limiting the quantity of contractor-required hazardous materials on-site and debris and/or wastes generated at any one time. Additionally, appropriate management of construction and land clearing debris, including recycling and reuse when possible, would limit any potential adverse impacts.

5.1.6 UTILITIES

While the proposed construction projects would have cumulative impacts on utilities, there is no indication that the local utilities infrastructure would not be able to handle the changes in utilization.

In addition, several of the cumulative action projects include impacts to vehicle transportation; however, only the projects from the 2010 EA would occur within and/or adjacent to the boundary of the 175 WG. The cumulative impacts would be positive by improving vehicle traffic flow into and within the Base while providing sufficient vehicle parking throughout the site.

5.1.7 WATER RESOURCES

All actions would be subject to Coastal Zone Consistency Determinations.

Several of the planned activities would occur within the CBCA and as result be subject to the specific critical area ESD requirements. For the construction activities outside the CBCA, appropriate stormwater design and permitting would occur.

The Lockheed Martin Corporation remedial action involves short-term monitoring and long-term cleanup of groundwater/surface water adjacent to the airport.

5.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

NEPA CEQ regulations require environmental analyses to identify “...any irreversible and irretrievable commitments of resources that would be involved in the Proposed Action should it be implemented” (40 CFR Section 1502.16). Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects the uses of these resources have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame. Building construction material such as gravel and gasoline usage for construction equipment would constitute the consumption of nonrenewable resources. The Proposed Action would not have irreversible impacts because future options for using these project locations would remain possible. The sites could be used for alternative uses in the future. No loss of future options would occur as a result of the Proposed Action. The primary irretrievable commitment of resources under the Proposed Action would involve the use of energy, labor, materials and funds. Irretrievable impacts would occur as a result of construction, facility operation, and maintenance activities.

Due to the temporary nature of the Proposed Action, implementation of the Proposed Action or the No Action Alternative would not result in an irreversible and/or irretrievable commitment of resources.

6. SPECIAL OPERATING PROCEDURES

This section summarizes special operating procedures and mitigation associated with this EA. *Special operating procedures* are defined as measures that would be implemented to address minor potential environmental impacts associated with implementation of the Proposed Action.

Additionally, the following special procedures would be implemented as part of the Proposed Action.

6.1 SPECIAL OPERATING PROCEDURES

6.1.1 SOLID DEBRIS AND HAZARDOUS MATERIALS AND WASTES

- Hazardous materials associated with construction would be consistent with existing operations; however, hazardous materials not currently in the pharmacy inventory would need to be approved via an existing process to ensure that they would not pose undue health or environmental hazards before they could be used.
- Changes in the overall quantity of hazardous materials used/stored on the Base would be documented and reported to state and local emergency planning committees/local fire departments using the annual Tier II forms and/or Form R, as required.
- The 175 WG would establish new SAPs at hazardous waste generation locations, if necessary, and personnel managing these locations would be properly trained in waste management.

Management of solid debris and hazardous materials and wastes would be performed according to existing procedures at the 175 WG, including those prescribed in the ISWMP, which contains guidance for managing municipal solid waste, munitions-related waste, compost materials, recycling, construction and demolition debris, and industrial solid waste (U.S. Air Force 2013). No change to permits, hazardous waste generator status, or management would be required.

6.1.2 WATER RESOURCES

- Construction BMPs would be employed during construction activities to minimize soil movement, stabilize runoff, and generally control sedimentation. These BMPs would include, but not be limited to: the use of silt fences, covering of soil stockpiles, use of secondary containment for the temporary storage of hazardous liquids, and establishment of buffer areas near intermittent streams, as appropriate.
- The 175 WG would obtain any required permits, approvals, or certifications prior to implementing construction or demolition activities.

- The 175 WG would implement negotiated procedures for the 10 percent rule for pollutant removal (i.e., on-site planting or Critical Area enhancement).
- The 175 WG would file a Notice of Intent with MDE to obtain coverage under the NPDES General Permit for Stormwater Associated with Construction Activity, Permit Number 14GP, effective 1 January 2014 through 31 December 2018, prior to implementation of individual construction projects where one or more acres would be disturbed. Construction activities covered under the current General Permit (09GP) that will continue earth disturbance after 31 December 2013, must obtain coverage under the new General Permit.
- Project site design options would prioritize LID integrated management practices of UFC 3-210-10 that are proven within the regional area and have the greatest cost benefit/lowest lifecycle costs while maintaining predevelopment hydrology and preventing any net increase in stormwater runoff.
- Strength testing of soils in the area surrounding Project #2 is recommended due to the *very limited rating* for local road and street construction.

6.2 MITIGATIONS

No mitigations would be required to preclude the Proposed Actions from resulting in significant impacts.

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8. PERSONS AND AGENCIES CONTACTED

Robin Bowie, Maryland Aviation Administration

Matt Stover, MDE, Water Quality

James Carroll, MDE, Land Restoration Program

Elder Ghigiarelli, Jr., MDE, Wetlands and Waterways Program

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9. LIST OF PREPARERS

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B.S., Aerospace Engineering

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Years of Experience: 23

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M.A. Economics

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B.S. Biology, 2001

Years of Experience: 11

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Appendix A

**INTERAGENCY AND INTERGOVERNMENTAL
COORDINATION FOR ENVIRONMENTAL PLANNING
(IICEP), AGENCY CORRESPONDENCE, AND PUBLIC
INVOLVEMENT**

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**IICEP COORDINATION LIST FOR PROPOSED CONSTRUCTION PROGRAM
AT THE 175TH WING
MARYLAND AIR NATIONAL GUARD**

Maryland Department of the Environment
Attn: Mr. Elder Ghigiarelli, Jr.
Wetlands and Waterways Program
1800 Washington Boulevard
Baltimore, MD 21240

Maryland Historical Trust
100 Community Place
Crownsville, MD 21032-2023

Maryland Department of Transportation
Maryland Aviation Administration
P.O. Box 8766
BWI Airport, MD 21202

Martin State Airport
Airport Manager
601 Wilson Point Road
Baltimore, MD 21220

Maryland Office of Planning
Clearinghouse and Plan Review Unit
Room 1104
301 West Preston Street
Baltimore, MD 21201-2305

Baltimore County Planning Department
Director of Planning
401 Bosley Avenue
Towson, MD 21204

Baltimore County Department of Economic
Development
Attn: Sharon Klots
400 Washington Avenue
Towson, MD 21204

U.S. Department of the Interior
1849 C Street N.W., Room 2340
Washington, DC 20240

U.S. Fish and Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401

U.S. Environmental Protection Agency
Region III – Environmental Services
Division
1650 Arch Street
Philadelphia, PA 19103-2029

Maryland Department of Natural Resources
Tawes State Office Building
580 Taylor Avenue
Annapolis, MD 21401

U.S. Army Corps of Engineers
Baltimore District
P.O. Box 1715
Baltimore, MD 21203-1715

Department of Transportation
Federal Aviation Administration
Washington Airports District Office
ATTN: Mr. Marcus Brundage
23723 Air Freight Lane, Suite 210
Dulles, Virginia 20166

Baltimore County Historical Trust
P.O. Box 10067
Towson, MD 21285

Maryland Mass Transit Administration
William Donald Schaefer Tower
6 Saint Paul Street
Baltimore, MD 21202-1614

Maryland Commission on Indian Affairs
301 West Preston Street, Suite 1500
Baltimore, Maryland 21201

Critical Area Commission for the
Chesapeake and Atlantic Coastal Bays
1804 West St., Suite 100
Annapolis, MD 21401

SAMPLE IICEP LETTER

3 April 2014

«Title» «FirstName» «LastName»
«JobTitle»
«Address1»
«Address2»
«City», «State» «PostalCode»

Dear «Title» «LastName»

The National Guard Bureau (NGB) has prepared a draft Environmental Assessment (EA) and draft Finding of No Significant Impact (FONSI) for the proposed construction program at the 175th Wing (175 AW). The purpose of the Proposed Action is to provide the 175 WG with properly sized and configured facilities that are required to effectively accomplish its mission and to replace outdated facilities and provide security assets. The draft EA and draft FONSI are provided for your review and comment (Attachment 1).

The environmental analysis for the Proposed Action is being conducted by the NGB in accordance with the Council on Environmental Quality guidelines pursuant to the National Environmental Policy Act of 1969. In accordance with Executive Order 12372, *Intergovernmental Review of Federal Programs*, we request your participation by reviewing the attached draft EA, and solicit your comments concerning the proposal and any potential environmental consequences of the action. We also request information regarding other recently completed, ongoing, or proposed projects in the vicinity that create cumulative impacts in association with the Proposed Action. Please provide any comments you may have within 30 days of receipt of this letter. Further, if upon completion of the environmental impact analysis process it is determined that a FONSI is appropriate, a FONSI will be signed. Please indicate in writing if you wish to receive the final EA and/or signed FONSI.

Please forward your written comments to NGB, Asset Management Division, Attn: Krystle McClain, NGB/A7AM, Shepperd Hall, 3501 Fetchet Ave, Joint Base Andrews, Maryland 20762-5157, or fax to (301) 836-7427, or email to krystle.mcclain@ang.af.mil. Thank you for your assistance.

Sincerely

Krystle McClain
Air National Guard, National Guard Bureau,
(NGB/A7AM), Asset Management
Division, Plans and Requirements Branch

Attachment: *Environmental Assessment (EA) for Proposed Construction Program at the 175th Wing (175 WG) and Draft FONSI*

AGENCY COMMUNICATION LETTERS



Sustain  — Attain 

Maryland Department of Planning
Maryland Historical Trust

September 17, 2014

Krystle McClain, ME, EIT
NEPA Program Manager
Air National Guard, National Guard Bureau
NBG/A7AM, Shepperd Hall
Asset Management Division, Plans and Requirements Branch
3501 Fetchet Avenue
Joint Base Andrews, Maryland 20762-5157

Re: Proposed Construction Program at the 175th Wing
Martin State Airport Air National Guard Base
Baltimore County, Maryland
Section 106 Review – National Guard Bureau (NGB)

Dear Ms. McClain:

Thank you for your recent letter, dated and received by the Maryland Historical Trust (Trust) on July 10, 2014, initiating consultation regarding the above-referenced construction program. The Trust, Maryland's State Historic Preservation Office, reviewed the proposed undertakings to assess their effects on historic properties, pursuant to Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. We offer the following comments to conclude the Section 106 consultation.

Project Description: Based on the information presented in your submittal, we understand that the National Guard Bureau (NGB) proposes to implement a construction program at the 175th Wing located at the Martin State Airport located in Middle River, Maryland. The program encompasses various projects related to mission requirements including construction of new facilities, renovation, and demolition. Planned actions include the following nine projects:

1. Construct new Cyber/Intelligence Surveillance and Reconnaissance Facility (ISR) [MHT Log #201403620];
2. Expand Hercules Road [MHT Log #201403621];
3. Construct new Mobile Fuel Tanker Parking Area [MHT Log #201403622];;
4. Construct Vehicle Parking Areas, includes demolition of Buildings 1080 and 1120 [MHT Log #201403623];
5. Construct A-10 Flight Simulator, Building 2042 [MHT Log #201403624];
6. Construct Logistics Readiness Squadron (LRS) Warehouse, Building 4020 [MHT Log #201403625];
7. Repair A-10 Drop Tank Storage Area/Access Road and LAMS (Large Area Maintenance Shelter) Facility [MHT Log #201403626];
8. Repair Taxiway Tango [MHT Log #201403627];
9. Emergency Management/Building Manager Storage Facility (EM/BM Storage) [MHT Log #201403628].

Historic Built Environment: As noted in the submittal, the program is located within the Martin State Airport. The Glen L. Martin Airport (MIHP #BA-2081) was determined eligible for inclusion in the National Register of Historic Places in 1999. This historic district is significant for many reasons including: its role in war production, flight testing, and design during World War II, its association with aviation pioneer Glenn L. Martin, and finally for its architectural significance as an important example of the work of Albert Kahn and his design firm. Due to the more recent dates of construction for the National Guard Buildings, they are considered non-contributing resources to the historic district.

Marlin O'Malley, Governor
Anthony G. Brown, Lt. Governor

Richard Eberhart Hall, AICP, Secretary
Amanda Siakem Conn, Esq., Deputy Secretary

Maryland Historical Trust - 100 Community Place - Crownsville - Maryland - 21032
Tel: 410.514.7600 - Toll Free: 1 800 756 0119 - TTY users: Maryland Relay - MHT.Maryland.gov

Krystle McClain
Proposed Construction Program at the 175th Wing
Martin State Airport Air National Guard Base
September 17, 2014
Page 2 of 2

Archeology: Prior archeological investigations (Goodwin et al. 2007) have examined portions of Martin State Airport, including much of the current project areas. Although there are several inventoried archeological sites located within the airport property, the present program areas do not contain any known archeological resources. Given the extent of prior survey coverage as well as disturbances within the project areas, it is unlikely that the actions will have an effect on National Register eligible archeological properties. Thus, it is our opinion that archeological investigations are not warranted for these projects.

Section 106 Review: Based on the information provided, we concur with the NGB that the nine actions listed in the project description will have no adverse effect on historic properties.

If you have questions or require further assistance, please contact Amanda Apple (for historic built environment) at 410-514-7630 / amanda.apple@maryland.gov or me at 410-514-7631 / beth.cole@maryland.gov. Thank you for providing us this opportunity to comment.

Sincerely,



Amanda R. Apple
Preservation Officer, Project Review and Compliance
Maryland Historical Trust

EJC/ARA/ 201403620-3628

cc: Robin Bowie (MAA)



Maryland Department of Planning

Sustainable Attainable

April 4, 2014

Ms. Krystle McClain
Asset Management Division
The National Guard Bureau
NGB/A7AM, Shepperd Hall
3501 Fetchet Avenue
Joint Base Andrews, MD 20762-5157

STATE CLEARINGHOUSE REVIEW PROCESS

State Application Identifier: MD20140404-0219

Reply Due Date: 04/29/2014

Project Description: Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI): Proposed Construction Program at the 175th Wing (175 AW) Martin State Airport, Maryland Air National Guard Base, Middle River

Project Location: County(ies) of Baltimore

Clearinghouse Contact: Nasrin Rahman

Dear Ms. McClain:

Thank you for submitting your project for intergovernmental review. Your participation in the Maryland Intergovernmental Review and Coordination (MIRC) process helps to ensure that your project will be consistent with the plans, programs, and objectives of State agencies and local governments.

We have forwarded your project to the following agencies and/or jurisdictions for their review and comments: the Maryland Department(s) of the Environment, Natural Resources, Transportation, Baltimore County and the Maryland Department of Planning, including the Maryland Historical Trust. A composite review and recommendation letter will be sent to you by the reply due date. Your project has been assigned a unique State Application Identifier that you should use on all documents and correspondence.

Please be assured that we will expeditiously process your project. The issues resolved through the MIRC process enhance the opportunities for project funding and minimize delays during project implementation.

If you need assistance or have questions, contact the State Clearinghouse staff noted above at 410-767-4490 or through e-mail at nasrin.rahman@maryland.gov. Thank you for your cooperation with the MIRC process.

Sincerely,

Linda C. Janey, J.D., Assistant Secretary

P.S. Great News!! Your project may be eligible to be "FastTracked" through the State permitting processes. For more information, go to: <http://easy.maryland.gov/wordpress/track/>.

LCJ:NR
14-0219_NRR.NEW.doc

Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor

Richard Eberhart Hall, AICP, Secretary
Amanda Stakem Conn, Esq., Deputy Secretary

301 West Preston Street - Suite 1101 - Baltimore - Maryland - 21201
Tel: 410.767.4500 - Toll Free: 1.877.767.6272 - TTY users: Maryland Relay - Planning.Maryland.gov



Maryland Department of Planning

Sustainable _____ Attainable

June 23, 2014

Ms. Krystle McClain
Asset Management Division
The National Guard Bureau
NGB/A7AM, Shepperd Hall
3501 Fetchet Avenue
Joint Base Andrews, MD 20762-5157

STATE CLEARINGHOUSE RECOMMENDATION

State Application Identifier: MD20140404-0219

Applicant: The National Guard Bureau

Project Description: Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI):
Proposed Construction Program at the 175th Wing (175 AW) Martin State Airport, Maryland Air National
Guard Base, Middle River

Project Location: Baltimore County

Approving Authority: U.S. Department of Defense DOD/NGB

Recommendation: Consistent with Qualifying Comment(s)

Dear Ms. McClain:

In accordance with Presidential Executive Order 12372 and Code of Maryland Regulation 34.02.01.04-.06, the State Clearinghouse has coordinated the intergovernmental review of the referenced project. This letter, with attachments, constitutes the State process review and recommendation based upon comments received to date. This recommendation is valid for a period of three years from the date of this letter.

Review comments were requested from the Maryland Department(s) of Natural Resources, Transportation, the Environment, Baltimore County and the Maryland Department of Planning, including the Maryland Historical Trust. As of this date, the Maryland Historical Trust has not submitted comments. This recommendation is contingent upon the applicant considering and addressing any problems or conditions that may be identified by their review. Any comments received will be forwarded.

Baltimore County and Maryland Department of Planning found this project to be consistent with their plans, programs, and objectives.

The Maryland Department(s) of Natural Resources, Transportation and Environment found this project to be generally consistent with their plans, programs, and objectives, but included certain qualifying comments summarized below.

The Department of Transportation stated that "as far as can be determined at this time, the subject has no unacceptable impacts on plans or programs."

Comments from the Maryland Department(s) of Natural Resources and Environment are attached (see attachments).

Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor

Richard Eberhart Hall, AICP Secretary
Amanda Stakem Conn, Esq., Deputy Secretary

301 West Preston Street - Suite 1101 - Baltimore - Maryland - 21201
Tel: 410.767.4500 - Toll Free: 1.877.767.6272 - TTY users: Maryland Relay - Planning.Maryland.gov

Ms. Krystle McClain
June 23, 2014
Page 2
State Application Identifier: **MD20140404-0219**

Any statement of consideration given to the comments(s) should be submitted to the approving authority, with a copy to the State Clearinghouse. The State Application Identifier Number must be placed on any correspondence pertaining to this project. The State Clearinghouse must be kept informed if the approving authority cannot accommodate the recommendation.

Please remember, you must comply with all applicable state and local laws and regulations. If you need assistance or have questions, contact the State Clearinghouse staff person noted above at 410-767-4490 or through e-mail at nasrin.rahman@maryland.gov. **Also please complete the attached form and return it to the State Clearinghouse as soon as the status of the project is known. Any substitutions of this form must include the State Application Identifier Number. This will ensure that our files are complete.**

Thank you for your cooperation with the MIRC process.

Sincerely,



Linda C. Janey, J.D., Assistant Secretary

LCJ:NR
Enclosure(s):
cc:

Amanda Degen - MDE
Greg Golden - DNR

Melinda Gretsinger - MDOT
Jessie Bialek - BLCO

Peter Conrad - MDPL
Beth Cole - MHT

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MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore, Maryland 21230
410-537-3000 • 1-800-633-6101 • <http://www.mde.state.md.us>

Martin O'Malley
Governor

Robert M. Summers, Ph.D.
Secretary

Anthony G. Brown
Lieutenant Governor

April 28, 2014

Ms. Krystle McClain
The National Guard Bureau
Asset Management Division
NBG/A7AM, Shepperd Hall
3501 Fetcher Avenue
Joint Base Andrews, MD 20762-5157

RE: State Application Identifier: MD2014-0404-0219
Project: Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI): Proposed Construction Program at the 175th Wing (175 AW) Martin State Airport, Maryland Air National Guard Base, Middle River
Recommendations: Generally Consistent with Qualifying Comments

Dear Ms. McClain:

Thank you for the opportunity to review the above referenced project. The document was circulated throughout the Maryland Department of the Environment (MDE) for review, and the following comments are offered for your consideration.

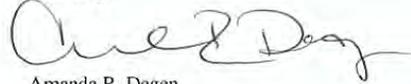
1. Any above ground or underground petroleum storage tanks, which may be utilized, must be installed and maintained in accordance with applicable State and federal laws and regulations. Underground storage tanks must be registered and the installation must be conducted and performed by a contractor certified to install underground storage tanks by the Land Management Administration in accordance with COMAR 26.10. Contact the Oil Control Program at (410) 537-3442 for additional information.
2. If the proposed project involves demolition – Any above ground or underground petroleum storage tanks that may be on site must have contents and tanks along with any contamination removed. Please contact the Oil Control Program at (410) 537-3442 for additional information.
3. Any solid waste including construction, demolition and land clearing debris, generated from the subject project, must be properly disposed of at a permitted solid waste acceptance facility, or recycled if possible. Contact the Solid Waste Program at (410) 537-3315 for additional information regarding solid waste activities and contact the Waste Diversion and Utilization Program at (410) 537-3314 for additional information regarding recycling activities.
4. The Waste Diversion and Utilization Program should be contacted directly at (410) 537-3314 by those facilities which generate or propose to generate or handle hazardous wastes to ensure these activities are being conducted in compliance with applicable State and federal laws and regulations. The Program should also be contacted prior to construction activities to ensure that the treatment, storage or disposal of hazardous wastes and low-level radioactive wastes at the facility will be conducted in compliance with applicable State and federal laws and regulations.
5. Any contract specifying "lead paint abatement" must comply with Code of Maryland Regulations (COMAR) 26.16.01 - Accreditation and Training for Lead Paint Abatement Services. If a property was built before 1950 and will be used as rental housing, then compliance with COMAR 26.16.02 - Reduction of Lead Risk in Housing; and Environment Article Title 6, Subtitle 8, is required. Additional guidance regarding projects where lead paint may be encountered can be obtained by contacting the Environmental Lead Division at (410) 537-3825.
6. The proposed project may involve rehabilitation, redevelopment, revitalization, or property acquisition of commercial, industrial property. Accordingly, MDE's Brownfields Site Assessment and Voluntary Cleanup Programs (VCP) may provide valuable assistance to you in this project. These programs involve environmental site assessment in accordance with accepted industry and financial institution standards for property transfer. For specific information about these programs and eligibility, please contact the Land Restoration Program at (410) 537-3437.
7. If the applicant suspects that asbestos is present in any portion of the structure that will be renovated/demolished, then the applicant should contact the Community Environmental Services Program, Air and Radiation Management Administration at (410) 537-3215 to learn about

Ms. Krystle McClain
April 28, 2014
Page Two

- the State's requirements for asbestos handling.
8. Construction, renovation and/or demolition of buildings and roadways must be performed in conformance with State regulations pertaining to "Particulate Matter from Materials Handling and Construction" (COMAR 26.11.06.03D), requiring that during any construction and/or demolition work, reasonable precaution must be taken to prevent particulate matter, such as fugitive dust, from becoming airborne.
 9. During the duration of the project, soil excavation/grading/site work will be performed; there is a potential for encountering soil contamination. If soil contamination is present, a permit for soil remediation is required from MDE's Air and Radiation Management Administration. Please contact the New Source Permits Division, Air and Radiation Management Administration at (410) 537-3230 to learn about the State's requirements for these permits.
 10. Fossil fuel fired power plants emit large quantities of nitrogen oxides (NOx), sulfur oxides (SOx), volatile organic compounds (VOCs) and other air pollutants, which adversely affect the air quality. As an ongoing effort to improve air quality, the MDE supports energy conservation, which reduces the demand for electricity and therefore, reduces overall emissions of harmful air pollutants. For these reasons, MDE recommends that the builders use energy efficient lighting, computers, insulation and any other energy efficient equipment. Contact the U.S. EPA at (202) 233-9120 to learn more about the voluntary Green Lights Program which encourages businesses to install energy-efficient lighting systems.
 11. In addition, information from MDE's Science Services Administration is enclosed.

Again, thank you for giving MDE the opportunity to review this project. If you have any questions or need additional information, please feel free to call me at (410) 537-4120.

Sincerely,



Amanda R. Degen
MDE Clearinghouse Coordinator
Office of the Secretary

cc: Nasrin Rahman, State Clearinghouse

EA: Proposed Construction Program at the 175th Wing (175 WG)
at Martin State Airport

Maryland Department of the Environment - Science Services Administration

REVIEW FINDING: R1 Consistent with Qualifying Comments
(MD2014 0404-0219)

The following additional comments are intended to alert interested parties to issues regarding water quality standards. The comments address:

A. Water Quality Impairments: Section 303(d) of the federal Clean Water Act requires the State to identify impaired waters and establish Total Maximum Daily Loads (TMDLs) for the substances causing the impairments. A TMDL is the maximum amount of a substance that can be assimilated by a waterbody such that it still meets water quality standards.

Planners should be aware of existing water quality impairments identified on Maryland's 303(d) list. The Project is situated in the Middle River - Browns watershed, identified by the MD 8-digit code 02130807 which is currently impaired by several substances and subject to regulations regarding the Clean Water Act.

Planners may find a list of nearby impaired waters by entering the 8-digit basin code into an on-line database linked to the following URL:
<http://www.mde.state.md.us/programs/Water/TMDL/Integrated303dReports/Pages/303d.aspx>.

This list is updated every even calendar year. Planners should review this list periodically to help ensure that local decisions consider water quality protection and restoration needs. **Briefly, the current impairments that are relevant to the Project include the following:**

Middle River - Browns (02130807)

Toxics: Tidal. A TMDL for PCB is pending development.
Nutrients: Tidal. A TMDL has been written and approved by EPA. (Bay TMDL)
Sediment: Tidal. A TMDL has been written and approved by EPA. (Bay TMDL)

B. TMDLs: Development and implementation of the any Plan should take into account consistency with TMDLs developed for the impaired waterbodies referenced above. Decisions made prior to the development of a TMDL should strive to ensure no net increase of impairing substances. TMDLs are made available on an updated basis at the following web site:
<http://www.mde.state.md.us/programs/Water/TMDL/CurrentStatus/Pages/Programs/WaterPrograms/TMDL/Sumittals/index.aspx>

Special protections for high-quality waters in the local vicinity, which are identified pursuant to Maryland's anti-degradation policy;

C. Anti-degradation of Water Quality: Maryland requires special protections for waters of very high quality (Tier II waters). The policies and procedures that govern these special waters are commonly called "anti-degradation policies." This policy states that "proposed amendments to county plans or discharge permits for discharge to Tier II waters that will result in a new, or an increased, permitted annual discharge of pollutants and a potential impact to water quality, shall evaluate alternatives to eliminate or reduce discharges or impacts." These permitted annual discharges are not just traditional Point Sources, it can include all discharges such as Stormwater.

Currently, Tier II waters are not present in the area surrounding the project.

Planners should be aware of legal obligations related to Tier II waters described in the Code of Maryland Regulations (COMAR) 26.08.02.04 with respect to current and future land use plans. Information on Tier II waters can be obtained online at: <http://www.dsd.state.md.us/comar/comarhtml/26/26.08.02.04.htm> and policy implementation procedures are located at <http://www.dsd.state.md.us/comar/comarhtml/26/26.08.02.04-1.htm>

Planners should also note that since the Code of Maryland Regulations is subject to periodic updates. A list of Tier II waters pending Departmental listing in COMAR can be found, with a discussion and maps for each county, at the following website:

<http://www.mde.state.md.us/programs/Water/TMDL/Water%20Quality%20Standards/Pages/HighQualityWatersMap.aspx>

ADDITIONAL COMMENTS

Chesapeake Bay TMDL

With the completion of the Chesapeake Bay TMDL, the Chesapeake Bay Program Office (CBPO) will be able to provide loading data at a more refined scale than in the past. MDE will be able to use the CBPO data to estimate pollution allocations at the jurisdictional level (which will include Federal Facilities) to provide allocations to the Facilities. These allocations, both Wasteload (WLA) and Load Allocation (LA) could call for a reduction in both Point Sources and Nonpoint Sources. **Facilities should be aware of reductions and associated implementation required by WIPs or FIPs.**

Stormwater

The project should consider all Maryland Stormwater Management Controls. Site Designs should consider all Environmental Site Design to the Maximum Extent Practicable and "Green Building" Alternatives. Designs that reduce impervious surface and BMPs that increase runoff infiltration are highly encouraged.

Further Information:

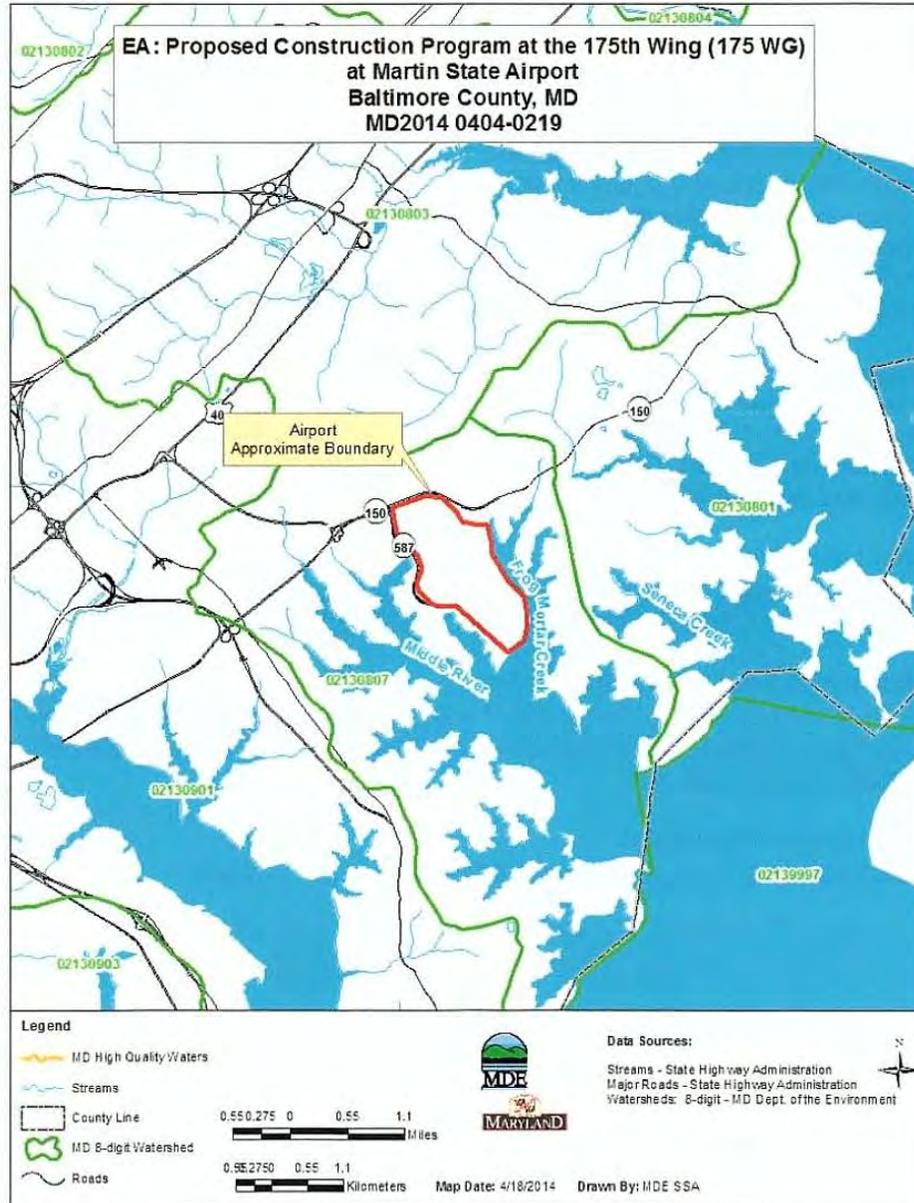
<http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/Pages/Programs/WaterPrograms/SedimentandStormwater/swm2007.aspx>

Environmental Site Design (Chapter 5):

<http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/MarylandStormwaterDesignManual/Documents/www.mde.state.md.us/assets/document/chapter5.pdf>

Redevelopment Regulations:

<http://www.dsd.state.md.us/comar/comarhtml/26/26.17.02.05.htm>



Responses to Specific Maryland Department of the Environment Comments

COMMENT	RESPONSE
Any above ground or underground petroleum storage tanks, which may be utilized, must be installed and maintained in accordance with applicable State and federal laws and regulations. Underground storage tanks must be registered and the installation must be conducted and performed by a contractor certified to install underground storage tanks by the Land Management Administration in accordance with COMAR 26.10. Contact the Oil Control Program at (410) 537-3442 for additional information.	Comment noted. No ASTs or USTs would be affected as part of the proposed action.
If the proposed project involves demolition. Any above ground or underground petroleum storage tanks that may be on site must have contents and tanks along with any contamination removed. Please contact the Oil Control Program at (410) 537-3442 for additional information.	Comment noted. No ASTs or USTs would be affected as part of the proposed action.
Any solid waste including construction, demolition and land clearing debris, generated from the subject project, must be properly disposed of at a permitted solid waste acceptance facility, or recycled if possible. Contact the Solid Waste Program at (410) 537-3315 for additional information regarding solid waste activities and contact the Waste Diversion and Utilization Program at (410) 537-3314 for additional information regarding recycling activities,	Information on proper disposal and recycling of solid waste is currently presented in Section 4.5.2.
The Waste Diversion and Utilization Program should be contacted directly at (410) 537-3314 by those facilities which generate or propose to generate or handle hazardous wastes to ensure these activities are being conducted in compliance with applicable State and federal laws and regulations, The Program should also be contacted prior to construction activities to ensure that the treatment, storage or disposal of hazardous wastes and low-level radioactive wastes at the facility will be conducted in compliance with applicable State and federal laws and regulations.	Comment noted. The 175 WG currently operates a compliant hazardous waste program and would continue to implement the current program with regards to any hazardous wastes. No radioactive wastes would be generated as a result of the proposed action.
Any contract specifying "lead paint abatement" must comply with Code of Maryland Regulations (COMAR) 26.16.01 - Accreditation and Training for Lead Paint Abatement Services. If a property was built before 1950 and will be used as rental housing, then compliance with COMAR 26.16.02 - Reduction of Lead Risk in Housing; and Environment Article Title 6, Subtitle 8, is required. Additional guidance regarding projects where lead paint may be encountered can be obtained by contacting the Environmental Lead Division at (410) 537-3825.	Comment noted. No demolition or renovation of lead-based paints would occur as part of the proposed action.
The proposed project may involve rehabilitation, redevelopment, revitalization, or property acquisition of commercial, industrial property. Accordingly, MDE's Brownfield's Site Assessment and Voluntary Cleanup Programs (VCP) may provide valuable assistance to you in this project. These programs involve environmental site assessment in accordance with accepted industry and financial institution standards for property transfer. For specific information about these programs and eligibility, please contact the Land Restoration Program at (410) 5373437.	Comment noted. Thank you for the information.

Responses to Specific Maryland Department of the Environment Comments (Cont.)

COMMENT	RESPONSE
<p>If the applicant suspects that asbestos is present in any portion of the structure that will be renovated/demolished, then the applicant should contact the Community Environmental Services Program, Air and Radiation Management Administration at (410) 537-3215 to learn about the State's requirements for asbestos handling.</p>	<p>Comment noted. No demolition or renovation of asbestos materials would occur as part of the proposed action.</p>
<p>Construction, renovation and/or demolition of buildings and roadways must be performed in conformance with State regulations pertaining to "Particulate Matter from Materials Handling and Construction" (COMAR 26.11.06.03D), requiring that during any construction and/or demolition work, reasonable precaution must be taken to prevent particulate matter, such as fugitive dust, from becoming airborne.</p>	<p>Comment noted. Information related to this comment is presented in Section 4.1.2.</p>
<p>During the duration of the project, soil excavation/grading/site work will be performed; there is a potential for encountering soil contamination. If soil contamination is present, a permit for soil remediation is required from MDE's Air and Radiation Management Administration. Please contact the New Source Permits Division, Air and Radiation Management Administration at (410) 537-3230 to learn about the State's requirements for these permits.</p>	<p>No impacts would be anticipated from the presence of Environmental Restoration Program (ERP) sites, as all ERP sites have been determined to require no further action and none have land-use restrictions in place. Regardless, construction activities located near the ERP site will be coordinated with the Environmental Management Office. In addition, should any unusual odor, soil, or groundwater coloring be encountered during development activities in any areas, construction will cease and the Environmental Management Office will be contacted immediately.</p>
<p>Fossil fuel fired power plants emit large quantities of nitrogen oxides (NO_x), sulfur oxides (SO_x), volatile organic compounds (VOCs) and other air pollutants, which adversely affect the air quality. As an ongoing effort to improve air quality, the MDE supports energy conservation, which reduces the demand for electricity and therefore, reduces overall emissions of harmful air pollutants. For these reasons, MDE recommends that the builders use energy efficient lighting, computers, insulation and any other energy efficient equipment. Contact the U.S. EPA at (202) 233-9120 to learn more about the voluntary Green Lights Program which encourages businesses to install energy-efficient lighting systems.</p>	<p>Comment noted. Sustainable strategies and energy reduction practices for military construction (MILCON) projects will be incorporated into the Proposed Action facilities as part of the Air Force sustainability policy and Leadership in Energy and Environmental Design requirements. Guidance for these strategies is presented in Engineering Technical Letter 08-13, <i>Incorporating Sustainable Design and Development and Facility Energy Attributes in the Air Force Construction Program</i>.</p>



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, Maryland 21401
<http://www.fws.gov/chesapeakebay>



January 23, 2014

National Guard Bureau
3501 Fetchet Avenue
Joint Base
Andrews, MD 20762-5157

RE: Proposed Construction Program and Beddown of C-27J aircraft at the 175th Wing

Dear Krystle McClain:

This responds to your letter, received December 16, 2013, requesting information on the presence of species which are federally listed or proposed for listing as endangered or threatened within the vicinity of the above referenced project area. We have reviewed the information you enclosed and are providing comments in accordance with section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the project impact area. Therefore, no Biological Assessment or further section 7 Consultation with the U.S. Fish and Wildlife Service is required. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. For information on the presence of other rare species, you should contact Lori Byrne of the Maryland Wildlife and Heritage Division at (410) 260-8573.

Effective August 8, 2007, under the authority of the Endangered Species Act of 1973, as amended, the U.S. Fish and Wildlife Service (Service) removed (delist) the bald eagle in the lower 48 States of the United States from the Federal List of Endangered and Threatened Wildlife. However, the bald eagle will still be protected by the Bald and Golden Eagle Protection Act, Lacey Act and the Migratory Bird Treaty Act. As a result, starting on August 8, 2007, if your project may cause "disturbance" to the bald eagle, please consult the "National Bald Eagle Management Guidelines" dated May 2007.



If any planned or ongoing activities cannot be conducted in compliance with the National Bald Eagle Management Guidelines (Eagle Management Guidelines), please contact the Chesapeake Bay Ecological Services Field Office at 410-573-4573 for technical assistance. The Eagle Management Guidelines can be found at:

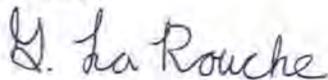
<http://www.fws.gov/northeast/ecologicalservices/pdf/NationalBaldEagleManagementGuidelines.pdf>

In the future, if your project can not avoid disturbance to the bald eagle by complying with the Eagle Management Guidelines, you will be able to apply for a permit that authorizes the take of bald and golden eagles under the Bald and Golden Eagle Protection Act, generally where the take to be authorized is associated with otherwise lawful activities.

An additional concern of the Service is wetlands protection. Federal and state partners of the Chesapeake Bay Program have adopted an interim goal of no overall net loss of the Basin's remaining wetlands, and the long term goal of increasing the quality and quantity of the Basin's wetlands resource base. Because of this policy and the functions and values wetlands perform, the Service recommends avoiding wetland impacts. All wetlands within the project area should be identified, and if construction in wetlands is proposed, the U.S. Army Corps of Engineers, Baltimore District, should be contacted for permit requirements. They can be reached at (410) 962-3670.

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interests in these resources. If you have any questions or need further assistance, please contact Trevor Clark at (410) 573-4527.

Sincerely,



Genevieve LaRouche
Supervisor

U.S. Fish and Wildlife Service

Chesapeake Bay Field Office

**Introducing the new online project review
process for Delaware, Maryland and
Washington, D.C.**

For a faster project review, please go to the following website and use the new online project review process to see if your project will or will not impact federally listed endangered and threatened species in Delaware, Maryland and Washington, D.C.:

<http://www.fws.gov/chesapeakebay/EndSppWeb/ProjectReview/Index.html>

Please contact Trevor Clark at (410) 573-4527 if you have any questions about the online project review process.



NATIONAL GUARD BUREAU

3501 FETCHET AVENUE
JOINT BASE ANDREWS MD 20762-5157

16 December 2013

NGB/A7AM

U.S. Fish and Wildlife Service
Chesapeake Bay Field Office
Attn: Ms. Genevieve LaRouche
177 Admiral Cochrane Drive
Annapolis, MD 21401

Subject: Environmental Assessment (EA) for Proposed Construction Program and Beddown of C-27J Aircraft at the 175th Wing (175WG)

Dear Ms. LaRouche

The National Guard Bureau (NGB) proposes to amend the Environmental Assessment (EA) for Proposed Construction Program and Beddown of C-27J Aircraft at the 175th Wing (175WG) (published June 2010) with updated mission requirements. The 175 WG is located on the northeastern portion of the Martin State Airport in Baltimore County, Maryland (see Attachment 1). We are writing this letter to advise you of this amended EA and to request your review of the draft document once it is published.

Following publication of the 2010 EA, the U.S. Air Force decided to replace the C-27J mission with a Cyber/Intelligence, Surveillance, and Reconnaissance mission at the 175 WG. The purpose of the Proposed Action is to provide the 175 WG with properly sized and configured facilities that are required to effectively accomplish its mission and to replace outdated facilities and provide security assets (see Attachment 2).

Proposed construction activities would occur on currently developed property, or intensely disturbed areas within the Chesapeake Bay Critical Area (CBCA). No sensitive habitats or refuges exist within proposed construction footprints and no sensitive habitats would be disturbed from the Proposed Action. No Federally listed endangered or threatened species are known to exist on airport property or within a 2-mile radius of the airport, and no critical habitats have been designated in the vicinity of the Base. Additionally, the proposed projects are not within the 100-year floodplain and are not within or adjacent to wetlands; therefore, environmental consequences do not include impacts to these resources.

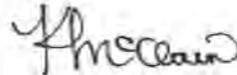
NGB intends to maximize the use of electronic transmittals during subsequent coordination phases of this Project. If you prefer a hardcopy of the Draft and Final EA, please indicate this in your response. Please provide any comments you may have within 30 days of receipt of the document.

- 2 -

If you have any questions concerning the project, please contact me at (240) 612-8167. Please forward your written comments to NGB, Asset Management Division, Attn: Krystle McClain, NGB/A7AM, Sheperd Hall, 3501 Fetchet Ave, Joint Base Andrews, Maryland 20762-5157, or fax to (301) 836-7427, or email to krystle.mcclain@ang.af.mil.

Upon written request, a final copy of the EA and/or Finding of No Significant Impact will be provided. Thank you for your assistance.

Sincerely,



Krystle McClain
Air National Guard, National Guard Bureau,
(NGB/A7AM), Asset Management
Division, Plans and Requirements
Branch

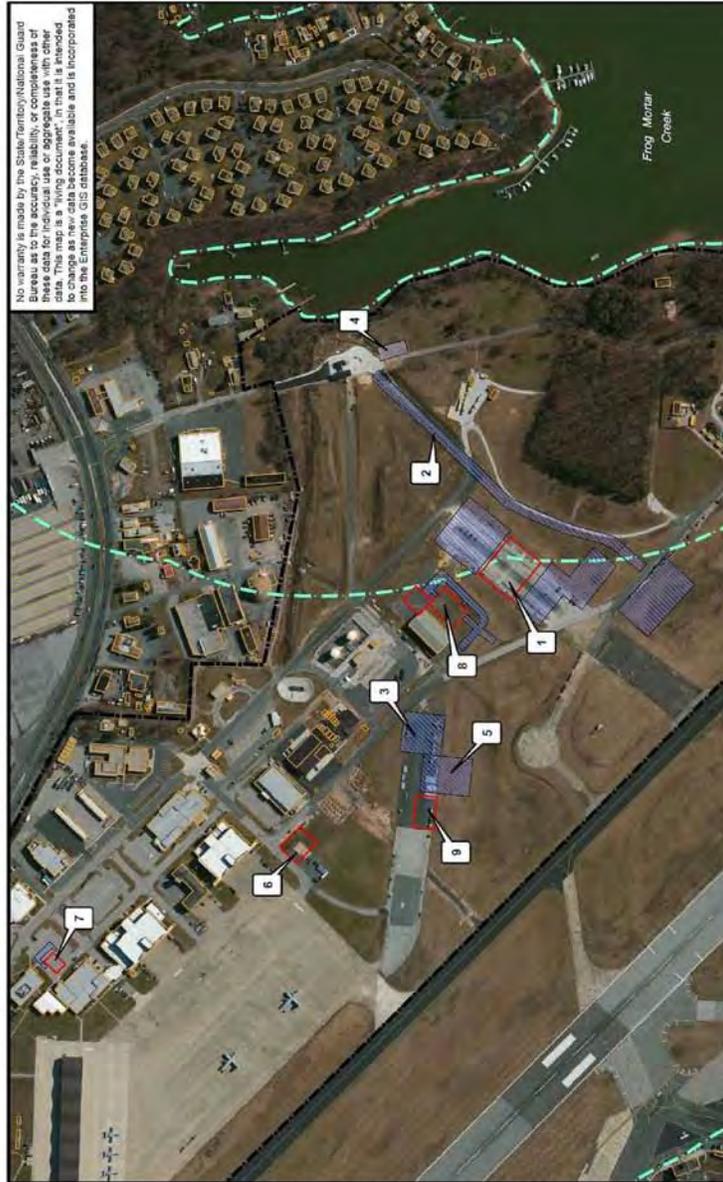
Attachment:

1. Location Map
2. Proposed Construction Projects



Attachment 1. Location Map

- 4 -



Attachment 2. Proposed Construction Projects

NOTICE OF AVAILABILITY

National Guard Bureau Invites Public Comments on its Environmental Assessment for the Proposed Construction Program at 175 WG, Maryland Air National Guard, Baltimore, Maryland.

The National Guard Bureau has prepared a Draft Environmental Assessment (EA) to analyze the potential impacts of a construction program for the 175th Wing, Maryland Air National Guard Base. The Proposed Action is necessary to implement a construction program.

A copy of the Draft EA and Draft Finding of No Significant Impact will be available for review at the following library:

Baltimore County Public Library – Essex Library
1110 Eastern Boulevard
Essex, Maryland 21221

Please provide any comments on the analysis presented in this Draft EA by April 17, 2014 to:

Krystle McClain
NGB/A7AM
Shepperd Hall
3501 Fetchet Avenue
Joint Base Andrews, MD 20762-5157
Email: Krystle.McClain@ang.af.mil

Appendix B
**FEDERAL COASTAL CONSISTENCY
DETERMINATION**

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**FEDERAL COASTAL CONSISTENCY DETERMINATION IN COMPLIANCE WITH
2013 MEMORANDUM OF UNDERSTANDING BETWEEN THE STATE OF
MARYLAND AND THE UNITED STATES DEPARTMENT OF DEFENSE**

Proposed Project Description	EA Chapter Location
a. Project Location	1.3/Figure 2-1
b. Project Description	2.2
c. Public Participation Section	1.7
d. Other Consultations (e.g., National Historic Preservation Act Section 106 Consultations)	1.4/Appendix A
Site Location	EA Chapter Location
a. Site Location Map	Figure 1-1
b. Photographs	Appendix B
Basis of Determination	EA Chapter Location
a. General Policies	
i. Core Policies	
1. Air quality	1. Relevant, affected, 4.1
2. Noise	2. Not relevant
3. Unique State wild lands	3. Not relevant
4. State parks and forests, historical monuments and recreational areas	4. Not relevant
5. Water resources	5. Relevant, affected, 4.7
6. Natural character/scenic value of waterway impacts	6. Not relevant
7. Dam/structure that impedes the natural flow of a scenic or wild river	7. Not relevant
8. Permanent structure east of the dune line	8. Not relevant
9. Impacts to Assateague Island	9. Not relevant
10. Public hearing for projects in non-tidal waters	10. Not relevant
11. Soil erosion	11. Relevant, affected, 4.7
12. Hazardous substances	12. Relevant, affected, 4.5
13. Hazardous materials in Port of Baltimore	13. Not relevant
14. Operations on the Outer Continental Shelf	14. Not relevant
ii. Water Quality	
1. State authorization to impact waters of the State	1. Relevant, affected, 4.7
2. State Waters protected for water contact recreation/aquatic life	2. Not relevant
3. Discharge of pollutant into surface waters	3. Not relevant
4. Discharge permit issued by the Department of the Environment	4. Relevant, affected, 4.7
5. Best available technology for permitted discharges	5. Relevant, affected, 4.7
6. Thermal discharges	6. Not relevant
7. Pesticide storage	7. Not relevant
8. Use of small-scale non-structural stormwater management practices and site planning that mimics natural hydrologic conditions	8. Relevant, affected, 4.7
9. Used oil disposal	9. Not relevant
10. Biological/chemical monitoring	10. Not relevant
11. Public involvement	11. Relevant, affected 1.7

Basis of Determination	EA Chapter Location
iii. Flood Hazards	Not relevant
b. Coastal Resources	
i. Chesapeake and Atlantic Coastal Bays Critical Area	
1. Colonial water bird nesting sites	1.-25. Not relevant
2. Historic waterfowl concentration and staging areas	
3. Physical alterations to streams	
4. Concrete riprap/artificial surface onto bottom of natural streams	
5. Dams or other structures	
6. Development that crosses or affects a stream	
7. Activities which involve disturbance within the buffer	
8. Activity in areas designated to protect habitat	
9. 100-foot vegetated buffer	
10. Disturbance to a buffer	
11. Buffer management plan	
12. Public areas in the buffer	
13. Water-dependent research facilities/activities in the buffer	
14. Industrial and port-related facilities	
15. Agricultural activities	
16. Feeding/watering of livestock within 50 feet of mean high water line	
17. Creation of new agricultural lands	
18. Agricultural activity	
19. Cutting or clearing of trees within the buffer	
20. Commercial tree harvesting in the buffer	
21. Solid or hazardous waste collection or disposal facilities	
22. Surface mining operations	
23. Mining that allows reclamation of the site	
24. Sand and gravel operations	
25. Wash plants in the buffer	
26. Soil erosion and sedimentation control plan	26.-27. Relevant, affected, 4.7
27. Stormwater storage facilities	
28. Intense development	28.-29. Not relevant
29. Development activities in IDA with a net improvement in water quality	
30. Requirements for areas of intense development	30. Relevant, affected, 4.7
31. Requirements for areas not of intense development	31. Not relevant
ii. Tidal Wetlands	Not relevant
1. Action which alters tidal wetlands, tidal marshes, tidal waters of Chesapeake Bay/tributaries, and coastal bays.	
iii. Non-tidal Wetlands	Not relevant

Basis of Determination	EA Chapter Location
<ul style="list-style-type: none"> iv. Forests <ul style="list-style-type: none"> 1. For actions not in the Critical Area, before developing an area greater than 40,000 SF, identify and preserve forested and environmentally sensitive areas 2. Forestry activities 3. Commercially cut timber from five or more acres 4. Highway construction project that includes tree clearing 5. Roadside tree removal 6. Forestry activity in non-tidal wetland – sediment and erosion control plan 	<ul style="list-style-type: none"> 1. Relevant, unaffected, 4.2.2 2.–6. Not relevant
<ul style="list-style-type: none"> v. Historic and Archaeological Sites 	Not relevant
<ul style="list-style-type: none"> vi. Living Aquatic Resources 	Not relevant
<ul style="list-style-type: none"> c. Coastal Uses 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> i. Mineral Extraction 	Not relevant
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ii. Electrical Generation and Transmission 	Not relevant
<ul style="list-style-type: none"> <ul style="list-style-type: none"> iii. Tidal Shore Erosion Control 	Not relevant
<ul style="list-style-type: none"> <ul style="list-style-type: none"> iv. Oil and Natural Gas Facilities 	Not relevant
<ul style="list-style-type: none"> <ul style="list-style-type: none"> v. Dredging and Disposal of Dredged Material 	Not relevant
<ul style="list-style-type: none"> <ul style="list-style-type: none"> vi. Navigation 	Not relevant
<ul style="list-style-type: none"> <ul style="list-style-type: none"> vii. Transportation 	Not relevant
<ul style="list-style-type: none"> viii. Agriculture 	Not relevant
<ul style="list-style-type: none"> ix. Development 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> 1. Development designed to minimize erosion 	1. Relevant, affected, 4.7
<ul style="list-style-type: none"> <ul style="list-style-type: none"> 2. Development minimize impacts to tidal and non-tidal wetlands, water quality, clearing of woody plants, and preserve sites of historic, archeological, and architectural significance. 	2. Relevant, affected, 4.7
<ul style="list-style-type: none"> <ul style="list-style-type: none"> 3. Utilities infrastructure 	3. Relevant, affected, 4.6
<ul style="list-style-type: none"> <ul style="list-style-type: none"> 4. County utility infrastructure 	4. Relevant, affected, 4.6
<ul style="list-style-type: none"> <ul style="list-style-type: none"> 5. On-site sewage disposal or private water system 	5. Not relevant
<ul style="list-style-type: none"> <ul style="list-style-type: none"> 6. Development in the Severn River Watershed 	6. Not relevant
<ul style="list-style-type: none"> <ul style="list-style-type: none"> 7. Industrial facilities 	7. Not relevant
<ul style="list-style-type: none"> <ul style="list-style-type: none"> 8. Local citizen involvement 	8. Relevant, affected, 1.7
<ul style="list-style-type: none"> <ul style="list-style-type: none"> 9. Protect existing community character 	9. Not relevant
<ul style="list-style-type: none"> <ul style="list-style-type: none"> 10. Proximity to available or planned transit options 	10. Not relevant
<ul style="list-style-type: none"> <ul style="list-style-type: none"> 11. Mixture of land uses and be walkable 	11. Not relevant
<ul style="list-style-type: none"> <ul style="list-style-type: none"> 12. Identify adequate water resources, stormwater management, and wastewater treatment and disposal. 	12. Relevant, affected, 4.6
<ul style="list-style-type: none"> x. Sewage Treatment 	Not relevant



**Photograph 1. Project 2
Expand Hercules Road**



**Photograph 2. Project 4
Vehicle Parking Area**



**Photograph 3. Project 6
Logistics Readiness Squadron
Warehouse Facility**

Appendix C
GENERAL CONFORMITY APPLICABILITY ANALYSIS

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GENERAL CONFORMITY RECORD OF NONAPPLICABILITY

Action Name: Environmental Assessment Proposed Construction Program At the 175 WG

Action Point of Contact: Lt.Col. Peter Loebach, 175 WG CES/EMO

Analysis Prepared by: Ms. Alysia Baumann, Leidos

Nonattainment Area: Baltimore County

Nonattainment Criteria Pollutant and Classification: PM_{2.5}, nonattainment and O₃, serious nonattainment.

Pollutants of Interest and Precursors: PM_{2.5} and ozone precursors: nitrogen oxides (NO_x), which includes both nitric oxide and NO₂, and volatile organic compounds (VOCs).

The Proposed Action has been reviewed for General Conformity under Clean Air Act Section 176(c), General Conformity. This review concluded that the requirements of General Conformity do not apply to this action because the annual total direct and indirect emissions from the pollutants of interest from this action are estimated to be: 0.352 tons per year (tpy) for NO_x, 0.614 tpy for VOCs, and 0.001 tpy for PM_{2.5} all of which are well below the *de minimis* thresholds of 50 tpy for NO_x and VOCs and 100 tpy for PM_{2.5}.

Proposed Action

The Proposed Action calls for construction of infrastructure to accommodate the new cyber/ISR mission of the 175 WG. Table C-1 shows the proposed construction and paving projects.

Table C-1. Proposed Action Infrastructure Footprints

	Project Area	Construction Year	Construction - Building (SF)	Construction - Concrete Pavement (SF)	Grading (SF)	Asphalt Paving (SF)	Demolition (SF)
1. Construct new Cyber/ISR Facility	146,785	2014	27,500	69,484	69,484		
2. Expand Hercules Road	47,324	2016		30,346			
3. Mobile Fuel Tanker Parking Area	32,280	2016		16,140			
4. Construct Vehicle Parking Areas	17,000	2015				17,000	
5. A-10 Flight Simulator Bldg. 2042	4,010	2014		2,810			
6. LRS Warehouse Facility Bldg. 4020	31,530	2013	15,740	11,849			
7. Repair A-10 Drop Tank Storage Area/ Access Road	11,520	2014				11,520	
8. Repair Taxiway Tango	2,022,291	TBD		436,050		1,586,241	
9. Emergency Management Building	10,000	TBD		6,650			
Total (SF)	2,322,740	-	43,240	573,329	69,484	1,614,761	-

BASELINE CONFORMITY APPLICABILITY SUPPORTING CALCULATIONS

As previously noted, Baltimore County is in attainment for all criteria pollutants except: serious nonattainment for 8-hour ozone, and nonattainment for PM_{2.5}. To determine if the Proposed Action would result in emissions below *de minimis* levels, or if a formal conformity analysis and conformity determination were required, a comparison of the Proposed Action emissions to *de minimis* thresholds was first evaluated for pollutants of interest (VOC, NO_x, and PM_{2.5}). To implement this comparison, Proposed Action emissions for PM_{2.5}, VOC and NO_x (ozone precursors) from construction projects and were assessed against conformity standard *de minimis* thresholds of 100 tpy for PM_{2.5} and 50 tpy for NO_x and VOCs as stipulated by 40 CFR 93. For

the remaining criteria pollutants (which are in attainment for Baltimore County), the projected emissions under the Proposed Action were compared to Baltimore County emissions.

The Air Conformity Applicability Model (ACAM) (version 4.5.0) was utilized to provide a level of consistency with respect to emissions factors and calculations. The ACAM provides estimated air emissions from proposed Federal actions in areas designated as nonattainment and/or maintenance for each specific NAAQS criteria and/or precursor pollutant. ACAM was utilized to provide emissions for construction, demolition, and paving activities.

PROJECT CALCULATIONS

Construction Emissions

Project emissions calculations dealing with construction of base facilities assumed that all construction activity would be performed within a given calendar year. Construction emissions are calculated based upon the facility footprint (Table C-2). ACAM's construction emissions calculations include stationary and mobile equipment, grading, surface coatings, asphalt paving, demolition, and worker commuting trips (USAF 2010).

$$E_{\text{construction}} (\text{tons/yr}) = E_{\text{equipment}} + E_{\text{grading}} + E_{\text{coatings}} + E_{\text{paving}} + E_{\text{demolition}} + E_{\text{trips}}$$

Mobile and Stationary Equipment - Direct

Emissions from stationary equipment (e.g., saws, generators) and mobile equipment (e.g., forklifts and dump trucks) occur when gasoline-powered equipment is used at the construction site (Table C-2 and Table C-3).

Emission Calculations

$$Equipment \text{ Emissions Phase 1 (tons/year)} = DPY * (Grading \text{ SF} / 435,600 \text{ SF}) * [Emission \text{ rate (lbs/day) for a grader} + Emission \text{ rate (lbs/day) for a rubber tired dozer} + Emission \text{ rate (lbs/day) for a tractor/loader/backhoe} + Emission \text{ rate (lbs/day) for a water truck}] / 2,000$$

$$Equipment \text{ Emissions Phase 2 (lbs/day)} = DPY * (Construction \text{ SF} / 435,600 \text{ SF}) * [Emission \text{ rate (lbs/day) for crane} + Emission \text{ rate (lbs/day) for tractor/loader/backhoe} + Emission \text{ rate (lbs/day) for a forklift} * 2] / 2,000$$

Where: DPY = number of days per year during each phase of construction (182 days)

2,000 = conversion factor from pounds to tons

435,600 = Conversion factor; scenario assumes equipment use per 435,600 SF

Grading would be 69,484 SF; construction activities would entail a total of 609,919 SF. Table C-2 includes emission rates for applicable construction equipment.

Table C-2. Construction Equipment Emissions Rates

Equipment	CO	NO _x	VOCs	SO ₂	PM ₁₀	PM _{2.5}
Grader	5.19	0.42	0.19	0.00	0.02	0.02
Crane	3.93	0.45	0.21	0.00	0.02	0.02
Forklift	2.13	0.17	0.08	0.00	0.01	0.01
Dozer	7.24	0.83	0.39	0.01	0.04	0.04
Tractor/Loader/Backhoe	3.87	0.31	0.15	0.00	0.01	0.01
Water Truck	4.33	0.49	0.23	0.00	0.02	0.02

Source: USAF 2010

Table C-3. Mobile and Stationary Equipment Emissions

	CO (tons/year)	NO _x (tons/year)	VOC (tons/year)	SO _x (tons/year)	PM ₁₀ (tons/year)	PM _{2.5} (tons/year)
Phase I	0.30	0.03	0.01	0.00	0.00	0.00
Phase 2	1.54	0.14	0.07	0.00	0.01	0.01
Total	1.84	0.17	0.08	0.0	0.01	0.01

CO = carbon monoxide; NO_x = nitrogen oxides; PM₁₀ and PM_{2.5} = particulate matter with diameter less than or equal to 10 and 2.5 microns, respectively; SO_x = sulfur oxides; VOC = volatile organic compound

GRADING ACTIVITIES - DIRECT

Emission Calculation:

$$PM_{10} \text{ (tons/yr)} = 55 \text{ (lb/acre/day)} * \text{Acres} * \text{DPY}/2,000$$

Where: Acres = number of gross acres to be graded

DPY = number of days per year used for grading

2,000 = conversion factor from pounds to tons

The calculations assumed that there were no controls used to reduce fugitive emissions. Also, it was assumed that construction activities would occur within one calendar year (365 days) and that grading activities would represent 50 percent of that total, or 182 days. The number of gross acres to be graded 69,484 SF (1.6 acres).

Surface Coatings

Paints, varnishes, primers, and other surface coatings release VOC through the evaporation of solvents. The following calculations were performed to determine VOC emissions.

Determine the total interior and exterior surface square footage:

$$\text{Nonresidential Interior} = \text{Total building SF} * 2.0 * 0.75$$

$$\text{Nonresidential Exterior} = \text{Total building SF} * 2.0 * 0.25$$

$$\text{Total Surface Coating Area (SF)} = \text{Nonres. Int.} + \text{Nonres. Ext.} = 86,480 \text{ SF}$$

Where: 21,620 SF = Building for exterior; incorporating renovation project SF results in
64,860 SF = for interior
2.0 = Conversion factor from total building SF to surface area SF to be coated
0.75 or 0.25 = Percentages used to account for the total coatings assumed to be interior and exterior

Emissions are then calculated:

$$VOC = 250 / 454 * 3.785 / 180 * Total\ Surface\ Coating\ Area / 2,000$$

Where: 250 = Grams of VOC per liter of paint
454 = Conversion factor from grams to pounds (g/lbs)
3.785 = Conversion factor from liters to gallons (L/gal)
180 = Conversion factor from SF to gallons (ft²/gal)
2,000 = Conversion factor from pounds to tons

These algorithms assume that emissions associated with all coating applications and drying is evenly distributed over the entire construction phase.

Asphalt Paving

VOCs from asphalt paving operations are calculated in the following manner.

$$VOC\ (tons/yr) = (2.62 * AP) * WP / (2,000 * 43,560)$$

Where: 2.62 = Emission factor for paving activities (lbs/acre)
AP = Total number of SF to be paved at the site
WP = Weight percentage for rapid cure (USAF 2010),
45 percent is 0.32 2,000 = Conversion factor from pounds to tons
43,560 = Conversion factor from SF to acres

A total of 1,614,761 SF would be paved for all projects.

Construction Workers Trips - Indirect

Construction worker trips during the construction phases of the project are calculated and represent a function of the square feet of construction.

Calculation:

$$Trips\ (trips/day) = 0.42\ (trip/1,000\ SF/day) * Area\ of\ facilities\ (1,000\ SF)$$

Total daily trips are applied to the following factors depending on the corresponding years.

Year 2010 through 2014 (USAF 2010):

$$\text{SO}_{2\text{E}} (\text{lbs/day}) = 0.0005 (\text{grams/trip}) * \text{Trips}/454$$

$$\text{VOC}_{\text{E}} (\text{lbs/day}) = 0.678 (\text{grams/trip}) * \text{Trips}/454$$

$$\text{NO}_{\text{xE}} (\text{lbs/day}) = 0.661 (\text{grams/trip}) * \text{Trips}/454$$

$$\text{PM}_{10\text{E}} (\text{lbs/day}) = 0.0047 (\text{grams/trip}) * \text{Trips}/454$$

$$\text{CO}_{\text{E}} (\text{lbs/day}) = 15.184 (\text{grams/trip}) * \text{Trips}/454$$

Where: Area of facilities in 2010 through 2014 is 2,161,194 SF (Project 8 was assumed to occur within this timeframe)

Trips 907.7 trips/day

Year 2015 through 2019 (USAF 2010):

$$\text{SO}_{2\text{E}} (\text{lbs/day}) = 0.0003 (\text{grams/trip}) * \text{Trips}/454$$

$$\text{VOC}_{\text{E}} (\text{lbs/day}) = 0.437 (\text{grams/trip}) * \text{Trips}/454$$

$$\text{NO}_{\text{xE}} (\text{lbs/day}) = 0.492 (\text{grams/trip}) * \text{Trips}/454$$

$$\text{PM}_{10\text{E}} (\text{lbs/day}) = 0.0047 (\text{grams/trip}) * \text{Trips}/454$$

$$\text{CO}_{\text{E}} (\text{lbs/day}) = 10.371 (\text{grams/trip}) * \text{Trips}/454$$

Where: Area of facilities in 2015 through 2019 is 63,486 SF

Trips 26.6 trips/day

To convert from pounds per day to tons per year:

$$\text{SO}_2 (\text{tons/yr}) = \text{SO}_{2\text{E}} * \text{DPY}/2,000$$

$$\text{VOC} (\text{tons/yr}) = \text{VOC}_{\text{E}} * \text{DPY}/2,000$$

$$\text{NO}_x (\text{tons/yr}) = \text{NO}_{\text{xE}} * \text{DPY}/2,000$$

$$\text{PM}_{10} (\text{tons/yr}) = \text{PM}_{10\text{E}} * \text{DPY}/2,000$$

$$\text{CO} (\text{tons/yr}) = \text{CO}_{\text{E}} * \text{DPY}/2,000$$

Where: 2,000 = conversion factor from pounds to tons

DPY= number of days per year (365)

Table C-4 details the total emissions associated with construction worker trips.

Table C-4. Construction Worker Trip Emissions

Pollutant	2010-2014 Factor (lbs/day)	2010/2014 Trips (trips/day)	2010/2014 Emissions (tons/year)	2015-2019 Factor (lbs/day)	2015/2019 Trips (trips/day)	2015/2019 Emissions (tons/year)	Total (tons/year)
SO ₂	0.00	907.7	0.00	0.00	26.6	0.00	0.00
VOC	0.00		0.25	0.00		0.00	0.25
NO _x	0.00		0.24	0.00		0.01	0.25
PM ₁₀	0.00		0.00	0.00		0.00	0.00
CO	0.03		5.54	0.02		0.11	5.65

CO = carbon monoxide; NO_x = nitrogen oxides; PM₁₀ = particulate matter with diameter less than or equal to 10; SO₂ = sulfur dioxide; VOC = volatile organic compound

Combining the above calculations results in the total emissions associated with the construction projects for the Proposed Action (Table C-5).

Table C-5. Construction Emissions

	CO	NO _x	PM ₁₀	PM _{2.5}	SO ₂	VOC
Direct Emissions						
Mobile and Stationary Equipment	1.84	0.17	0.01	0.01	0.00	0.08
Grading			8.01			
Surface Coating	--	--	--	--	--	0.46
Asphalt Paving	--	--	--	--	--	0.02
Direct Emissions Total	1.84	0.17	8.02	0.01	0.0	0.56
Indirect Emissions						
Construction Worker Trips	5.65	0.25	0.00	--	0.00	0.25
Indirect Emissions Total	5.65	0.25	0.00	0.00	0.00	0.25

CO = carbon monoxide; NO_x = nitrogen oxides; PM₁₀ and PM_{2.5} = particulate matter with diameter less than or equal to 10 and 2.5 microns, respectively; SO₂ = sulfur dioxide; VOC = volatile organic compound

Indirect Point Sources

Emissions would occur from the use of additional facility space heating (Table C-6).

Calculations:

$$E = F * FAC * EF * GSF / 2,000$$

Where: F = Fraction of the year the buildings operate (0.71)
FAC = Heating energy requirement (USAF 2010): 0.0416 MMBtu/SF
EF = Emission factor for each pollutant (lb/MMBtu) (USAF 2010): CO = 0.0824, NO_x = 0.1863, VOC = 0.0054, SO₂ = 0.0006, and PM₁₀ = 0.0075
GSF = Gross building SF (43,240 SF)
2,000 = Conversion factor from pounds to tons

Table C-6. Point Source Emissions

	CO (tons/year)	NO _x (tons/year)	PM ₁₀ (tons/year)	SO ₂ (tons/year)	VOC (tons/year)
Total	0.05	0.24	0.01	0.0	0.0

CO = carbon monoxide; NO_x = nitrogen oxides; PM₁₀ = particulate matter with diameter less than or equal to 10 microns; SO₂ = sulfur dioxide; VOC = volatile organic compound

Indirect Mobile Sources

Mobile sources include Base employee commute emissions (Table C-7).

Base Employee Commute

Calculation:

$$E = F * N * 2 * COMDIST * EF / (454 * 2,000)$$

Where: F = Fraction of the year the personnel operate (0.71)
 N = Number of personnel (269 people)
 COMDIST = One-way commute distance (30 miles)
 2 = Number of commutes per work day
 EF = Emission factor for pollutant (grams/mile) (USAF 2013): NO_x = 0.446, VOC = 0.584, CO = 10.49, SO_x = 0.007, PM₁₀ = 0.025, and PM_{2.5} = 0.011
 454 = Conversion factor from grams to pound
 2,000 = Conversion factor from pounds to tons

Table C-7. Mobile Source Emissions (Indirect)

	CO (tons/year)	NO _x (tons/year)	PM ₁₀ (tons/year)	PM _{2.5} (tons/year)	SO ₂ (tons/year)	VOC (tons/year)
Total	0.13	0.01	0.0	0.0	0.0	0.01

CO = carbon monoxide; NO_x = nitrogen oxides; PM₁₀ and PM_{2.5} = particulate matter with diameter less than or equal to 10 and 2.5 microns, respectively; SO₂ = sulfur dioxide; VOC = volatile organic compound

As shown in Table C-8, the individual pollutant emissions resulting from the Preferred Alternative would not exceed one percent of the total Baltimore County emissions for each corresponding pollutant. Conformity thresholds would not be exceeded for ozone precursors (NO_x and VOCs) or PM_{2.5}. Because the Preferred Alternative's projected emissions are below conformity applicability threshold values, conformity requirements are satisfied and a finding of nonapplicability is supported by the calculations included in this appendix.

Table C-8. Preferred Alternative Emissions

Annual Emissions Source	Criteria Pollutant (tons/year) ^a					
	CO	NO _x	PM ₁₀	PM _{2.5}	SO ₂	VOCs
Direct Emissions						
Construction	1.84	0.17	8.02	0.01	0.0	0.56
Indirect Emissions						
Construction	5.65	0.25	0	0	0	0.25
Point Sources	0.05	0.24	0.01	0	0	0.0
Mobile	0.13	0.01	0	0	0	0.01
Total	7.67	0.67	8.03	0.01	0	0.82
<i>de minimis</i> thresholds ^c		50		100		50
Baltimore County ^d	172,146.59	28,452.54	12,265.65	4,001.77	28,296.80	21,529.82
Percent of ROI	0.01%	0.00%	0.07%	0.0%	0.0%	0.0%

CO = carbon monoxide; NO_x = nitrogen oxides; PM₁₀ and PM_{2.5} = particulate matter with diameter less than or equal to 10 and 2.5 microns, respectively; ROI = region of influence; SO₂ = Sulfur dioxide; VOC = volatile organic compound

^a Values rounded to two decimal places.

^b values are shown as negative because these aircraft will no longer be operating at the Base.

^c *De minimis* thresholds are shown only for marginal nonattainment 8-hour precursors (NO_x and VOCs).

^d Source: USEPA 2014

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FINAL

ACRONYMS AND ABBREVIATIONS (CONT'D)

NWG	Network Warfare Group
NWS	Network Warfare Squadrons
O ₃	ozone
PA/SI	Preliminary Assessment/Site Investigations
Pb	lead
PM _{2.5}	particulate matter with an aerodynamic diameter of less than or equal to 2.5 microns
PM ₁₀	particulate matter with an aerodynamic diameter of less than or equal to 10 microns
POL	petroleum, oil, lubricant
ppm	parts per million
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
ROI	region of influence
SAP	Satellite Accumulation Point
SCIF	Sensitive Compartmented Information Facility
SER	significant emissions rate
SF	square feet
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO ₂	sulfur dioxide
SY	square yards
TBD	to be determined
tpy	tons per year
TSS	threshold siting surface
UFC	Unified Facilities Criteria
U.S.	United States
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound