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**Fort George G. Meade  
Wideband Satellite Communications  
Operations Center (WSOC)**

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**Final Environmental Assessment**

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**September 2010**





## DEPARTMENT OF THE ARMY

FORT GEORGE G. MEADE  
FORT MEADE, MARYLAND 20755-5115

### FINDING OF NO SIGNIFICANT IMPACT

#### ENVIRONMENTAL ASSESSMENT

#### Fort Meade Wideband Satellite Communications Operations Center (WSOC) Fort George Meade, Anne Arundel County, Maryland

**AGENCY:** The United States Army Space and Missile Defense Command/U.S. Army Forces Strategic Command (USASMDC/ARSTRAT)

**ACTION:** Finding of No Significant Impact

**BACKGROUND:** Pursuant to the provisions of the National Environmental Policy Act (NEPA) of 1969, Executive Order 12114, Council on Environmental Quality (CEQ) Regulations [40 Code of Federal Regulations (CFR) Parts 1500-1508], 32 CFR Part 989, the USASMDC/ARSTRAT has conducted an assessment of the potential environmental consequences of constructing and operating a Wideband Satellite Communications Operations Center (WSOC) at Fort George G. Meade, MD.

The WSOC facility would replace the existing Defense Satellite Communications System (DSCS) Operations Center (DSCSOC) at Fort George G. Meade (FGGM), MD. The mission is currently being operated by the WSOC at Fort Meade, MD. This facility is a 25-year-old, pre-engineered metal building that has come to the end of its useful life cycle in support of this program. The facility is not large enough to support the current equipment while the new systems equipment is being installed and operated.

The Environmental Assessment (EA) considers all potential impacts of the Proposed Action and the No-action Alternative. This Finding of No Significant Impact summarizes the results of the evaluations of the activities associated with the proposed WSOC.

#### DESCRIPTION OF THE PROPOSED ACTION

The Proposed Action would provide space for SATCOM Operational Control equipment for the Department of Defense (DoD) Satellites. The new space would be a one-story facility that would include operations rooms, equipment rooms, training and conference room, private offices, general administrative areas, storage and supply rooms, an equipment maintenance area, and personnel and security support areas. Site preparation

shall include security systems, force protection construction, utilities, parking, fire protection and alarm systems, sidewalks/walkways, and drainage.

**NO-ACTION ALTERNATIVE:** Under the No Action Alternative, USASMDC/ARSTRAT would not construct a WSOC facility at Fort George G. Meade and operation would continue under the existing conditions without implementation of the Proposed Action.

## MONITORING AND MITIGATION

- ***Air Quality.*** Mitigation would lessen the minor impacts of the construction of the Proposed Action. During construction, the contractor should control fugitive dust emissions from soil piles and unpaved construction roads by surface treatment with penetration chemicals, soil stabilization chemicals, watering, and traffic-control regulations.
- ***Biological Resources.*** FGGM would follow FGGM Directorate of Public Works Environmental Management Office guidance in tree replacement on another area of the installation as mitigation. This loss of habitat would result in a negligible adverse effect.
- ***Geology and Soils.*** The use of Best Management Practices (BMPs) during and after construction would minimize the potential for cumulative impacts to area soils. The preferred option for all FGGM projects is to balance all soils on-site in lieu of transporting excess soil off the installation. For projects that cannot meet this requirement, soil that is transported off the installation must be tested.
- ***Land Use.*** There would be a 20-foot forest preservation buffer between the proposed site and the golf course. FGGM will designate a mitigation area for forest replacement.
- ***Water.*** The incorporation of the mitigation measures and BMPs into the design phase of the project would reduce impacts to water resources below the level of significance. Under all circumstances, sediment runoff from the site should be captured and prevented from entering area surface water bodies, especially the Little Patuxent River. Water quality impacts associated with implementation of the Proposed Action should be considered in conjunction with other actions in an installation context.

**CONCLUSION/FINDING OF NO SIGNIFICANT IMPACT**

The resulting environmental analysis shows that no significant impacts would occur from the Proposed Action. Preparation of an Environmental Impact Statement (EIS), therefore, is not required.

\_\_\_\_\_  
**Date**

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**Name/Title**

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<p>This Environmental Assessment analyzes the construction and operation of a Wideband Satellite Communications Operations Center (WSOC) that would replace the existing Defense Satellite Communications System (DSCS) Operations Center (DSCSOC) at Fort George G. Meade (FGGM), Maryland. Construction for the proposed project would begin in January 2011. The new space would include operations rooms, equipment rooms, training and conference room, private offices, general administrative areas, storage and supply rooms, an equipment maintenance area, and personnel and security support areas. The WSOC facilities would support the soon to be fielded Wideband Global Satellite (WGS) Communication Satellites. These satellites are being fielded as a replacement for the current DSCS satellites. During the next 10 years, the WGS satellites would be launched as the old DSCS satellites are removed from operational orbit. During that time, portions of both constellations would be in orbit (requiring control equipment for both systems to be operated simultaneously). The current Satellite Control facility (Buildings 8904/8904A) is scheduled for demolition at least 9 months after the WSOC building is completed, occupied, and operational. Demolition is anticipated to begin in June 2013.</p>					
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**FINAL ENVIRONMENTAL ASSESSMENT**  
**WIDEBAND SATELLITE COMMUNICATIONS OPERATIONS CENTER**  
**(WSOC)**  
**FORT GEORGE G. MEADE, MARYLAND**

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# Executive Summary



# EXECUTIVE SUMMARY

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## Introduction

The United States Army Space and Missile Defense Command (USASMDC) proposes to construct a Wideband Satellite Communications (SATCOM) Operations Center (WSOC) to replace the existing Defense Satellite Communications System Operations Center at Fort George G. Meade (FGGM), Maryland. Construction for the proposed project would begin in January 2011.

The mission of the new WSOC at FGGM would be to provide 24-hour SATCOM payload and transmission control of the wideband satellite constellation to the Department of Defense (DoD). This mission will be accomplished by five separate WSOCs located in diverse geographic locations for worldwide coverage. This project is part of a comprehensive program to replace existing facilities in support of the new satellite constellation. In the future the WSOC would also provide 24-hour SATCOM payload and transmission control to commercial SATCOM resources.

## Background and Setting

FGGM encompasses approximately 5,027 developed acres in northwestern Anne Arundel County, with 65.5 miles of paved roads and about 1,300 buildings (Fort Meade, 2007). Located midway between Baltimore, Maryland and Washington, D.C., FGGM houses approximately 10,000 military personnel and 6,000 family members, and employs 25,800 civilians on the installation. FGGM is located near the communities of Odenton, Laurel, Columbia, Severn, and Jessup.

FGGM is a permanent United States Army Installation with the mission of providing base operation support for facilities and infrastructure, quality of life, and protective services in support of DoD activities and Federal agencies. The major command for FGGM is the Military District of Washington.

Specifically, the installation houses more than 78 partner organizations from all four services and several Federal agencies. Major tenant units include the National Security Agency (NSA), the Defense Information School, the Defense Courier Service, the U.S. Army Field Band, the U.S. Army Intelligence and Security Command, First U.S. Army (East), the Naval Security Group Activity, the 694th Intelligence Group (U.S. Air Force), and the U.S. Environmental Protection Agency Center.

This Environmental Assessment (EA) is being prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, its implementing regulations published by the Council on Environmental Quality (40 Code of Federal Regulations [CFR] 1500- 1508), and 32 CFR Part 651, which implements NEPA for the Army under Environmental Analysis of Army Actions, Final Rule [Army Regulation 200-2]. Pursuant to NEPA, Federal agencies are required to consider the environmental consequences of their proposed actions. NEPA typically applies when the Federal agency is the proponent of the action or where Federal funds are involved in the action.

## **Proposed Action/Preferred Alternative**

The Proposed Action would provide space for SATCOM Operational Control equipment for DoD satellites. The new space would include operations rooms, equipment rooms, a training and conference room, private offices, general administrative areas, storage and supply rooms, an equipment maintenance area, and personnel and security support areas. Site preparation would include security systems, force protection construction, utilities, parking, fire protection and alarm systems, sidewalks/walkways, and drainage.

Components of the project would include:

- Construction of a new 28,744-square-foot WSOC facility
- Construction of associated car parking area (minimum of 42 spaces plus visitors)
- Trenching and installation of primary electrical power feed from an existing Substation
- Demolition of Building 8904 and Building 8904A

The proposed site is located adjacent to the NSA perimeter fence, and would become part of the NSA campus upon completion. The proposed site is located adjacent to the existing SATCOM facility off of Love Road to the west, and the FGGM golf course to the east. This site was selected as the only viable option to meet the maximum distance limitations imposed by waveguide runs to the Radio Frequency Interface Subsystem in existing Buildings 8901 and 8906.

The current satellite control complex is located inside a security fence, which would be moved to the east to accommodate the new building and parking area. The jogging trail that runs adjacent to the current fence would also be moved to parallel the new fence. The new trail route would be leveled and graveled and would connect to the old jogging trail above and below the project area. The new trail would be established before the existing trail is disturbed by the construction project.

## **No-action Alternative**

The No-action Alternative is the continuation of existing conditions without implementation of the Proposed Action. Inclusion of the No-action Alternative is prescribed by the Council on Environmental Quality regulations as the benchmark against which Federal actions are evaluated. Under this Alternative, if a new WSOC facility is not constructed at the FGGM Satellite Communications site, the B Company 53<sup>rd</sup> Signal BN (SATCOM) would not be able to control all communications satellites assigned. The existing facility needs to be completely replaced to provide adequate space, electrical systems, and mechanical systems to support the existing and future equipment.

The current Satellite Control facility (Buildings 8904/8904A) is nearing the end of its useful life. Removal of the building and its contents would free the site for future development. However, while development of the site is likely at some point in the future, at this time there are no firm plans for future development that have reached the level of a proposed or reasonably foreseeable action. Demolition would not start until at least 9 months after the WSOC building is completed, occupied, and operational. Demolition is anticipated to begin in June 2013.

## **Impact Assessment Methodology**

Thirteen broad areas of environmental consideration were originally considered to provide a context for understanding the potential effects of the Proposed Action and to provide a basis for assessing the severity of potential impacts. These areas included air quality, airspace, biological resources, cultural resources, geology and soils, hazardous materials and waste, health and safety, infrastructure (transportation, and utilities), land use, noise, socioeconomics, visual and aesthetics, and water resources. Of these 13 resources, air quality, biological resources, geology and soils, hazardous materials and waste, health and safety, infrastructure (transportation, and utilities), land use, socioeconomics, and water resources were the only areas of concern analyzed as applicable for the Proposed Action. As for resource areas not analyzed further, the proposed construction and operation would not require the use of the airspace which lies above FGGM or any airspace under the jurisdiction of this nation. There are no known prehistoric, historic, archaeological sites, buildings, or structures associated with the proposed site. All change in noise levels is expected to be short-term and temporary and not impact people or animals. The visual and aesthetic make-up of the area is not expected to change due to the construction of the new replacement facility.

## **Summary/Results**

Two tables summarize the analyses performed in the EA. Table ES-1 presents a list of Federal environmental statutes and executive orders that are applicable to the proposed project as well as the status of compliance with each. Table ES-2 summarizes the potential consequences that the Proposed Actions and the No Action Alternative would have on the environmental resources.

## **Conclusion**

Based on the evaluation of environmental consequences by this EA, a finding of No Significant Impacts (FNSI) has been prepared.

**Table ES-1. Compliance with Federal Environmental Statutes and Executive Orders**

<b>Acts</b>	<b>Compliance</b>
Clean Air Act, as amended (Public Law 88-206)	FULL
Clean Water Act, as amended (Public Law 95-217)	PENDING
Coastal Zone Management Act	FULL
Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. §9601 et seq.)	FULL
Endangered Species Act of 1973, as amended (Public Law 93-205)	FULL
Farmland Protection Policy Act (Public Law 97-98)	FULL
Fish and Wildlife Coordination Act, as amended (16 United States Code [U.S.C.] 661, et seq.)	FULL
National Environmental Policy Act of 1969 (Public Law 91-190)	FULL
National Historic Preservation Act of 1966, as amended (Public Law 89-665)	FULL
Noise Control Act of 1972, as amended (Public Law 92-574)	FULL
Resource Conservation and Recovery Act (Public Law 94-580)	FULL
Safe Drinking Water Act, as amended (Public Law 93-523)	FULL
Solid Waste Disposal Act of 1965, as amended (Public Law 89-272, Title II)	FULL
Toxic Substances Control Act of 1976 (Public Law 94-469)	FULL
Watershed Protection and Flood Prevention Act of 1954 (16 U.S.C. §1101, et seq.)	FULL
Wetlands Conservation Act (Public Law 101-233)	FULL
Wetlands Conservation Act (Public Law 101-233)	FULL
Sikes Act, Energy Policy Act of 2005, Archaeological Resources Protection Act	FULL
<b>Executive Orders</b>	
Floodplain Management (Executive Order 11988)	FULL
Environmental Justice in Minority Populations and Low-Income Populations (Executive Order 12898)	FULL
Protection of Wetlands (Executive Order 11990)	FULL
Protection of Children from Environmental Health Risk (Executive Order 13045 as amended by EO 13229)	FULL
Strengthening Federal Environmental, Energy, and Transportation Management (Executive Order 13423) and Leadership in Energy and Environmental Design (LEED) Silver Level	FULL

**Table ES-2. Summary of Potential Individual and Cumulative Impacts on Environmental Resources**

Resource Area	Environmental Consequences	
	Proposed Action and Cumulative Impact	No Action
<b>Air Quality</b>	<p>Ground disturbance of approximately 4.5 acres would generate dust in the immediate vicinity of the construction, increasing the particulate matter (PM-10 and PM-2.5) emissions. The levels of dust generated would be mitigated using standard Best Management Practices (BMPs) (such as watering exposed soil and unpaved roads). Emissions should be minor and classified as <i>de minimis</i>. It is anticipated that the net increase of emissions associated with operational activities would be minimal.</p> <p><b>Cumulative Impact:</b> The construction and subsequent operation of the Fort George G. Meade (FGGM) Wideband Satellite Communications (SATCOM) Operations Center (WSOC) will not significantly affect regional air quality in and around Anne Arundel County, Maryland, due to the relatively minor amount of emissions generated. As stated in Chapter 3.0, Anne Arundel County is ranked as the top geographical emitter of PM 2.5, sulfur dioxide, and nitrogen oxides in the State of Maryland. Numerous industrial plants as well as activities associated with the large urban corridors of Washington, DC and Baltimore, Maryland contribute to the degraded air quality in this region. Overall, the emissions released from the Proposed Action will be an incremental addition to a larger air quality problem, but will not in and of themselves constitute a significant impact to air quality.</p>	<p>There would be no change in existing conditions, and no new construction activities would take place. Therefore, no additional impacts would occur to air quality.</p>
<b>Biological Resources</b>	<p>All construction equipment should be treated according to BMPs in a manner that would minimize the spread of any invasive species either onto or from the project site. Trenching for installation of the primary electrical power feed would occur along existing roadways and other previously disturbed areas to the maximum extent practicable to minimize the amount of vegetation that would need to be removed. Since the proposed site (4.5 acres) is primarily covered with shrubs and trees, a large number of trees would need to be removed. This would be mitigated by following FGGM guidance for tree replacement and management on the installation and landscaping the new facility with native vegetation.</p>	<p>The new WSOC facility would not be constructed, and no additional impacts would occur to biological resources.</p>

**Table ES-2. Summary of Potential Individual and Cumulative Impacts on Environmental Resources (Continued)**

Resource Area	Environmental Consequences	
	Proposed Action and Cumulative Impact	No Action
<b>Biological Resources (Continued)</b>	<p>It is anticipated that most wildlife species would be able to avoid the disturbance by relocating to adjacent minimally disturbed areas. Clearing of vegetation and earth-moving activities may result in some unavoidable mortality to burrowing and less mobile fauna. This loss of habitat would result in a negligible adverse effect. Construction would not affect wetlands that birds use for resting, nesting, and foraging since there are no wetlands located on or in the vicinity of the proposed site. Bird migration patterns would not be altered.</p> <p>Since there is no evidence that any federally endangered or threatened plant or wildlife species occur at the site of the Proposed Action other than potential transient species, no threatened or endangered species or critical habitat would be adversely affected by the Proposed Action.</p> <p>While State-listed species such as the purple chokeberry, downy bushclover, roughish panicgrass, and glassy darter are not protected under the Endangered Species Act, whenever feasible, the installation cooperates with State authorities in an effort to identify and conserve them.</p> <p><b>Cumulative Impact:</b> Implementation of the Proposed Action would result in the loss of 4.5 acres of trees and shrubs and thus a cumulative impact to the amount of forest on FGGM when added to the loss from other current and planned construction projects. However, the program would follow FGGM Directorate of Public Works Environmental Division guidance in tree replacement on another area of the installation as mitigation. Removal of the trees would eliminate habitat for some wildlife. However, as described above, it is anticipated that most wildlife species would be able to avoid the disturbance by relocating to adjacent minimally disturbed areas.</p>	

**Table ES-2. Summary of Potential Individual and Cumulative Impacts on Environmental Resources (Continued)**

Resource Area	Environmental Consequences	
	Proposed Action and Cumulative Impact	No Action
<b>Geology and Soils</b>	<p>Erosion and Sediment Control, Storm Water Management, and National Pollutant Discharge Elimination System permits would be pursued from the Maryland Department of the Environment through the FGGM Environmental Office for this project.</p> <p>BMPs would be incorporated and maintained as part of the new WSOC facility program. At the proposed site, silt fences, straw bales, and other temporary measures could be placed in ditches and along parts of the site perimeter to control erosion during construction activities. These temporary erosion prevention measurements would be maintained in place until the replanted site vegetation is firmly established and the soil has stabilized. All disturbed areas would be stabilized and revegetated with native plant vegetation following construction activities. Regular inspections of the erosion and sediment control measures would be performed after any storm event by qualified personnel as required.</p> <p><b>Cumulative Impact:</b> The use of BMPs during and after construction would minimize the potential for cumulative impacts to area soils.</p>	<p>The new WSOC facility would not be constructed. No additional impacts to geology and soils would occur.</p>
<b>Hazardous Materials and Waste</b>	<p>Implementation of the Proposed Action would not result in an increase in the production or use of hazardous material or waste. There would be no impacts on aboveground storage.</p> <p>Due to the possibility of groundwater exceeding Maryland Department of the Environment (MDE) cleanup standards for aluminum, iron, and manganese, the Army may have to take appropriate measures to remediate the site to a level at least sufficient for the proposed use. However, this is not likely after most current review of data and MDE/U.S. Environmental Protection Agency consultation. The proposed site may contain unexploded ordnance; however, U.S. Army Corps of Engineers personnel would provide onsite supervision of these activities and direction to the contractor if any hazardous materials are uncovered. Demolition and disposal of the debris would be conducted in accordance with all applicable regulations.</p> <p><b>Cumulative Impact:</b> The impacts described in this section of the EA are cumulative impacts.</p>	<p>A new WSOC facility would not be constructed. The existing hazardous materials management for the current mission would remain unchanged.</p>

**Table ES-2. Summary of Potential Individual and Cumulative Impacts on Environmental Resources (Continued)**

Resource Area	Environmental Consequences	
	Proposed Action and Cumulative Impact	No Action
<b>Health and Safety</b>	<p>FGGM construction safety guidelines would be followed to minimize the potential for accidents if additional munitions are found on site, since the proposed site is located within the former mortar range. FGGM construction safety guidelines would be followed to minimize the potential for accidents and injuries during tree cutting, trenching activities, and other construction practices. FGGM safety guidelines would also be followed during demolition of Buildings 8904 and 8904A to minimize the potential for accidents and injuries.</p> <p><b>Cumulative Impact:</b> Due to the small potential for impacts to health and safety from the Proposed Action, no cumulative impacts are anticipated.</p>	<p>The new WSOC facility would not be constructed. No additional impacts to health and safety would occur.</p>
<b>Infrastructure</b>	<p>Electrical and water needs associated with the Proposed Action are not anticipated to have a significant impact on the infrastructure system on FGGM. No impacts from the Proposed Action to the existing wastewater treatment system are anticipated. Short-term impacts from stormwater should not be significant, and mitigation procedures would be implemented. No significant impacts to traffic during the construction or operation of the new WSOC facility are expected.</p> <p><b>Cumulative Impact:</b> The implementation of the Proposed Action would not impact the average daily traffic on roadways on FGGM or off-base. No adverse impacts are anticipated from electricity consumption or on the wastewater system from operation of the proposed WSOC facility.</p>	<p>There would be no impacts to infrastructure systems in the proposed project area, as there would be no construction of a new WSOC facility.</p>
<b>Land Use</b>	<p>The Proposed Action would have a negligible impact on land use during construction and operation of the new WSOC facility. The Proposed Action would require clearing approximately 4.5 acres of trees. There would be a 20-foot forest preservation buffer between the proposed site and the golf course, and the WSOC project would mitigate the area by replanting trees in accordance with established policy. The removal of Buildings 8904 and 8904A is anticipated to free land area that could be considered for future use by FGGM.</p> <p><b>Cumulative Impact:</b> Implementation of the Proposed Action would not affect land use within the region of influence because no adverse land use impacts were identified in Section 4.7.1. Recreational resources would continue to be available and unimpeded. All proposed land uses would be compatible with FGGM Master Plan and the State of Maryland planning efforts.</p>	<p>There would be no impacts to land use in the proposed project area, as there would be no construction or removal of trees associated with a new WSOC facility.</p>

**Table ES-2. Summary of Potential Individual and Cumulative Impacts on Environmental Resources (Continued)**

Resource Area	Environmental Consequences	
	Proposed Action and Cumulative Impact	No Action
<b>Socioeconomics</b>	<p>The construction phase could have a temporary positive effect on the local economy through the employment of some sectors of the local construction community. Since operation of the proposed WSOC facility would be executed by personnel at the current WSOC facility, it would not have a long-term impact on socioeconomic conditions.</p> <p><b>Cumulative Impact:</b> Overall impacts to socioeconomics from the Proposed Action are temporary and moderate in magnitude in the short-term and inconsequential in the long-term. However, through the BRAC 2005 process, FGGM will be the site for the relocation and consolidation of several DoD organizations, which is expected to have a greater positive impact in the long-term.</p>	<p>There would be no impacts to socioeconomics in the proposed project area, as there would be no construction of a new WSOC facility.</p>
<b>Water Resources</b>	<p>The construction contractor would be required to comply with the Maryland Erosion and Sediment Control Guidelines for State and Federal Projects and the Stormwater Management Guidelines for State and Federal Projects to avoid and minimize erosion at the construction site and sediment runoff. There are no surface water features (lakes, ponds, streams) on the proposed project site. There would be no impacts to waterways protected under the Wild and Scenic Rivers program and wetlands since none occur in the vicinity of the proposed project site.</p> <p><b>Cumulative Impact:</b> Implementation of the Proposed Action would not result in significant impacts on water quality within the region of influence.</p>	<p>There would be no additional impacts to water (surface water, groundwater, wetlands, and floodplains) in the proposed project area, as there would be no construction of a new WSOC facility.</p>

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# **Acronyms and Abbreviations**



# ACRONYMS AND ABBREVIATIONS

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ACM	Asbestos-Containing Material
AOI	Areas of Interest
AR	Army Regulation
BG&E	Baltimore Gas & Electric
BMP	Best Management Practices
BRAC	Base Realignment and Closure
BWI	Baltimore-Washington International Airport
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMAR	Code of Maryland Regulation
CTC	Corridor Transportation Corporation
CWA	Clean Water Act
DoD	Department of Defense
DSCS	Defense Satellite Communication System
DSCSOC	Defense Satellite Communication System Operations Center
EA	Environmental Assessment
EBS	Environmental Baseline Survey
EIS	Environmental Impact Statement
EO	Executive Order
EUL	Enhanced Use Lease
FGGM	Fort George G. Meade
H <sub>2</sub> O	Water
HAZMAT	Hazardous Materials
HPAs	Habitat Protection Areas
ISCP	Installation Spill Contingency Plan
kV	Kilovolt
LBP	Lead Based Paint
MARC	Maryland Commuter Rail
MDE	Maryland Department of the Environment
MD	Maryland
MDW	Military District of Washington
MEC	Munitions and Explosives of Concern

MGD	Million Gallons Per Day
MRS	Military Response Site
MSDS	Material Safety Data Sheets
msl	Mean Sea Level
MTA	Maryland Transit Authority
N <sub>2</sub>	Nitrogen
NAAQS	National Ambient Air Quality Standard
NEPA	National Environmental Policy Act
NO or NO <sub>x</sub>	Nitrogen Oxide
NO <sub>2</sub>	Nitrogen Dioxide
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NSA	National Security Agency
NWR	National Wildlife Refuge
Pb	Lead
PM	Particulate Matter
SATCOM	Satellite Communications
SIP	State Implementation Plan
SO <sub>2</sub>	Sulfur Dioxide
SPCC	Spill Prevention Control and Countermeasures Plan
SSUP	Sewage Sludge Utilization Permit
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
TPY	Tons Per Year
USACE	United States Army Corps of Engineers
USASMDC	United States Army Space and Missile Defense Command
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VOCs	Volatile Organic Compounds
WGS	Wideband Global Satellite
WMATA	Washington Metropolitan Area Transportation Authority
WSOC	Wideband Satellite Communications Operations Center
WWTP	Waste Water Treatment Plant

---

## **1.0 Purpose, Need, and Scope**



# 1.0 PURPOSE, NEED, AND SCOPE

---

## 1.1 INTRODUCTION

The United States Army Space and Missile Defense Command (USASMDC) proposes to construct a Wideband Satellite Communications (SATCOM) Operations Center (WSOC) to replace the existing Defense Satellite Communications System (DSCS) Operations Center (DSCSOC) at Fort George G. Meade (FGGM), Maryland. Construction for the proposed project would begin in January 2011.

The Proposed Action would provide space for SATCOM Operational Control equipment for the Department of Defense (DoD) Satellites. The new space would include operations rooms, equipment rooms, training and conference room, private offices, general administrative areas, storage and supply rooms, an equipment maintenance area, and personnel and security support areas. Site preparation shall include security systems, force protection construction, utilities, parking, fire protection and alarm systems, sidewalks/walkways, and drainage.

The WSOC facilities would support the soon to be fielded Wideband Global Satellite (WGS) Communication Satellites. These satellites are being fielded as a replacement for the current DSCS satellites. During the next 10 years, the WGS satellites would be launched as the old DSCS satellites are removed from operational orbit. During that time, portions of both constellations would be in orbit (requiring control equipment for both systems to be operated simultaneously). The new WSOC facilities would be sized and designed with adequate computer room space and utilities to support both satellite constellations simultaneously.

The mission is currently being operated by the WSOC at FGGM. This facility is a 25-year-old, pre-engineered metal building that has come to the end of its useful life cycle in support of this program. The facility is not large enough to support the current equipment while the new systems equipment is being installed and operated. The electrical infrastructure in the facility is incapable of supporting this new equipment, and the building mechanical systems are in inadequate shape and showing signs of failure. This facility has been expanded four times since its original construction.

This Environmental Assessment (EA) was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, its implementing regulations published by the Council on Environmental Quality (40 Code of Federal Regulations [CFR] 1500-1508), and 32 CFR Part 651, which implements NEPA for the Army as revised and published in the Federal Register on 29 March 2002, as Environmental Analysis of Army Actions; Final Rule [Army Regulation 200-2]. Pursuant to NEPA, Federal agencies are required to consider the environmental consequences of their proposed actions. NEPA typically applies when the Federal agency is the proponent of the action or where Federal funds are involved in the action. FGGM's mission is to provide base operations support for facilities and infrastructure, quality of life, and protective services in support of DoD activities and Federal agencies. Specifically, the installation houses more than 78 partner organizations from all four services and several Federal agencies. Major tenant units include the National Security Agency (NSA), the Defense Information School, the Defense Courier Service, the U.S. Army Field Band, the U.S. Army

Intelligence and Security Command, First U.S. Army (East), the Naval Security Group Activity, the 694th Intelligence Group (U.S. Air Force), and the U.S. Environmental Protection Agency Center.

FGGM is a permanent U.S. Army Installation with the mission of providing base operations support for facilities and infrastructure, quality of life, and protective services in support of DoD activities and Federal agencies. The major command for FGGM is the Military District of Washington (MDW).

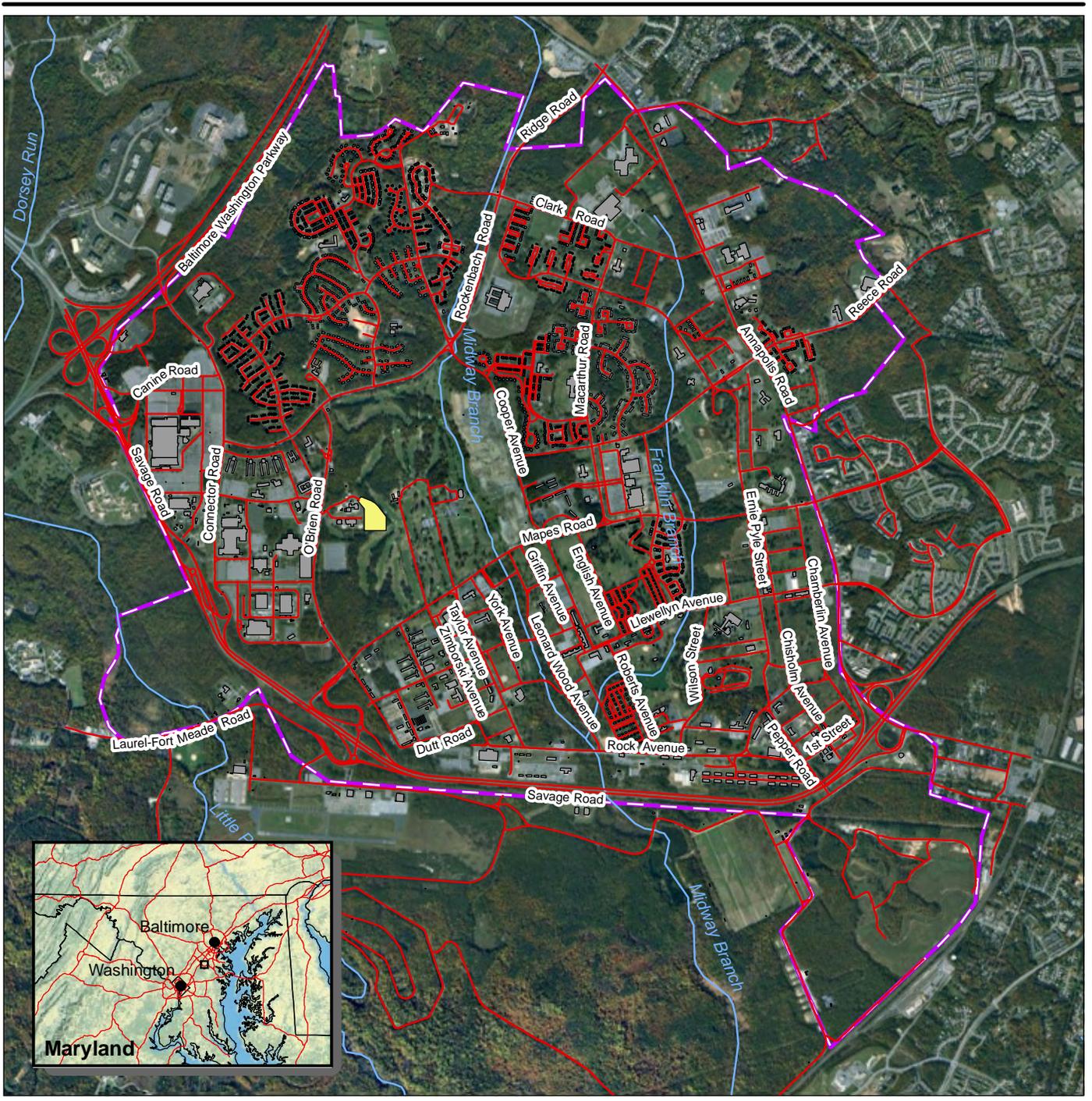
FGGM encompasses approximately 5,027 developed acres in northwestern Anne Arundel County, with 65.5 miles of paved roads and about 1,300 buildings (Figure 1-1). Located midway between Baltimore, Maryland and Washington, D.C., FGGM houses approximately 10,000 military personnel and 6,000 family members, and employs 25,800 civilians on the installation. FGGM is located near the communities of Odenton, Laurel, Columbia, Severn, and Jessup.

Under the 8 September 2005 Base Realignment and Closure (BRAC) process, the Commission recommended a set of realignment actions to occur at FGGM. Three BRAC recommendations affected FGGM by relocating new organizations and activities to the post:

- The Defense Information Systems Agency
- The Colocation of Defense/Military Adjudication Activities
- Defense Media Activity

This realignment will result in an increase of approximately 5,400 military, DoD civilian, and contractor employees who will work on FGGM, as well as approximately 4,900 family members who are likely to relocate to the area. An estimated 3,000 to 7,000 employees will serve as contract support for these activities (excluding family members) and will occupy facilities in and around the local communities.

New construction to support these activities will require over 1,338,000 square feet at a cost of approximately \$457 million. A Record of Decision for the *Environmental Impact Statement for Implementation of Base Realignment and Closure Recommendations and Department of Defense (DoD) Enhanced Use Lease Actions at Fort Meade, Maryland* was signed on 9 November 2007.



**EXPLANATION**

-  Road
-  Stream
-  Existing Structure
-  Project Area
-  Installation Area



NORTH 0 0.5 1 2 Miles

**Installation Map**

Ft. George G. Meade, Maryland

**Figure 1-1**

## **1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION**

The mission of the new WSOC at FGGM would be to provide 24-hour satellite communications payload and transmission control of the wideband satellite constellation to the DoD. This mission will be accomplished by five separate Wideband Satellite Operation Centers located in diverse geographic locations for worldwide coverage. This project is part of a comprehensive program to replace existing facilities in support of the new satellite constellation. In the future the WSOC would also provide 24-hour satellite communications payload and transmission control to commercial Satellite Communications resources.

The purpose of the Proposed Action is to provide technologically updated and adequate operating space for U.S. Army SATCOM activities at FGGM.

The need for the Proposed Action is to maintain the U.S. Army's ability to control and operate military communications and surveillance satellites as part of the nation's national defense.

## **1.3 SCOPE OF THE ENVIRONMENTAL ASSESSMENT**

This EA addresses the scope of activities associated with the construction of the SATCOM WSOC that would replace the existing DSCSOC at FGGM, Maryland. Construction for the proposed project would begin in January 2011. Components of the project include:

- Construction of a new 28,744-square-foot WSOC facility
- Construction of associated 56-car parking area
- Trenching and installation of primary electrical power feed from an existing Generator Building
- Demolition of Building 8904 and Building 8904A

The environmental effects of this action are anticipated to be minor, but because the site area exceeds 5 contiguous acres of undeveloped land, Army regulations require preparation of an EA.

This EA analyzes the environmental effects of the Proposed Action and the No-action Alternative. Chapter 3.0 of this EA discusses the affected environment, including air quality, biological resources, geology and soil, hazardous material and waste, health and safety, land use, infrastructure, socioeconomics, and water resources. Chapter 4.0 of this EA addresses the impacts of the construction and operation of the proposed WSOC at FGGM. Notification letters describing the Proposed Action and preliminary EA conclusions were sent to the U.S. Fish and Wildlife Service (USFWS), the U.S. Department of Agriculture Natural Resources Conservation Service, the Maryland Department of Natural Resources, and the Maryland State Historic Preservation Office to solicit comments related to their areas of responsibility/jurisdiction and to obtain concurrence with the preliminary findings. Correspondence is provided in Appendix B. References and citations are included in this EA where relevant. The secondary (indirect)

effects of the proposed new construction and the cumulative effects of the proposed construction with other known current and foreseeable future actions in the area are also analyzed and presented in this EA. The methods and procedures of the previously referenced AR 200-2 were followed in preparation of this EA. Information sources used in preparing this EA include those gathered in facility planning meetings, environmental planning and technical reports provided by FGGM's Environmental Management Office, and interviews with FGGM staff, USASMDC, and U.S. Army Corps of Engineers (USACE) officials.

## **1.4 PUBLIC INVOLVEMENT**

The public and any interested organizations will be notified of the conclusions of this EA by the publication of a Notice of Availability. The EA and Finding of No Significant Impact will be made available to the public for a 30-day review period.

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## **2.0 Description of the Proposed Action and Alternatives**



# 2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

---

This chapter describes the Proposed Action and the No-action Alternative.

## 2.1 PROPOSED ACTION

### 2.1.1 WSOC CONSTRUCTION

The site is located adjacent to the NSA perimeter fence, and would become part of the NSA campus upon completion (Figure 2-1). The site is located adjacent to the existing SATCOM facility off of Love Road to the west, and the FGGM golf course to the east. This site was selected as the only viable option to meet the maximum distance limitations imposed by waveguide runs to the Radio Frequency Interface Subsystem in existing Buildings 8901 and 8906.

The site is heavily wooded rolling terrain with a total elevation change of 22 feet and slopes ranging from 5 to 17 percent. The access to the facility would be off of Love Road near the existing parking lot. The site would require clearing approximately 4.5 acres of trees.

The building was sited taking into consideration several site constraints, the most important being the waveguide trench lengths not to exceed 900 feet from either Building 8901 or Building 8906. Presently the lengths are approximately 675 and 835 feet respectively.

The proposed WSOC facility would be approximately 28,744 square feet. The roof structure would be composed of galvanized metal decking supported by open web steel joists spaced approximately 6 feet on center (maximum). The open web joists would be supported by either wide-flange beams or reinforced concrete bearing walls. The top chord of the open web joists would be extended to provide a cantilevered roof eave along the perimeter.

The exterior walls would be 6.5-inch thick reinforced concrete bearing walls, and the interior higher bearing walls would be 8-inch thick reinforced concrete. These reinforced walls would also serve as shear walls to provide lateral force resistance in both the longitudinal and transverse direction. Reinforced concrete columns would be poured monolithically with the wall at select locations to provide bearing support for the higher concentrated loads from girders or hip girders. The weapons vault would also be constructed entirely out of reinforced concrete walls and ceiling.

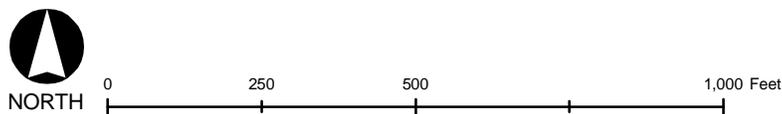
The building slab on grade would be 5 inches thick in all areas without raised flooring and 6 inches thick below raised flooring areas. The slab would be reinforced with #4 bars at 16 inches on center in both directions over a 15 mil polyethylene vapor barrier and 4-inch thick minimum cushion fill.



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**EXPLANATION**

-  Existing Road
-  WSOC Project Area
-  Existing Roadway
-  Jogging Path
-  Proposed Roadway and Parking
-  Proposed Wideband Satellite Operation Center
-  Stormwater Management Area
-  Relocated Jogging Path
-  Satellite Area
-  Water Tank
-  Natural Area
-  Existing Structure



**WSOC Construction Site**

Ft. George G. Meade, Maryland

**Figure 2-1**

## **2.1.2 PARKING AREA, LANDSCAPING, STORMWATER, AND FENCING**

The facility would include a total number of parking spaces equal to 60 percent of the building population (approximately 70 personnel) or a minimum of 42 spaces. The site sketch shows 56 parking spaces; however, some of these can be swapped for built-in bio-retention islands to fulfill stormwater management quality requirements.

The site layout would include pavers capable of handling semi-truck type vehicles. The parking lot would be constructed with paving stones. Reinforced concrete would be used in the vicinity of the loading dock capable of withstanding semi-truck type loads, and typical concrete sidewalk sections shall be used for all pedestrian walkways. Stormwater management designs would adhere to all U.S. Government, U.S. Army, and State of Maryland regulations.

Exterior lighting fixtures for roadways adjacent to the WSOC building and its parking lot would include metal halide or high pressure sodium lamps and electronic ballasts. The selection and location of exterior lighting, including fixture and pole types, would be coordinated with the architectural elevations, plans and vision, as well as desires of FGM/NSA personnel. The location of the exterior lighting fixtures would also be coordinated with the appearance and function of the area served, and to minimize light pollution on adjacent properties and the sky. The lighting would be designed to limit night sky pollution.

The current satellite control complex is located inside a security fence. This fence would be moved to the east to accommodate the new building and parking area. The jogging trail that runs adjacent to the current fence would also be moved. It would parallel the new fence. The new trail route would be leveled and graveled and would connect to the old jogging trail above and below the project area. The new trail would be established before the existing trail is disturbed by the construction project.

## **2.1.3 UTILITIES**

There are existing 8-inch gridded mains just west of the site that would be connected to form another 8-inch loop around the new facility. Water service lines and fire hydrants would be supplied from this loop. Water services into the mechanical room would be 6-inch for fire and 2-inch for domestic use.

An existing 8-inch sewer on the north side of Building 8901 is the closest sewer to the project site. A pump station would be required to reach this sewer since the site is at lower elevation. Estimated sewage flow for 70 employees is 1,400 gallons per day.

The sanitary system would have to connect to the nearest sanitary line, which is a significant distance away from the WSOC site. This is the same line that the buildings on SATCOM hill adjacent to the future WSOC site are currently connected. The elevation of the WSOC site is lower than the elevation of the nearest sanitary line connection site. This would require the use of a lift station.

The electrical power source for this project will be from the Generator Building located on the SATCOM facility property. In this building, utility and generator power is paralleled in switchgear and sent to the new SATCOM facility in existing and new ductbanks. The new SATCOM facility will be provided with two feeds from the generator building to an in-line exterior double-ended substation that will feed the new SATCOM building.

The SATCOM building will be provided with two communication ductbanks. A 4W-6-inch ductbank from SATCOM building will be installed to an existing manhole located within the SATCOM facility and will allow the tie in to building 8901. An additional 6W-6-inch ductbank will be installed from the SATCOM building to an existing manhole located along O'Brien Road that was installed by the I3MP project. The second ductbank will allow connection to the Fort Meade NEC system as well as others.

#### **2.1.4 BUILDING 8904 AND 8904A DEMOLITION**

The current Satellite Control facility (Building 8904, Figure 2-1) is nearing the end of its useful life. With the addition of a full complement of WSOC equipment, the existing facility is not adequate to support the mission in the areas of floor space, quality and quantity of electrical power, and quality and quantity of air conditioning. Additionally, this building has maintenance problems as the required humidity levels to support the equipment have created significant condensation inside the building when the metal siding gets cold. This results in water forming above the suspended ceiling and dripping onto the electronic equipment.

In addition, removal of the building and its contents would free the site for future development. However, while development of the site is likely at some point in the future, at this time there are no firm plans for future development that have reached the level of a proposed or reasonably foreseeable action. Demolition would not start until at least 9 months after the WSOC building is completed, occupied, and operational. Demolition is anticipated to begin in June 2013.

## **2.2 NO-ACTION ALTERNATIVE**

The No-action Alternative is the continuation of existing conditions without implementation of the Proposed Action. Inclusion of the No-action Alternative is prescribed by the Council on Environmental Quality regulations as the benchmark against which Federal actions are evaluated. Under this Alternative, if a new WSOC facility is not constructed at the FGGM SATCOM site, the B Company 53<sup>rd</sup> Signal BN (SATCOM) would not be able to control all communications satellites assigned. The existing facility needs to be completely replaced to provide adequate space, electrical systems, and mechanical systems to support the existing and future equipment.

## **2.3 ALTERNATIVES CONSIDERED**

### **2.3.1 PROPOSED ACTION**

Under the Proposed Action, the construction and operations of the new facility would provide space for SATCOM Operational Control equipment for the DoD Satellites including operations rooms, equipment rooms, a training and conference room, private offices, general administrative areas, storage and supply rooms, an equipment maintenance area, and personnel and security support areas.

### **2.3.2 NO-ACTION ALTERNATIVE**

Under the No-action Alternative, the wideband satellite program would continue in the existing facility, which has been labeled as “not adequate” and is nearing the end of its useful life.

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## **3.0 Affected Environment**



## 3.0 AFFECTED ENVIRONMENT

---

This chapter describes the environmental characteristics that may be affected by the Proposed Action and No-action Alternative. The information serves as a point of reference for understanding any potential impacts from the construction and operation of the new WSOC Facility. The affected environment is briefly described, and any components of greater concern are described in greater detail.

Available reference materials, including EAs, EISs, and base master plans, were reviewed. To fill data gaps (questions that could not be answered from the literature) and to verify and update available information, installation and facility personnel were contacted.

### Environmental Resources

Thirteen broad areas of environmental consideration were originally considered to provide a context for understanding the potential effects of the Proposed Action and to provide a basis for assessing the potential impacts. These areas included air quality, airspace, biological resources, cultural resources, geology and soils, hazardous materials and waste, health and safety, infrastructure (transportation, and utilities), land use, noise, socioeconomics, visual and aesthetics, and water resources. Of these 13 resources, air quality, biological resources, geology and soils, hazardous materials and waste, health and safety, infrastructure (transportation, and utilities), land use, socioeconomics, and water resources were the only areas of concern analyzed as applicable for the Proposed Action. As for other resource areas not analyzed further, the proposed construction and operation would not require the use of the airspace which lies above FGGM or any airspace under the jurisdiction of this nation. There are no known prehistoric, historic, archaeological sites, buildings, or structures associated with the proposed site. Any change in noise levels is expected to be short-term and temporary and to not impact people or animals. The visual and aesthetic make-up of the area is not expected to change due to the construction of the new replacement facility.

### Environmental Setting

FGGM encompasses approximately 5,027 acres in northwestern Anne Arundel County, Maryland, in the Chesapeake Bay watershed. Maryland (MD) Route 32 lies along the western part of the Post and along the south; the installation shares a border with the Patuxent Research Refuge. MD Route 175 borders FGGM on the east, and Interstate 295 borders the installation on the north and the Little Patuxent River runs along the installation's southwest corner. Two tributaries to the Little Patuxent River, Midway Branch and Franklin Branch, flow south through the installation.

## 3.1 AIR QUALITY

The U.S. Environmental Protection Agency (USEPA) regulates six air pollutants for which standards for safe levels of exposure have been set under the Clean Air Act of 1990 (CAA): ozone, carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), particles with a diameter less than or equal to a nominal 10 micrometers (PM<sub>10</sub>) and 2.5 micrometers (PM<sub>2.5</sub>), sulfur dioxide (SO<sub>2</sub>), and lead (Pb). These pollutants are referred to as "criteria pollutants." In addition to the six

criteria pollutants outlined in the CAA, several other pollutants raise concerns with regard to air quality. These pollutants include nitrogen oxides (NOx) and volatile organic compounds (VOCs), which are precursors to ozone.

For each criteria pollutant, the maximum concentration above which adverse effects on human health may occur is called a National Ambient Air Quality Standard (NAAQS). Areas are designated as meeting ("attainment") or not meeting ("nonattainment") the NAAQS standards. Nonattainment designations are further categorized for severity of the pollution problem as marginal, moderate, serious, severe, or extreme nonattainment.

Under the CAA, each State is required to complete a State Implementation Plan (SIP) in order to detail its plans and programs for decreasing air pollution and adhering to NAAQS. In Maryland, the Maryland Department of the Environment (MDE) is responsible for each SIP as well as general air quality permitting.

Under the USEPA's General Conformity Rule (40 CFR Parts, 6, 51, and 93), Federal agencies are required to prepare a written conformity analysis and determination for proposed activities located in non-attainment or maintenance areas where the total of direct and indirect emissions caused by the activity will exceed the *de minimis* threshold emission levels specified under the CAA. The *de minimis phrase* is applied to describe the estimated emission determinations that are below the USEPA's established thresholds for air emissions caused by federally sponsored approved or funded activities in areas that do not meet the NAAQS. When Federal actions are expected to produce emissions greater than the *de minimis* levels, the Federal agency is required to show that emissions would not interfere with the goals of the SIP or the State's ability to attain and maintain the NAAQS.

The conformity regulation also required evaluation of "regionally significant" emissions, defined as the total direct and indirect emissions of a Federal action that represent 10 percent or more of a County's total emissions for a criteria pollutant. A general conformity determination would be required if emissions were regionally significant, even if they were *de minimis*. Ten percent of Anne Arundel County's annual air emission budget for each criteria pollutant would apply in the case of the construction of WSOC.

The Fort Meade BRAC EIS provides the analysis performed for the installation (U.S. Army Corps of Engineers, 2007). Environmental analysis under the General Conformity Rule of the CAA shows that emissions increases for NOx under the Proposed Action would be less than *de minimis* levels, and that the work is not subject to the General Conformity Rule requirements. In order to screen the Proposed Action for conformity, the annual emissions for the criteria pollutants are estimated for each of the project actions (construction and operation) to determine if they would be below or above the *de minimis and regionally significant* levels established in USEPA's General Conformity Rule.

### **3.1.1 REGION OF INFLUENCE**

For inert pollutants (all pollutants other than ozone and its precursors), the region of influence is generally limited to an area extending several miles downwind from the source. The region of influence for ozone may extend much farther downwind than the region of influence for inert pollutants.

### 3.1.2 AFFECTED ENVIRONMENT

The proposed site of the WSOC is located in Anne Arundel County. As of 6 January 2010, Anne Arundel County, as part of the Baltimore, Maryland area, is in non-attainment for PM2.5 and moderate non-attainment for 8-hour ozone (United States Environmental Protection Agency, 2010). The entire State of Maryland is located within the Ozone Transport Region.

As mentioned above, air quality is described by the concentration of various pollutants in the atmosphere. The significance of a pollutant concentration is determined by comparing the concentration in the atmosphere to applicable national and/or State ambient air quality standards. These standards represent the maximum allowable atmospheric concentrations that may occur and still protect public health and welfare with a reasonable margin of safety. The current ambient air quality standards (NAAQS) applicable to the proposed project area are listed in Table 3-1 for ozone and PM2.5.

**Table 3-1. Ambient Air Quality Standards for Ozone and Particulate Matter (2.5)**

Pollutant	Averaging Time	National Primary Standard
Ozone	8-hour <sup>(1)</sup>	147 µg/m <sup>3</sup> (0.075 ppm) <sup>(2)</sup>
PM2.5	Annual <sup>(3)</sup>	15.0 µg/m <sup>3</sup>
	24-hour <sup>(4)</sup>	35 µg/m <sup>3</sup>

Source: 40 CFR Part 50

(1) Calculated as the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year (effective 27 May 2008)

(2) Calculated as the arithmetic mean

(3) Calculated as the 3-year average of the arithmetic means

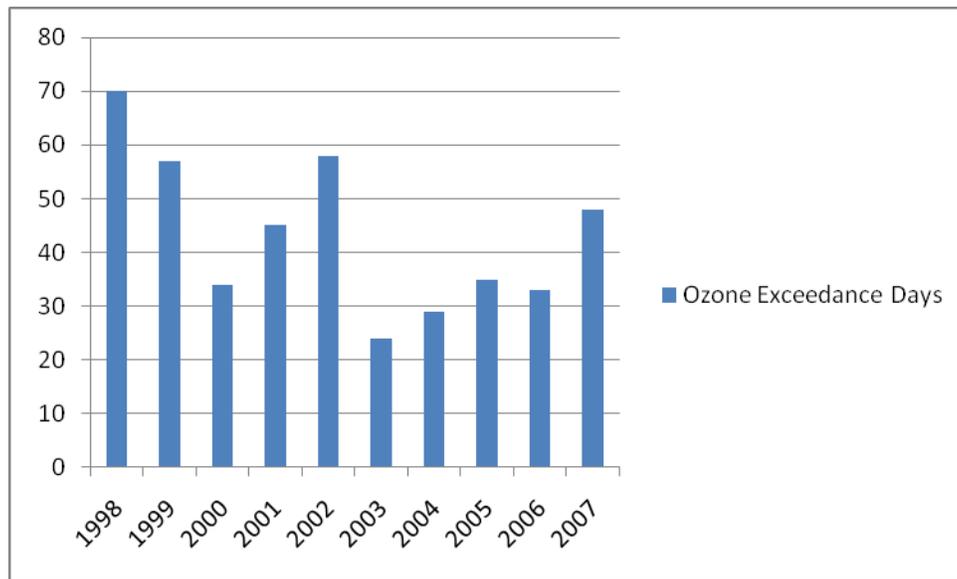
(4) Calculated as the 98th percentile of 24-hour PM2.5 concentration in a year (averaged over 3 years) at the population oriented monitoring site with the highest measured values in the area (effective 17 December 2006).

Notes: mg/m<sup>3</sup> = milligrams per cubic meter; µg/m<sup>3</sup> = micrograms per cubic meter; PM2.5 = fine particulate matter equal to or less than 2.5 microns in size; ppm = parts per million

The Baltimore region, which includes the WSOC project site, does not currently meet Federal standards for 8-hour ground-level ozone and fine particulate matter (or fine soot). Table 3-2 shows the number of days that the Baltimore region, which includes the WSOC project site, has exceeded these limits for ozone over the past 10 years. These monitoring data indicate poor local ambient air quality. Anne Arundel County is the fifth worst of 24 counties in Maryland for emissions of criteria air pollutants (Turek and Loften, 2007).

The *applicable* air emissions thresholds for the Proposed Action are as follows. The VOCs *de minimis* threshold for projects in the Ozone Transport Region is 50 tons per year (TPY). The NOx *de minimis* threshold for projects inside an Ozone Transport Region is 100 TPY. For PM2.5, the final rule established by the USEPA is 100 TPY as the *de minimis* emission levels in areas under nonattainment for directly emitted PM2.5. This 100 TPY emissions level is applicable separately to each of the precursors that form PM2.5, such as SO2, NOx, VOCs, and ammonia. This means that if an action's direct or indirect emissions of PM2.5, SO2, NOx, VOC, or ammonia exceed 100 TPY, a General Conformity determination is required (40 CFR Part 51.853). Neither the USEPA nor State of Maryland, however, has found PM2.5 problems in the Baltimore airshed to be caused by VOC or ammonia. Therefore, ammonia is not further addressed by the environmental assessment, while the VOCs emissions are addressed (VOC is addressed as an ozone precursor).

**Table 3-2. Ozone Exceedance Days—Baltimore, MD**



Source: Maryland Department of Environment, 2008  
Data converted to 2008 Standard for all years

## Climate

FGGM is located in the continental climate zone of the eastern United States, where general atmospheric flow is from west to east. This climate regime is characterized by summers that are long, warm, and often humid owing to the persistence of maritime tropical air. However, frequent air mass exchanges result from the influence of either maritime tropical air or continental polar air. Temperate weather prevails in the spring and autumn.

In 2009 the annual mean temperature at FGGM was 56.1 degrees Fahrenheit (°F), with an average daily maximum of 77°F and a minimum of 30°F (Weather Underground, 2010).

FGGM has 44 inches of rain per year. The U.S. average is 37 inches of rain and 17 inches of snow. The average U.S. city has 25 inches of snow per year. The number of days with any measurable precipitation is 109. On average, there are 213 sunny days per year at FGGM. The July high is around 88°F. The January low is 24°F. Comfort index, which is based on humidity during the hot months, is 42 out of 100, where higher is more comfortable. The U.S. average on the comfort index is 44. (BestPlaces, 2010)

## 3.2 BIOLOGICAL RESOURCES

Native or naturalized vegetation, wildlife, and the habitats in which they occur are collectively referred to as biological resources. For the purpose of discussion, biological resources have been divided into the areas of vegetation, wildlife, threatened and endangered species, and environmentally sensitive habitat.

### 3.2.1 REGION OF INFLUENCE

FGGM lies within the heavily developed and populated Baltimore-Washington metropolitan area. The proposed site is west of the golf course within BRAC Action Site M, which contains approximately 105 acres of forest. The proposed site is northeast of the Little Patuxent River, which is dammed shortly thereafter where the river intersects Route 198. The Little Patuxent is a tributary of the Patuxent River. The Patuxent enters Chesapeake Bay approximately 62 miles southeast of the installation.

### 3.2.2 AFFECTED ENVIRONMENT

#### Vegetation

Development throughout FGGM has been extensive, and few areas currently retain their native vegetation. Smaller wooded areas are scattered throughout upland and wetland areas. They are dominated by white, red, and chestnut oak; mockernut and pignut hickory; flowering dogwood; blueberry; greenbrier; loblolly and pitch pine; and poison ivy (U.S. Army Garrison Fort George G. Meade, Maryland, 2007; Fort Meade Directorate of Public Works, 2007; U.S. Department of the Army Fort Meade, Maryland, 2006). Exotic species throughout the installation include Japanese stilt grass, English ivy, garlic mustard, tree of heaven, multiflora rose, crown vetch, Japanese honeysuckle, common privet, Phragmites, and Asiatic tearthumb (Maryland Native Plant Society, 2006; U.S. Department of the Army Fort Meade, Maryland, 2006). The site of the Proposed Action is heavily wooded, rolling terrain with a total elevation change of 22 feet and slopes ranging from 5 to 7 percent.

#### *Army Forestry Program*

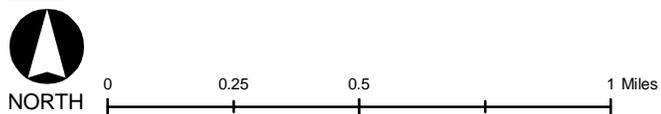
The Army forester sees Army lands as an integral part of Army training that also provide biological diversity, wildlife habitat, air and water quality, soil conservation, watershed protection, and recreational opportunities. Although all installations with forests have forestry responsibilities, not all installations have reimbursable forestry programs. Certain criteria must be met and maintained for an installation to establish a reimbursable forestry program. The program must support the military mission. Activities of the program must not encumber land that is needed for conducting mission operations. While pursuing and planning reimbursable activities, natural resource managers must coordinate with mission operators to identify opportunities to improve long-term mission access to land, increase training realism, and improve training flexibility. The program must comply with Federal laws, including but not limited to NEPA and the Endangered Species Act. The program must follow installation safety restrictions. Forest management must be documented in the installation Integrated Natural Resource Management Plan and any component Endangered Species Management Plan. (United States Army Environmental Command, 2009)

FGGM complies with the Maryland Forest Conservation Act (FCA) to the maximum extent practicable and manages its Forest Conservation Program (FCP) in agreement with the Maryland Department of Natural Resources (MDNR). FGGM has an established Tree Management Policy. Tree Management Policy would formalize tree management and replacement policy from any activity that would cause the death, destruction or lead to removal of existing trees. Any person or activity that adversely impacts desirably located trees would be responsible for replacing trees at their cost. This policy addresses preservation of existing dominant trees and mitigation for planting new trees. Figure 3-1 shows forested land located on FGGM.



**EXPLANATION**

- Road
- Streams
- Project Area
- Habitat Protection Area
- Existing Structure
- Installation Area
- Wetland Area
- Forested Area



**Forest Land**

Ft. George G. Meade, Maryland

**Figure 3-1**

Existing trees are characterized as Priority 1 (P-1), 2 (P-2), and 3 (P-3) as designated by FGGM, Directorate of Public Works, Environmental Division. P-1 trees include dominant trees: oaks (i.e., scarlet, white, red, chestnut, pin, black, bur, and others), black gum, tulip poplar, ash, hickory, beech, walnut, linden, pitch pine, American holly, hornbeam, red bud, dogwood, serviceberry, persimmon, and sassafras. P-2 trees include red maple, birch, elm, magnolia, white pine, and shortleaf pine. P-3 trees include silver maple, sweet gum, mulberry, sycamore, cottonwood, juniper, locust, black cherry, buckeye, catalpa, spruce, hemlock, fir, Virginia pine, and other trees not listed above.

### Wildlife

Wildlife species found at FGGM are representative of those found in urban-suburban environments due to heavy development of the installation. These species include white-tailed deer, gray squirrel, raccoon, opossum, Eastern chipmunk, field mouse, red fox, vole, and mole (U.S. Army Garrison Fort George G. Meade, Maryland, 2007; Fort Meade Directorate of Public Works, 2007; U.S. Department of the Army Fort Meade, Maryland, 2006).

Bird species include those that have adapted to an urban-suburban existence, such as American robin, catbird, mockingbird, Carolina chickadee, Carolina wren, house wren, downy woodpecker, common flicker, European starling, house sparrow, rock dove, mourning dove, and song sparrow. Warblers and raptors may be found during migrations and within the Patuxent Research Refuge; however, due to limited habitat, they are most likely not breeding on the installation (U.S. Army Garrison Fort George G. Meade, Maryland, 2007; Fort Meade Directorate of Public Works, 2007; U.S. Department of the Army Fort Meade, Maryland, 2006). A complete listing of avian species observed at FGGM is provided in the Base Realignment and Final Environmental Impact Statement for Implementation of Base Realignment and Closure 2005 and Enhanced Use Lease Actions at Fort George G. Meade, Maryland (Fort Meade Directorate of Public Works, 2007).

Wildlife on agricultural lands throughout the Bay States is limited. There are incentives, such as conservation programs within the 2002 Farm Bill, designed to encourage farmers to adopt farming practices that protect threatened and endangered species and their habitats on private lands rather than harm them (Natural Resources Conservation Service, 2002).

Table 3-3 lists the State List of rare, threatened, and endangered species in the vicinity of FGGM.

**Table 3-3. State List of Rare, Threatened, and Endangered Species Found at Fort George G. Meade**

Scientific Name	Common Name	Maryland Natural Heritage Program Rank
<b>Flora</b>		
<i>Aronia prunifolia</i>	Purple chokeberry	Watch list
<i>Lespedeza stuevei</i>	Downy bushclover	Watch list
<i>Panicum leucothric</i>	Roughish panicgrass	Possible rare, but status uncertain
<b>Fauna</b>		
<i>Etheostoma vitreum</i>	Glassy darter	Threatened

Source: Maryland Department of Natural Resources, 2007

### *Aquatic Resources*

The Patuxent River and its associated tributaries and small streams that flow through FGGM provide habitat for a number of aquatic organisms. Potential aquatic habitats were identified using MDE database mapping and mapping provided by FGGM. The proposed project site is located in or adjacent to one of these potential habitat areas; however, this area is not an aquatic habitat (Figure 3-1).

The Little Patuxent River south of the proposed site supports one of only two populations of the State endangered Glassy darter (*Etheostoma vitreum*) in Maryland. The Glassy darter is a member of the Perch family named for its translucent body. It is relatively common immediately below the Fort Meade Dam at Route 198. Various species of herring and shad are also seen regularly in the Little Patuxent (Francis, 2006). State-listed species are not protected under the Endangered Species Act; however, whenever feasible, the installation cooperates with State authorities in an effort to identify and conserve State-listed species (Army and Air Force Exchange Service, 2006).

Table 3-4 provides a list of species found in the surface waters on the installation.

### **Threatened and Endangered Species**

A Rare, Threatened, and Endangered Species Habitat Search was conducted in 2001 (Eco-Science Professionals, 2001). Field surveys conducted in 2001 by FGGM indicate that vegetative cover at the installation has changed little since the previous field survey conducted in 1993–1994. The primary purpose of the field surveys was to update the 1993–1994 Rare, Threatened, and Endangered survey. Fort Meade conducted a Flora and Fauna Survey between 5 October and 4 November 2009, and the results confirmed previous findings.

Except for occasional transient individuals, no federally listed or proposed endangered or threatened species are known to occur on FGGM (U.S. Army Garrison Fort George G. Meade, Maryland, 2007; Fort Meade Directorate of Public Works, 2007; U.S. Department of the Army Fort Meade, Maryland, 2006).

### **Environmentally Sensitive Habitat**

FGGM voluntarily maintains five Habitat Protection Areas (HPAs) on the installation. HPAs are State-designated areas where State-threatened or –endangered species are located. In some cases, they are inherently unique (i.e., bogs) and do not contain species of concern. HPAs are included in FGGM's Integrated Natural Resource Management Plan and are protected as a Best Management Practice (BMP). The proposed project site is located in or adjacent to one of these potential habitat areas; however, this area is not an aquatic habitat (Figure 3-1).

The Patuxent Research Refuge is located to the south of FGGM and to the east of the Baltimore-Washington Parkway and is one of over 500 refuges in the National Wildlife Refuge (NWR) System managed by the USFWS. It is currently the only NWR unit established to support wildlife research.

**Table 3-4: Fish Species Found at Fort George G. Meade, Maryland**

<b>Common Name</b>	<b>Scientific Name</b>
Creek chubsucker	<i>Erimyzon oblongu</i>
Tessellated darter	<i>Etheostoma olmsted</i>
Glassy darter	<i>Etheostoma vitreum</i>
Mummichog fundulus	<i>Fundulus heteroclitus</i>
Cutlips minnow	<i>Exoglossum maxillingua</i>
Northern hogsucker	<i>Hypentelium nigricans</i>
Least brook lamprey	<i>Lampetra aepyptera</i>
America brook lamprey	<i>Lampetra appendix</i>
Redbreast sunfish	<i>Lepomis auritus</i>
Pumpkinseed	<i>Lepomis gibbosus</i>
Bluegill	<i>Lepomis gibbosus</i>
Smallmouth bass	<i>Micropterus dolomieu</i>
Largemouth bass	<i>Micropterus salmoides</i>
Blueback herring	<i>Alosa aestivalis</i>
American eel	<i>Anguilla rostrata</i>
White sucker	<i>Catostomus commersoni</i>
Satinfin shiner	<i>Cyprinella analostana</i>
Gizzard shad	<i>Dorosoma cepedianum</i>
Bluespotted sunfish	<i>Enneacanthus gloriosus</i>
Comely shiner	<i>Notropis amoenus</i>
Swallowtail shiner	<i>Notropis procne</i>
Shield darter	<i>Percina peltata</i>
Blacknose dace	<i>Rhinichthys atratulus</i>
Longnose dace	<i>Rhinichthys cataractae</i>
Fallfish	<i>Semotilus corporalis</i>
Eastern mudminnow	<i>Umbra pygmaea</i>

The Patuxent Research Refuge supports a wide diversity of wildlife in forest, meadow, and wetland habitats. The land is managed to maintain biological diversity for the protection and benefit of native and migratory species. During the fall and spring migrations, many waterfowl species stop to rest and feed. Over 200 species of birds occur on the refuge. A nesting pair of bald eagles has used the North Tract of the Refuge since 1989. Increasing forest fragmentation in the area due to urban development has damaged many populations of neotropical migratory birds. The refuge is one of the largest forested areas in the mid-Atlantic region and provides critical breeding habitat and an important nesting area for these species (United States Fish and Wildlife Service, 2005).

No wetlands have been identified in the Proposed Action site. Wetlands occur along the Little Patuxent River floodplain in the southwestern portion of the installation outside the region of influence (Fort Meade, 2004a).

### **3.3 GEOLOGY AND SOILS**

Geology and soils include those aspects of the natural environment related to the earth, which may be affected by the Proposed Action. These features include physiography, geologic units and their structure, the presence/availability of mineral resources, soil condition and capabilities, the potential for natural hazards and topography.

#### **3.3.1 REGION OF INFLUENCE**

The region of influence encompasses the geology and soils contained within the boundaries of the construction site. Geology and soils are considered resources that may be adversely affected by the Proposed Action. These resources are described in terms of existing information on land forms, geology, and associated soil development.

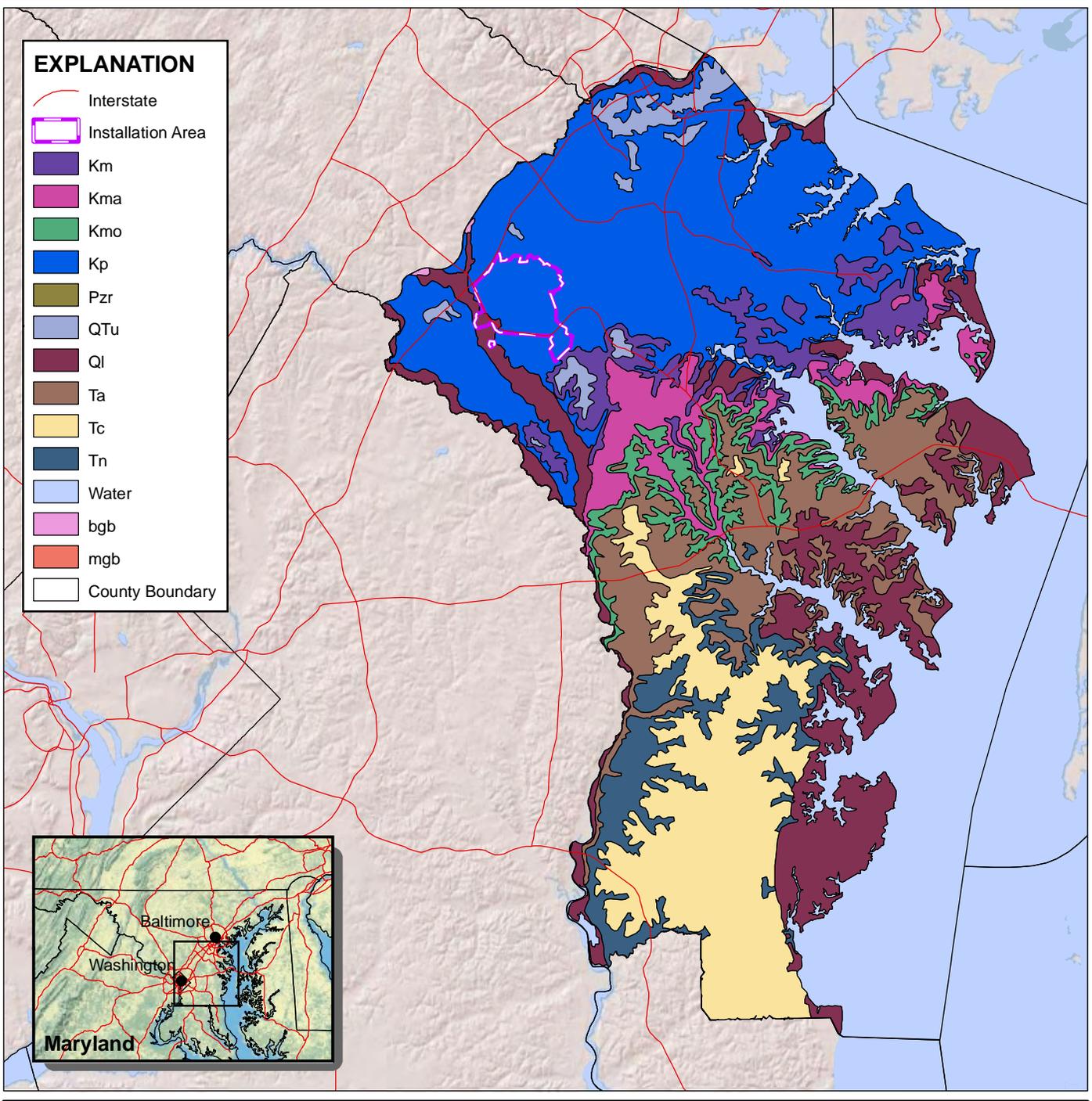
#### **3.3.2 AFFECTED ENVIRONMENT**

##### **Geology**

The topography around FGGM is gently rolling, with approximately 210 feet of topographic relief. The highest point reaches 310 feet mean sea level (msl) and occurs at the 1st Army Radio Station Tower in the northern-most central part of the installation. The lowest elevation, less than 100 feet msl, occurs in the southwestern corner of FGGM, along the Little Patuxent River (Fort Meade Directorate of Public Works, 2007). The majority of the land at FGGM is suitable for building, having gradual slopes, generally less than 6 percent (Fort Meade Directorate of Public Works, 2007).

Most of the installation slopes gradually to the south and southwest. Slopes exceeding 10 percent are rare and occur primarily in pockets in the north-central and central parts of the installation and along stream corridors. These steep slopes usually occur in natural wooded areas and are ideally suited as vegetated buffer zones for more developed areas. (Fort Meade Directorate of Public Works, 2007)

FGGM lies in the Atlantic Coastal Plain Physiographic Province. The Post is underlain by a wedge-shaped mass of unconsolidated sediments that thickens to the southeast. Beneath the sediments is crystalline rock of Precambrian to early Cambrian age (Fort Meade Directorate of Public Works, 2007). The low elevation point occurs along the Little Patuxent River. The alluvium that underlies all of the rivers and wetlands in the project site area consists of interbedded sand, silt, and clay with gravel inclusions. These latter areas have been altered so severely that their association with a soil series is impossible to determine. Figure 3-2 is a geological map of Anne Arundel County, and Table 3-5 is the description of the soil map unit symbols.



**Geological Map,  
Anne Arundel  
County**

Ft. George G. Meade, Maryland

**Figure 3-2**



**Table 3-5. Soil Map Unit Symbols**

Soil Map Unit Symbol	Map Unit Name	Description
bgb	Baltimore Gabbro Complex	Hypersthene gabbro with subordinate amounts of olivine gabbro, norite, anorthositic gabbro, and pyroxenite; igneous minerals and textures well preserved in some rocks, other rocks exhibit varying degrees of alteration and recrystallization, and still others are completely recrystallized with a new metamorphic mineral assemblage.
Km (K=Cretaceous)	Magothy Formation	Loose, white, cross-bedded, "sugary", lignitic sands and dark gray, laminated silty clays; white to orange-brown, iron-stained, subrounded quartzose gravels in western Anne Arundel County; absent in outcrop southwest of Patuxent River; thickness 0 to 60 feet.
Kma	Matawan Formation	Dark gray, micaceous, glauconitic, argillaceous, fine-grained sand and silt; absent in outcrop southwest of Patuxent River; thickness 0 to 70 feet.
Kmo	Monmouth Formation	Dark gray to reddish-brown, micaceous, glauconitic, argillaceous, fine- to coarse-grained sand; basal gravel in Prince Georges County; thickness 0 to 100 feet.
Kp	Potomac Group	Interbedded quartzose gravels; protoquartzitic to orthoquartzitic argillaceous sands; and white, dark gray and multicolored silts and clays; thickness 0 to 800 feet.
mgb	Metagabbro and Amphibolite	Weakly to strongly lineated metagabbro and epidote amphibolite.
Pzr (P=Paleozoic/ Precambrian)	Relay Quartz Diorite	Intensely foliated, fine-grained, light-colored; ranges from quartz diorite to albite granite; age 550 +/- 50 m.y. by radiogenic dating.
QTu (Q=Quaternary)	Upland Deposits (Eastern Shore)	Gravel, sand, silt, and clay. Mostly cross-bedded, poorly sorted, medium- to coarse-grained white to red sand and gravel, boulders near base; minor pink and yellow silts and clays; (Wicomico Formation of earlier reports); thickness 0 to 90 feet, locally thicker in paleochannels.
Ql	Lowland Deposits	Gravel, sand, silt and clay. Medium- to coarse-grained sand and gravel; cobbles and boulders near base; commonly contains reworked Eocene glauconite; varicolored silts and clays; brown to dark gray lignitic silty clay; contains estuarine to marine fauna in some areas (includes in part Pamlico, Talbot, Wicomico and Sunderland Formations of earlier reports); thickness 0 to 150 feet.
Ta (T=Tertiary)	Aquia Formation	Dark green to gray, argillaceous, glauconitic, fine- to medium-grained sand; minor gray to pale brown clay; Marlboro Clay Member at base: Pink to gray, homogeneous plastic clay with local lenses of very fine-grained white sand; thickness 0 to 30 feet; present west of Chesapeake Bay only; total thickness 0 to 125 feet.
Tc	Calvert Formation	Plum Point Marls Member: Interbedded dark green to dark bluish-gray, fine-grained argillaceous sand and sandy clay; contains prominent shell beds and locally silica-cemented sandstones. Fairhaven Member: Greenish-blue diatomaceous clay, weathers to pale gray; pale brown to white, fine-grained argillaceous sand and greenish-blue sandy clay; total thickness 0 to 150 feet.
Tn	Nanjemoy Formation	Dark green to gray, argillaceous, glauconitic, fine- to medium-grained sand; minor gray to pale brown clay; Marlboro Clay Member at base: Pink to gray, homogeneous plastic clay with local lenses of very fine-grained white sand; thickness 0 to 30 feet; present west of Chesapeake Bay only; total thickness 0 to 125 feet.

Source: Geologic Maps Of Maryland: Anne Arundel County, 2008

## **Soils**

FGGM has 39 distinct soil mapping units according to the U.S. Department of Agriculture's Fort George G. Meade Soil Survey (U.S. Army Corps of Engineers, 2007). The majority of the soil on the installation is part of an Evesboro complex, including the Proposed Action site. The surface soils identified in the vicinity of the project site are Evesboro Urban Land Complex, Evesboro Loamy Sand, and Evesboro–Galestown Loamy Sands.

Soils at sites selected by the Directorate of Public Works for construction are considered clean unless during excavation activities unforeseen conditions are encountered such as odor, staining, or the presence of waste materials. These soils must be segregated from other soils. Soils at FGGM have naturally occurring levels of the metal arsenic, which is also typical to this region of Maryland. (Fort Meade Directorate of Public Works Environmental Division, 2009)

## **Seismic Activity**

FGGM is located in a zone of low seismic activity. There are no important folds, faults, or joint systems that would indicate recent structural disturbances.

## **Prime and Unique Farmland**

Of the soils identified at FGGM, only the Woodstown Sandy Loam, which covers approximately 1.8 percent of the installation is considered either prime farmland soil, or farmland soil of statewide importance, as determined by the Natural Resources Conservation Service (NRCS) (Resources Conservation Service). Prime farmland, as defined by the U.S. Department of Agriculture (USDA), is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. This land could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. Although there are soils within the installation classified as Prime Farmland soils, acquisition or use of farmland by a Federal agency for national defense purposes is exempted by section 1547(b) of the Farmland Protection Policy Act, and as a result, it is not regarded as prime farmland.

## **3.4 HAZARDOUS MATERIALS AND WASTE**

In general, hazardous substances (materials) and wastes are defined as those substances that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, would present substantial danger to public health and welfare or to the environment when released into the environment.

As defined by the Department of Transportation, a hazardous material is a substance or material that is capable of posing an unreasonable risk to health, safety, or property when transported in commerce and has been so designated. Hazardous waste is further defined as any solid waste not specifically excluded which meets specified concentrations of chemical constituents or has certain toxicity, ignitability, corrosivity, or reactivity characteristics.

### 3.4.1 REGION OF INFLUENCE

The region of influence for hazardous materials and hazardous waste would be limited to areas where hazardous materials are stored and handled for the construction and operation of the proposed WSOC Facility.

### 3.4.2 AFFECTED ENVIRONMENT

#### Hazardous Materials

FGGM's Environmental Division coordinates and inventories hazardous materials and the disposal of hazardous waste. Emergency response to spills of hazardous waste and materials is conducted through on-site coordinators, the installation's fire department, and the installation's hazardous materials team. FGGM operates under a Spill Prevention Control and Countermeasures Plan (SPCC Plan)/Installation Spill Contingency Plan (ISCP) for all facilities where hazardous materials are stored, such as the Wastewater Treatment Plant (WWTP). The SPCC/ISCP Plan delineates measures and practices that require implementation to prevent and/or minimize spill/release from storage and handling of hazardous materials to protect ground and water surfaces. In accordance with State and Federal law and Army regulations, the SPCC/ISCP is updated at least every 3 years, or when significant changes in operations occur that could impact the likelihood of a spill. FGGM has also prepared an *Installation Hazardous Waste Management Plan* (U.S. Army Center for Health Promotion and Preventive Medicine North, December 2004). Those who handle or manage hazardous materials or hazardous waste are trained in accordance with Federal, State, local, and Army requirements. Each facility has appointed an emergency management coordinator, who is responsible for emergency response actions until relieved by hazardous materials spill response personnel.

The ISCP provides emergency response instructions for spills and uncontrolled releases of hazardous materials. Instructions include notification, probable spill routes, control measures, exposure limits, and evacuation guidelines. Material Safety Data Sheets (MSDS) that provide information about health hazards and first-aid procedures are included in the ISCP.

#### Hazardous Waste

FGGM generates relatively small quantities of a variety of hazardous wastes, and is regulated as Hazardous Waste Generator ID No. MD 9210020567. Procedures for handling, storage, transportation, and disposal of hazardous materials and wastes are outlined in the *Installation Hazardous Waste Management Plan, Fort George G. Meade* (USACHPPM-North 2004). The plan also outlines command responsibilities, identification procedures, inspections, personnel training, and spill response and emergency procedures (Versar, 2005).

Hazardous wastes are maintained at satellite accumulation areas. After these facilities have reached regulated capacities (55-gallon drum for hazardous waste, 1 quart for acutely hazardous waste), the hazardous waste is transported to the Controlled Hazardous Substance Storage Facility (Building 2250). In accordance with USEPA and MDE regulations, a running inventory of hazardous waste is maintained at the storage facility.

Sludge disposed of from the WWTP requires a Sewage Sludge Utilization Permit (SSUP) to be obtained from the MDE by the contractor handling the sludge. SSUPs are required for any person who collects, incinerates, stores, treats, applies to land, transports, or disposes of

sewage sludge or septage. The purpose of the permit is to maintain a degree of safety, since sludge contains pathogens that can be harmful to human health. The process to obtain a sewage sludge utilization permit typically lasts at least 10 months. It involves regular testing, monitoring, and paperwork (Freij, 2006).

Non-hazardous solid waste generated on FGGM is transported off the installation by a contractor and disposed of at permitted landfills, such as the Annapolis Junction Transfer Station and the Millersville Landfill in Anne Arundel County.

All procedures for the handling and containment of soils originating from projects on FGGM are addressed in Section 3.3.

### **Fort George G. Meade National Priorities List Site**

FGGM was placed on the National Priorities List (NPL) on 28 July 1998. The USEPA placed FGGM on the NPL based on the evaluation of four sites that had been identified as past storage and disposal sites of hazardous materials and waste that contained hazardous substances: the Defense Reutilization and Marketing Office, a Closed Sanitary Landfill, a Clean Fill Dump, and the Post Laundry Facility.

There are two Areas of Interest (AOI) that are pertinent to the Proposed Action. Although not a threat to human health or the environment, these areas could require additional evaluation during implementation of the Proposed Action. These areas are described below.

#### *Munitions and Explosives of Concern (MEC)*

The Army is currently conducting a Remedial Investigation of the Former Mortar Range. This work includes extensive geophysical testing of the Former Mortar Range and the vast majority of ordnance items were located south of the areas referred to as the project site. Of the over 6,000 anomalies detected, over 4,000 were evaluated and more than 1,300 were investigated. A significant amount of this material was determined to be non-munitions related scrap metal; however, some munitions debris included 60 mm, 81 mm, a practice landmine, 3-inch Stokes practice mortars rounds, flares (expended), practice grenades, a dummy grenade, and discarded small arms ammunitions and casings were detected. With the exception of the discarded small arms ammunition (two locations both south of Phase III locations (coordinates on record)), all were determined to be practice. (August 2009, Interim Draft Integrated RCRA Facility Investigation/CERCLA Remedial Investigation Report). Although historic range areas have been identified and studied, old ammunition and ordnance items may be still be found at the project site and elsewhere on the installation. Procedures for handling suspected MEC items are discussed in Section 4.4.1.

#### *Groundwater Contamination*

Based on the 2004 Final Environmental Baseline Survey (EBS), a portion of the proposed site (labeled as AOI 6 in the EBS), is identified as needing further evaluation of aluminum, iron, and manganese in groundwater exceeding MDE cleanup standards. The area is identified as lying near the northern boundary of a former mortar range. (Fort Meade, 2004b)

## 3.5 HEALTH AND SAFETY

Health and safety includes consideration of any activities, occurrences, or operations that have the potential to affect one or more of the following:

**The well-being, safety, or health of workers**—Workers are considered to be persons directly involved with the operation producing the effect or who are physically present at the operational site.

**The well-being, safety, or health of members of the public**—Members of the public are considered to be persons not physically present at the location of the operation, including workers at nearby locations who are not involved in the operation and the off-base population. Also included within this category are hazards to equipment and structures.

### 3.5.1 REGION OF INFLUENCE

The region of influence for potential impact related to the health and safety of workers includes work areas associated with the construction of an estimated 28,744-square-foot facility that will support operation and control of new Wideband Gapfiller Satellite constellation and is timed in conjunction with the launch and placement of Wideband Gapfiller Satellites in orbit. The worker population of concern for the Proposed Action would predominantly consist of the personnel directly involved with the construction of the WSOC Facility.

### 3.5.2 AFFECTED ENVIRONMENT

#### Public Safety

Police services at FGGM are provided by military police. Additionally, Maryland State Police troopers are located at barracks in Jessup and Glen Burnie. The FGGM Fire Station has a 30-member staff, two engine-pump trucks, one emergency rescue vehicle, and one hazardous materials trailer.

#### Medical Facilities

Kimbrough Ambulatory Care Center, a Fort Meade outpatient medical care facility, is located less than 1 mile from the Preferred Alternative site. Three nearby civilian hospitals provide emergency services to the area: North Arundel Hospital in Glen Burnie (6 miles east of Fort Meade), Laurel Regional Hospital in Prince George's County (6 miles west), and Anne Arundel Medical Center in Annapolis (12 miles southeast). Military facilities nearby include Walter Reed Army Hospital in northwest Washington, D.C. (30 miles southeast) and National Naval Medical Center in Bethesda, Maryland (24 miles southeast). (United States Army Intelligence and Security Command Fort Belvoir, Virginia, 2007)

#### Munitions and Explosives of Concern (MEC)

The project site is located within the former mortar range. An EBS was done by USACE-Baltimore HTRW branch. The proposed site is immediately east of the existing SATCOM facility on what is now the western portion of Fort Meade Golf Course and extends into Former Mortar Range and Training Area (a current 291-acre Military Response Site (MRS)), which roughly corresponds to the western half of the Golf Course and portions of NSA. The MRS has been

subjected to a Remedial Investigation by the Army, which included extensive geophysical investigations. Records indicate all targets excavated were determined to be practice munitions debris including practice mortar rounds, a practice landmine, flares, practice grenades, and discarded small arms ammunitions. None of these items appear to have been located and recovered from the proposed site for the WSOC Facility. (Fort Meade, 2008)

## **3.6 INFRASTRUCTURE**

Infrastructure addresses transportation routes and those facilities and systems that provide water, wastewater treatment, collection and disposal of solid waste, and power.

### **3.6.1 REGION OF INFLUENCE**

The region of influence for infrastructure includes ground transportation, waterways, and utility systems that could potentially be affected, which include potable water distribution, wastewater collection, solid waste collection and disposal, and electrical lines within or servicing the vicinity of the project site. Rail service is provided by AMTRAK and Maryland Area Regional Commuter (MARC) train.

### **3.6.2 AFFECTED ENVIRONMENT**

#### **Transportation**

The region of influence for transportation encompasses FGGM and the roadways within approximately 1 to 2 miles of the Post. FGGM is located in the western part of Anne Arundel County and is served by the surrounding roadway network. Access to FGGM is obtained through 10 control points, 8 of which are open and staffed on a regular basis. FGGM can be directly accessed (via secured gates) from MD 32, MD 175, Fort Meade Road (MD 198), and the Baltimore-Washington Parkway (which is designated as MD 295 north of MD 175).

#### **On Post Roadways**

Access routes through FGGM include Rockenbach Road, which extends from MD 175 south and west through FGGM to Canine Road and Samford Road, then to MD 32, and Mapes Road, which extends east from MD 32 through FGGM to MD 175. Internal circulation is provided through collector roadways such as Ernie Pyle Street, Mac Arthur Road, Cooper Avenue, Llewellyn Avenue, Reece Road, and Taylor Avenue. Most roads consist of one lane in each direction, with signals or stop signs (two-way, three-way, or four-way) at most intersections.

#### **Transit**

Although it lacks direct access, FGGM is relatively close to several major intermodal transportation air and rail hubs including:

- Air: Baltimore Washington International—Thurgood Marshall Airport is approximately 10 miles from FGGM.
- Metro (Baltimore): Maryland Transit Administration's (MTA) Metro heavy rail system provides high-speed transit service in a 15.5-mile corridor from Owings Mills in

western Baltimore County through downtown Baltimore to Johns Hopkins Hospital. With the potential to transfer to light rail or MARC service (on the Camden line), additional portions of Baltimore City and Baltimore County may be considered as having potential transit access to FGGM.

- **Light Rail (Baltimore):** MTA's Central Light Rail Line provides high-frequency, medium-speed transit service along a north-south 30-mile corridor from Baltimore County to Anne Arundel County. It intersects with the Metro (less than 1 block separation) and connects with many local bus routes. Near FGGM, it can be accessed at either the Cromwell/Glen Burnie station or the BWI Business District station, both less than 9 miles from FGGM.
- **Intercity and Commuter Rail:** MTA's MARC service provides high-speed, medium-frequency commuter rail service in the Baltimore–Washington region and beyond. In the Baltimore region, MARC trains operate in two existing rail corridors totaling 77 miles, with stations in all jurisdictions except Carroll County. The Penn Line runs between Perryville in Cecil County and Union Station in Washington DC and stops at eight stations in the region. The Camden Line runs from Camden Station in Baltimore to Union Station and stops at six stations in the region. Several MARC stations are near FGGM; it is approximately 3.5 miles to the Odenton MARC station (Penn line, 1.5 miles from the nearest access gate), approximately 8 miles to the BWI MARC station (Penn line), less than 8 miles to the Laurel MARC station (Camden line) and less than 7 miles to the Jessup MARC station, also on the Camden line. Currently, MARC service on the Penn Line provides 38 stops per day at the Odenton MARC station. This station records the highest usage of any suburban station on the MARC system with 2,100 average daily boardings.
- **Amtrak:** With Amtrak stations in Washington, DC, Baltimore, and BWI, connections can be made throughout the country.
- **Metro (Washington):** The Washington Metropolitan Area Transportation Authority (WMATA) Metro system can be accessed at the New Carrollton station, approximately 19 miles from the post, and at the Greenbelt station—almost 25 miles by road because of the orientation of the access roads to the station.
- **Bus Service:** MTA, WMATA, and Corridor Transportation Corporation (CTC) Connect-A-Ride (sponsored by Anne Arundel and Howard Counties) provide a variety of bus services in the vicinity of FGGM. Only one route, however, (K Route) currently directly serves FGGM. Similarly, the F Route is the only route that serves NSA.

### **Potable Water Systems**

FGGM receives most of its potable water from six groundwater wells that are located on the south side of the installation. The source of the raw water is the Patuxent Aquifer. The Little Patuxent River is used as a secondary source by FGGM's water treatment plant, which is located on the southwestern corner of the installation near the intersection of Maples Road and O'Brien Road. The water treatment plant was last upgraded in 1986.

The WTP is a multimedia filtration plant that contains three aboveground clearwell storage tanks with a combined capacity of 2.3 million gallons and seven active water storage tanks with

capacities that range from 200,000–600,000 gallons. (Fort Meade, 2007). All wastewater generated at FGGM is processed at the FGGM WWTP.

### **Natural Gas**

FGGM is supplied with natural gas by Baltimore Gas and Electric (BG&E) via high pressure mains, which form a loop around the installation. The natural gas distribution system at FGGM is extensive and runs throughout the installation. New gas-fired boilers installed throughout the installation have replaced old centralized oil-fired boilers. (Versar, 2005)

### **Stormwater Drainage**

FGGM's storm drainage system consists of two major defined watersheds and one minor undefined watershed. These three natural drainage areas are supplemented with an extensive network of storm drain pipes and attendant drainage structures supplemented by swales, ditches, other drains, and retention ponds. These drainage areas are generally north-south (N-S) oriented, emanate in the northern portion of the installation, and ultimately discharge into the Little Patuxent River, a tributary of the upper Chesapeake Bay (Fort Meade, 2005). The State of Maryland has stringent standards to protect the Chesapeake Bay watershed's valuable water resources. Provisions of the Code of Maryland Regulations 260901-260902 require that all jurisdictions within the State implement a stormwater management program to control the quality and quantity of stormwater runoff resulting from new development. The regulations require that the release rate from newly developed areas not exceed the rate generated by the site under undeveloped conditions. Furthermore, FGGM maintains a Stormwater Pollution Prevention Plan (SWPPP) that establishes BMPs for controlling and preventing siltation and other contaminants associated with construction and industrial activity sites from reaching area surface waters.

### **Wastewater**

The FGGM operates its own WWTP and has the capacity to process and treat 4.5 million gallons per day (MGD) of wastewater, but currently treats between 2 and 3 MGD. The 10-year average flow to the plant is 2.3 MGD, with a maximum instantaneous flow of 12 MGD (Fort George G. Mead, 2004a). The maximum flow to the plant typically occurs during wet weather. Once treatment of the wastewater is complete, the majority of the treated water is discharged into the Little Patuxent River, just downstream of the low water dam and north of the Simonds Bridge (Versar, 2005). During the summer months, an average of 133,000 gallons of treated water per day is also discharged to the two FGGM golf courses for irrigation (U.S. Department of Energy, 2002). The primary WWTP discharge point in the Little Patuxent River is approximately 12 miles upstream from where the Little Patuxent River flows into the Patuxent River, and it is approximately 43 miles upstream of where the Rivers empty into the Chesapeake Bay. The discharged water is required to meet specific parameters in order to be considered in compliance with its MDE permit. These include, but are not limited to, a nitrogen load cap of 54,800 lbs/year, a total phosphorous weekly average of 1.5 mg/l, a minimum dissolved oxygen level of 5.0 mg/l, and a pH range of 6.5-8.5, as well as Biological Oxygen Demand and fecal coliform levels.

The FGGM WWTP operates under a National Pollutant Discharge Elimination System (NPDES) Wastewater Treatment Plant Permit, which authorizes and regulates the plant's water discharge to the Little Patuxent River. Along with this primary permit, the WWTP also operates under two installation-wide permits—an NPDES Stormwater Discharge Permit which allows the discharge

of stormwater from industrial facilities, and an NPDES General Discharge Permit which allows discharge of stormwater from maintenance and repair activities. Each of these three permits is issued by MDE (Versar, 2005). The FGGM WWTP has historically and is currently in compliance with all of its discharge standards and permit requirements (Chesapeake Bay Foundation, 2003). See Section 4.10, Table 4-1 for permits and regulatory authorizations.

The FGGM property lies within the Chesapeake Bay watershed, which is one of the nation's largest and most productive ecosystems. Its watershed includes six States and the District of Columbia and drains 64,000 square miles of land (Chesapeake Bay Foundation, date unknown). Chesapeake Bay has been drastically impacted by agricultural and urban runoff, to the extent where areas of the Bay are considered dead. Both farming operations and wastewater treatment plants are major contributors to Chesapeake Bay contamination. Nitrogen and phosphorous from both sources runoff or are discharged into rivers and streams and eventually reach the Bay (Chesapeake Bay Program Office, 2009, Chesapeake Bay Foundation, 2005). Eutrophication then occurs as excessive algal growth results from an increase in nutrients in the Bay. This makes it difficult or impossible for aquatic species such as fish and vegetation to survive as it causes an increase in turbidity and dissolved oxygen depletion (United States Environmental Protection Agency, 2000, United States Geology Service, date unknown). Pollution from WWTPs results when discharged wastewater is not in compliance with local, State, or Federal standards. This is common in the Bay watershed, but, as stated earlier, the FGGM WWTP has consistently been in compliance with all of its operational permits.

### **Solid Waste Management**

No active landfills are located on FGGM; all solid waste is transported to a permitted facility located off the Post. Solid wastes are currently collected and disposed of under a contract with IAP World Services. Solid waste is ultimately transported to the King George Landfill in King George, Virginia through the Annapolis Junction Transfer Station. The King George Landfill has a total capacity of 31.8 million tons. In 2000, the landfill had a remaining capacity of approximately 28 million tons (Fort Meade, 2007).

### **Electricity**

BG&E provides the majority of the electricity used at FGGM, while some additional electricity is provided by Constellation Energy. A 115-kilovolt (kV) transmission line brings electricity to Government-owned master substations on the installation. The existing primary source for approximately 79 percent of FGGM's power is a 110 kV feederline from the BG&E Waugh Chapel Power Station that is located along the southern and eastern sides of the installation along MD Route 32 in the immediate vicinity of the project site.

FGGM is in the process of privatizing and upgrading all on-base electrical facilities. A new electrical substation will be constructed and all aboveground distribution facilities will be relocated underground as part of the privatization upgrades. Recent studies indicate that the new transmission and distribution facilities will be able to handle the projected growth at FGGM without impacting power supply redundancy (Versar, 2005).

## 3.7 LAND USE

Land use addresses existing land use patterns on areas of FGGM that are being considered for the Proposed Action.

### 3.7.1 REGION OF INFLUENCE

The site is located adjacent to the NSA perimeter fence. The site is located adjacent to the existing SATCOM facility off Love Road to the west, and the FGGM golf course to the east.

### 3.7.2 AFFECTED ENVIRONMENT

FGGM, comprising approximately 5,027 acres, is located almost midway between Baltimore, MD, and Washington, D.C., approximately 4 miles east of Interstate 95 and, at its closest boundary, one-half mile east of the Baltimore-Washington Parkway (MD-295). The Post is accessed via Maryland State Routes 175 and 32. Current land use at FGGM includes housing, administrative, recreational, open space, troop housing, and industrial. Similar to other large military installations, FGGM has distinct zones based on prominent use. The northern section of FGGM consists primarily of military family housing with public schools. The southern section consists primarily of the administrative, unaccompanied housing, and industrial operations of the Post. A golf course and retail center is located in the center of the Post, between the northern and southern sections. On the western edge of FGGM is the NSA complex, which conducts industrial and administrative functions (Fort Meade, 2005).

Approximately 800 acres on FGGM are available for future development. Additional areas are expected to become available as older facilities are replaced or removed, and flat parking surfaces are replaced by parking structures. Future development at FGGM will be in compliance with the current Comprehensive Expansion Master Plan (Fort Meade, 2005). FGGM's Master Plan establishes both current and future land use activities on the Post. Current activities on the Post include the support of more than 78 tenant units such as the Defense Information School Headquarters and the National Security Agency, Kimbrough Ambulatory Care Center, the Post Exchange, the Commissary, barracks, and various family housing areas. The Master Plan establishes zones for development on the Post.

The Patuxent Research Refuge lies to the south of Tipton Airfield, which in turn is located just over 2,500 feet southeast of the WWTP. The bulk of the refuge lies south southwest of the WWTP. The refuge was established in 1936 and is the Nation's only NWR established to support wildlife research. Anne Arundel County is more than 50 percent developed, with 17 percent of this development being non-residential (commercial, governmental, institutional, and roads).

Land use categories at FGGM include operations, housing, community, school (Anne Arundel County), and open space. The land use categories are summarized and further described as follows:

- **Operations**—Land use that facilitates installation and tenant operations including administrative, training and education, and industrial operations. Includes those areas used by the USEPA and Architect of the Capitol.

- **Housing**—Land use that includes family housing, unaccompanied troop housing, troop dining, and personnel support.
- **Community**—Land use that accommodates morale, welfare, and recreation and related functions such as retail, recreation, fitness, and school age services.
- **School**—Land use that includes Anne Arundel County elementary, middle, and high schools.
- **Open Space**—Land use that includes undeveloped areas, forested areas, the golf courses, and the three Enhanced Use Lease (EUL) sites. Roads, paved areas (including parking), and small structures may be included.

### **On-Base Recreation**

FGGM offers a multitude of on-base recreational services. Outdoor recreation includes Burba Lake, Camp Meade RV Park, Check-it-Out equipment rental, the Family Pet Center, the Greenhouse, and an RV storage lot. There are athletic and fitness centers, track, and intramural and varsity level sports, bowling allies, auto shop, and golf courses. The FGGM Golf Course is to the east of the proposed site and a recreational jogging trail is located adjacent to the proposed site. There are services that focus on children and youth and other family needs.

### **Landfill**

No active landfills are located on FGGM; all solid waste is transported to a permitted facility located off the Post. See Section 3.6.

### **Prime and Unique Farmlands**

Because there is no agricultural production within FGGM, no land within the installation is considered Unique Farmland.

## **3.8 SOCIOECONOMICS**

Socioeconomics describes a community by examining its social and economic characteristics. Several demographic variables are analyzed to characterize the community, including population size, the means and amount of employment, and income creation. In addition, socioeconomics analyzes the fiscal condition of local government and the allocation of the assets of the community, such as its schools, housing, public services, and healthcare facilities.

### **3.8.1 REGION OF INFLUENCE**

The socioeconomic region of influence for FGGM consists of Anne Arundel County, Howard County, Montgomery County, and Prince George's County in Maryland. The geographical extent of the region of influence is based on residential distribution of the installation's military, civilian, and contracting personnel, and the location of businesses that provide goods and services to the installation and its employees.

### 3.8.2 AFFECTED ENVIRONMENT

The socioeconomic region of influence for FGGM consists of Anne Arundel County, Howard County, Montgomery County, and Prince George's County in Maryland. These counties comprise the area in which the predominant socioeconomic effects of the Proposed Action would take place. The geographical extent of the region of influence is based on residential distribution of the installation's military, civilian, and contracting personnel, and the location of businesses that provide goods and services to the installation and its employees. (U.S. Army Corps of Engineers, 2007)

#### Regional Economic Activity

The regional economy is dominated by non-farm industries such as Government and Government enterprises, retail trade, professional and technical services, and health care.

#### *Installation Contribution to the Local Economy*

FGGM is the number one employer in Anne Arundel County, employing 36,742. FGGM is projected to have a \$5 billion per year economic impact on the regional economy. Through the BRAC process, FGGM will be the site for the relocation and consolidation of several DoD organizations. As a result, 5,695 direct jobs will be consolidated to FGGM from around the Country. The BRAC process is scheduled to be completed by September 2011. (Anne Arundel Economic Development Corporation, 2006)

#### Population, Housing, and Income

##### *Demographics*

Montgomery County is the most populous county within the region of influence as well as the State, and Howard County is the least populated county in the region of influence. Population data for the region of influence counties, Maryland, and the United States are presented in Table 3-6 for comparison purposes.

**Table 3-6. Estimated Population Growth Between 2000 and 2008**

Location	2000 Estimated Population	2008 Estimated Population	Percent (%) Change
Montgomery County	873,341	950,680	8.9% increase
Anne Arundel County	489,664	512,720	4.7% increase
Prince George's County	801,515	820,852	2.4% increase
Howard County	247,843	274,995	11% increase
Maryland (State of)	5,296,516	5,633,597	6.4% increase
United States	281,424,602	304,059,724	8.0% increase

Source: U.S. Census Bureau, 2009a

In 2008 the U.S. Census estimated a total population of 512,790 within Anne Arundel County, Maryland. Approximately 11.4 percent of the population was older than 65, and 23.9 percent of the population was younger than 18. Minorities comprised 25 percent of the total population. (U.S. Census, 2009b)

## Housing and Income

Table 3-7 presents housing characteristics for the region of influence for the year 2008, as well as median housing income for the year 2007. The housing units identified in the table include all structure types (e.g., single-family homes, apartments, and mobile homes).

**Table 3-7. 2008 Housing Units and 2007 Median Household Income**

	Montgomery County	Anne Arundel County	Prince George's County	Howard County
Total Housing Units (2008)	364,998	204,199	321,577	105,500
Median Household Income (2007)	\$91,440	\$80,158	\$67,706	\$100,744

Source: U.S. Census Bureau, 2009a

## 3.9 WATER RESOURCES

This section describes the existing water resource conditions at the proposed sites. Water resources include surface water, groundwater, water quality, and flood hazard areas.

Water resources include those aspects of the natural environment related to the availability and characteristics of water. For the purposes of this document, water resources can be divided into three main sections: surface water, groundwater, and flood hazard areas.

Surface water includes discussions of runoff, changes to surface drainage, and general surface water quality. Groundwater discussions focus on aquifer characteristics, general groundwater quality, and water supply. Flood hazard area discussions center on floodplains.

Where practicable, water resources are described quantitatively (volume, mineral concentrations, salinity, etc.); otherwise, they are described qualitatively (good, poor, etc.) when necessary.

### 3.9.1 REGION OF INFLUENCE

The region of influence is the immediate area surrounding the Proposed Action site.

### 3.9.2 AFFECTED ENVIRONMENT

#### Surface Water

FGGM is mostly located in the Little Patuxent drainage of the Atlantic Coastal Plain Physiographic Province. The extreme northeastern corner of the Post drains to the Severn River. There are three tributaries to the Little Patuxent on the Post, with Midway Branch and Franklin Branch being the two primary tributaries, and an unnamed tributary composed of two smaller tributaries.

Within the FGGM boundaries there are approximately 38,000 linear feet (7.2 miles) of perennial stream channel as well as other intermittent channels. The majority of the installation is drained

by Midway Branch and its primary tributary, Franklin Branch. Midway Branch is a tributary to the Little Patuxent River. The installation also includes smaller sized drainage areas associated with tributaries to the Little Patuxent River and Severn River. The Chesapeake Bay is approximately 12 miles to the east.

The Patuxent River is part of the greater Chesapeake Bay watershed. The Chesapeake Bay is North America's largest and most biologically diverse estuary, home to more than 3,600 species of plants, fish, and animals (Chesapeake Bay Project, 2000). To protect and restore this valuable ecosystem, Maryland joined a consortium of State and Federal agencies to establish the Chesapeake Bay Program partnership. The Army's conservation mission supports the Chesapeake Bay Programs, and FGGM is implementing BMPs that support the guidelines established by the partnership. Approximately 1 mile south of the Route 198 Bridge, the Little Patuxent River and its tributaries are designated "Use I-P" waters (Fort Meade, 2004). Use I-P waters are protected for water contact recreation, protection of aquatic life and public water supply. This designated use does not include Franklin Branch and Midway Branch; however, it does include the reach of the Little Patuxent River passing through FGGM, as well as the two unnamed tributaries. (Fort Meade, 2004a)

### **Groundwater**

The primary sources of potable water at FGGM are six groundwater wells located on the South side of the installation. Three aquifers—the Patuxent Aquifer, the Upper Patapsco Aquifer, and Lower Patapsco Aquifer—underlie FGGM. The Patuxent Aquifer lies beneath a layer of Arundel Clay, which can be up to 250 feet deep. The Arundel Clay serves as a confining unit for the Patuxent Aquifer. The Lower Patapsco Aquifer lies above the Arundel Clay formation and is composed of fine- to medium-grained brown sand. The Upper Patapsco Aquifer is unconfined and is considered the water table aquifer.

The Patuxent Aquifer is at or near the surface near the fall line (the boundary between the Coastal Plain and Piedmont physiographic provinces) and dips below the surface as it moves eastward. It is between 200 and 400 feet thick beneath the installation. Static water levels in the wells range between 80 and 120 feet below the surface.

FGGM complies with standards in the Safe Drinking Water Act (SDWA) and Code of Maryland Regulations (COMAR). Drinking water is tested according to permit requirements.

### **Wild and Scenic Rivers**

The Maryland Scenic and Wild Rivers Act of 1968 established State policy to protect the water quality of designated Scenic Rivers and fulfill vital conservation purposes of wise use of resources within the Scenic and Wild Rivers System. The Patuxent and Severn Rivers have been designated as Maryland Scenic Rivers. These rivers are not in the vicinity of the project site. There are no federally listed Wild and Scenic Rivers in Maryland (National Park Service, 2009).

### **Wetlands and Floodplains**

Of the approximately 5,400 acres on FGGM, only 154 acres have been designated as wetlands. The majority of these wetlands are situated on the floodplain of the Little Patuxent River, in the southwestern section of the installation. Information concerning the potential nature and extent of wetlands at the project site was obtained by performing a routine wetlands jurisdictional

delineation of the project site, from nontidal wetlands maps included in the National Wetlands Inventory Map (Figure 3-3) and geographic information systems data drawn from the *Wetlands Mapping Report for the United States Army, Fort Meade*. Wetlands were identified from photographs based on vegetation, visible hydrology, and geography, in accordance with Classification of Wetlands and Deepwater Habitats of the United States (FWS/OBS-79/31, December 1979).

The Chesapeake Bay watershed region supports some of the most ecologically and commercially important wetland areas in the United States (Versar, 2005). There are a variety of palustrine wetlands adjacent to the Little Patuxent River, but there are no wetlands in the immediate area of the proposed project.

Executive Order 11988, Floodplain Management, instructs federal agencies to consider the risks, danger, and potential impacts of locating projects within floodplains. Floodplains are typically described as areas likely to be inundated by a particular flood. For example, a flood that has a one percent chance of occurring in any one year is the 100-year flood. The report titled "Floodplain Analysis And Mapping U.S. Army Garrison Fort George G. Meade, Anne Arundel County, Maryland", prepared by the U.S. Army Corps of Engineers, Baltimore District (U.S. Army Corps of Engineers, 2008), provides a detailed floodplain analysis indicating reaches along Franklin Branch and Midway Branch that are prone to flooding. This report is to be used by FEMA as the official floodplain mapping for the area. As such, floodplain regulations regarding construction fill, and storage of materials should be adhered to.

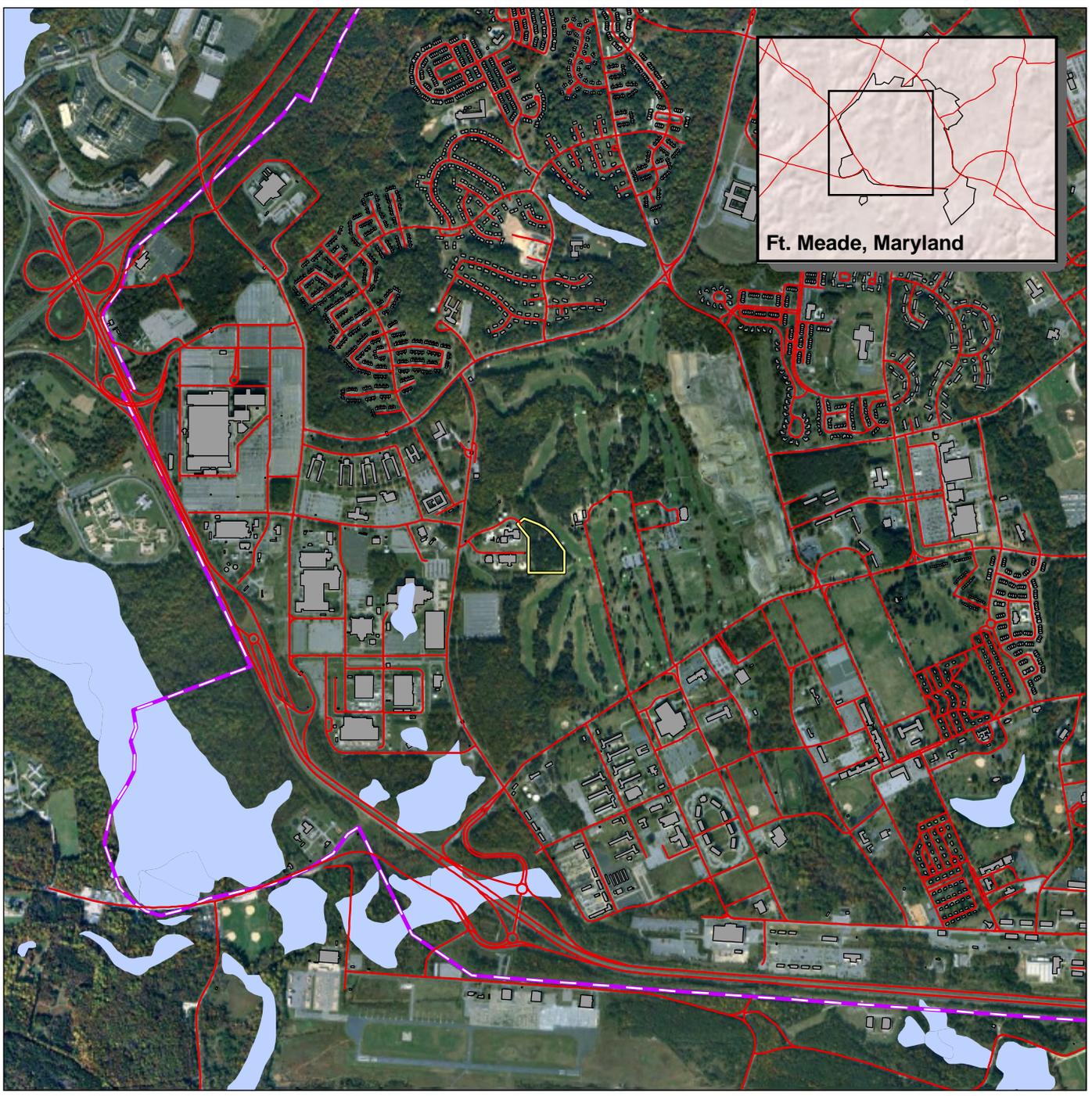
### **Coastal Zone**

Established by an Executive Order and approved in 1978, CZM Program is a network of State laws and policies designated to protect coastal and marine resources. FGGM is located entirely within Anne Arundel County, which has 447 linear miles of tidal shoreline, and major Chesapeake Bay tributaries that penetrate 8-10 miles inland (Versar, 2005). Because of its location, all of Anne Arundel County, including the proposed project site, lies within the Maryland Coastal Zone.

### **Water Quality**

The Maryland Department of the Environment designates the segments of the Little Patuxent River and its tributaries that are upstream from a point one mile south of the Route 198 Bridge, as Use I-P Waters. Use I-P Waters are protected for water contact recreation, aquatic life, and public water supply. The area of concern is located within the Department of Interior property near the Patuxent Environmental Science Center bordering FGGM to the south (Fort Meade, 1998). Use I-P Waters must be suitable for the following activities:

- Water contact sports
- Play and leisure-time activities where individuals may come into contact with the surface water
- Fishing
- The growth and propagation of fish (other than trout), other aquatic life, and wildlife



**EXPLANATION**

-  Road
-  Installation Area
-  Wetland Area
-  Project Area
-  Existing Structure



NORTH 0 0.25 0.5 1 Miles

**National Wetland  
Inventory Map  
for the Project Site**

Ft. George G. Meade, Maryland

**Figure 3-3**

- Agricultural water supply
- Industrial water supply
- Public water supply

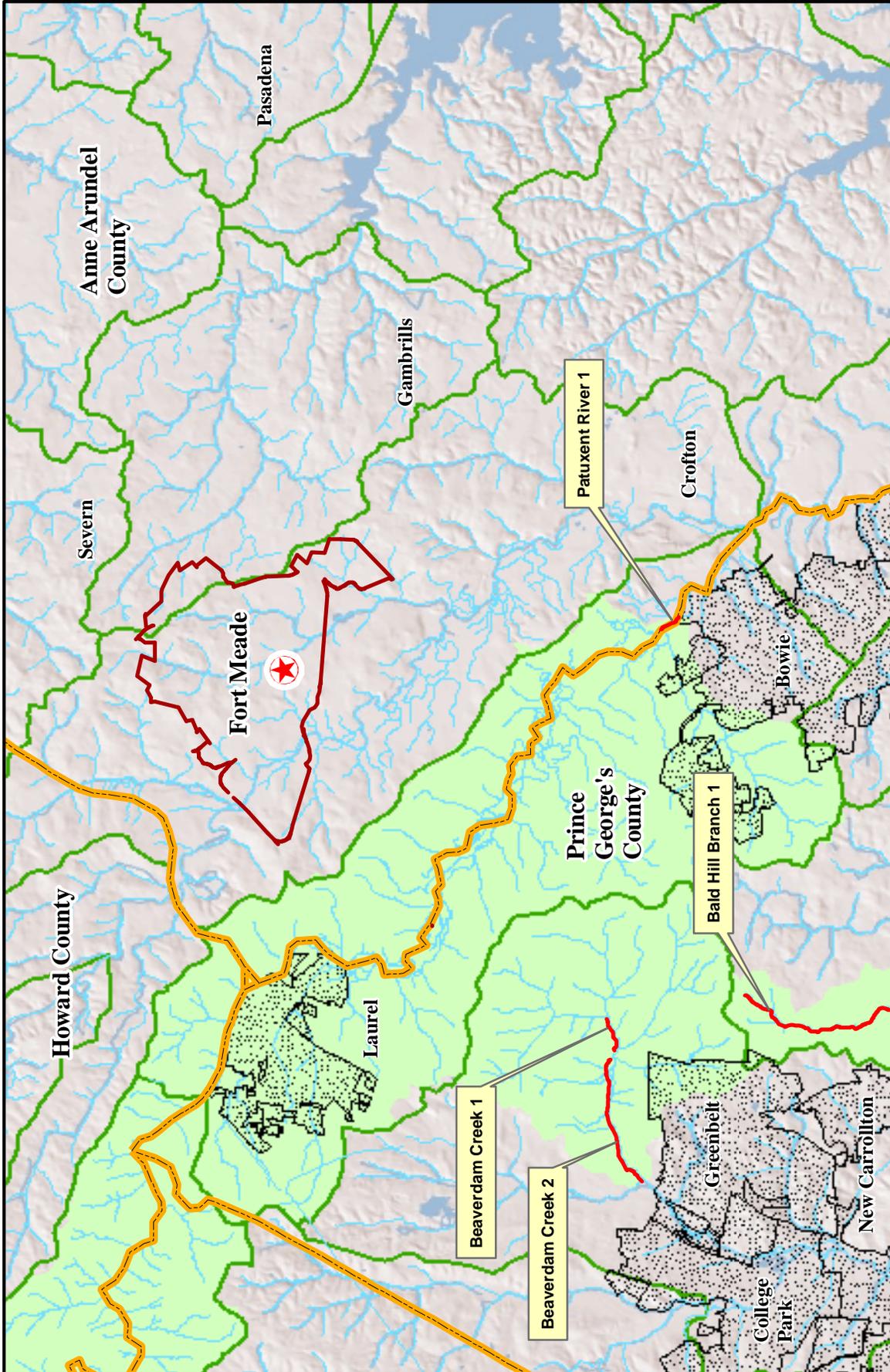
Section 303(d) of the Clean Water Act (CWA) directs each State to identify and list waters, known as water quality limited segments, in which current required controls of a specified substance are inadequate to achieve water quality standards. This list of impaired waters is commonly referred to as the “303(d) list.” For each water quality limited segment, the State is to establish a Total Maximum Daily Load (TMDL) of the specified substance that the waterbody can receive without violating water quality standards. Prior to the development of a TMDL, Government decisions must ensure no net increase of impairing substances or stressors from permitted activities. Following the development of a TMDL, Government decisions must ensure that loads of impairing substances or stressors are consistent with allocations reflected in the TMDL.

Less than half a mile from FGGM’s eastern boundary lie tributaries of the Severn River, which are designated as Use IV Recreational Trout Waters. These waters have the potential for, or are currently:

- Capable of holding or supporting adult trout for put-and-take fishing.
- Being managed as a special fishery by periodic stocking and seasonal catching.

### **Tier II Waters**

The State of Maryland requires special protections of waters of very high quality (Tier II waters). The policies and procedures that govern these special waters are commonly called “anti-degradation policies.” The Anti-degradation Policy Implementation Procedures, Code of Maryland Regulation 26.08.02.04-1, protect waters with higher water quality than required for that water’s designated use. All activities subject to an NPDES permit or a water and sewer plan amendment are subject to State review and approval under the Anti-degradation Policy Implementation Procedures. Tier II waters have been identified south of FGGM. Figure 3-4 indicates FGGM’s proximity to High Quality (Tier II) Waters.



**MARYLAND**  
 Martin O'Malley, Governor  
 Anthony G. Brown, Lt. Governor  
 Shari T. Wilson, Secretary  
 Robert M. Summers, Deputy Secretary

## Fort Meade - Proximity to High Quality (Tier II) Waters

- Map Legend**
- Fort Meade
  - Municipalities
  - County/State Boundaries
  - Tier II Waters
  - All Other Streams/Rivers
  - Tier II Catchments
  - Watershed Boundaries

Maryland Department of the Environment  
 Science Services Administration  
 Montgomery Park Business Center  
 1800 Washington Boulevard, Suite 540  
 Baltimore, Maryland 21230-1718  
 Date Map Prepared: August 2009

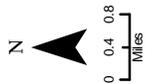


Figure 3-4. Fort George G. Meade's Proximity to High Quality (Tier II) Waters

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## **4.0 Environmental Consequences**



## **4.0 ENVIRONMENTAL CONSEQUENCES**

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This chapter describes the potential environmental consequences of implementing the Proposed Action by comparing the effects of these activities on the potentially affected environment. To assess the potential for and significance of environmental impacts from the proposed WSOC Facility program activities, a list of activities was developed (Chapters 1.0 and 2.0) and the environmental setting was described, with the emphasis placed on any special environmental sensitivities (Chapter 3.0). Activities associated with the construction and operation of the new facility were then compared with the potentially affected environmental resource areas to determine the impacts of the Proposed Action. The No-action Alternative was also considered as applicable.

Cumulative impacts result from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of who undertakes such action. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time.

Consistent with Council on Environmental Quality regulations, the scope of the analysis presented in this section was defined by the range of the potential environmental impacts that could result. Resources that have the potential for impacts were considered in the analysis to provide the decision makers with sufficient evidence and analysis for evaluation of potential effects of the actions.

### **4.1 AIR QUALITY**

#### **4.1.1 PROPOSED ACTION**

The proposed WSOC Facility would consist of an approximately 5-acre site with a new one-story 28,744 square foot building, and a parking area for 56 cars. Construction would include grading of 4.5 acres and the demolition of one-story Buildings 8904 (17,731 square feet) and 8904A (10,130 square feet). No new personnel or missions will relocate to FGGM as a result of the proposed WSOC Facility. Emissions producing equipment during operations will be limited to space heating, hot water generation boilers, and emergency standby power generators.

Emissions associated with construction activities include fugitive dust from ground disturbance, combustion byproducts from construction equipment (e.g., generators, saws), and construction worker vehicle miles traveled during construction. Ground disturbance of approximately 4.5 acres would generate dust in the immediate vicinity of the construction, increasing the PM-10 and PM-2.5 emissions. The levels of dust generated would be mitigated using standard BMPs (such as watering exposed soil and unpaved roads).

It is anticipated that the net increase of emissions associated with operational activities would be minimal. There are no added personnel proposed, thus no increased Government and privately-owned vehicle use associated with new employees. There would be no increased space heating/cooling of the new building. It is anticipated that the proposed construction activities and operational activities for the Proposed Action would not cause exceedances of the

NAAQS and would not have a long-term impact to air quality in the area. Therefore, air conformity analysis screening and air permits are not required.

Instead of quantifying the emissions for the proposed WSOC facility, it is assumed that emissions from the construction and ongoing operations of the proposed WSOC Facility would be less than the emissions calculated for the larger scale 902nd MI Headquarters facility proposed at FGGM. Short-term and long-term impacts to air quality were evaluated in a 2007 EA for the proposed 902<sup>nd</sup> MI Headquarters facility (U.S. Army Intelligence and Security Command Fort Belvoir, Virginia, 2007). The emissions calculations prepared for the proposed 902nd MI Group Headquarters showed that emissions would be minor and were classified as *de minimis*. The 902<sup>nd</sup> MI Headquarters would be a larger scale project than the WSOC Facility, including construction of a 128,257 GSF building, with a second phase (to be constructed fiscal year 2015 or later), estimated to be 291,857 GSF. It was designed not to use structures, chemicals, or thermal pollution that would impact the climate. The facility did not include any significant air emissions producing equipment that changed the installation's Synthetic Minor Air Permit status. Thus, the emissions from the construction and operation of the proposed WSOC Facility are anticipated to be less than the emissions from the larger scale 902<sup>nd</sup> MI Headquarters Facility.

#### **4.1.2 NO-ACTION ALTERNATIVE**

Under the No-action Alternative, there would be no change in existing conditions, and no new construction activities would take place. Therefore, no additional impacts would occur to this resource (air quality).

#### **4.1.3 CUMULATIVE IMPACT**

The construction and subsequent operation of the FGGM WSOC will not significantly affect regional air quality in and around Anne Arundel County, Maryland, due to the relatively minor amount of emissions generated. As stated in Chapter 3.0, Anne Arundel County is ranked as the top geographical emitter of PM 2.5, sulfur dioxide, and nitrogen oxides in the State of Maryland. Numerous industrial plants as well as activities associated with the large urban corridors of Washington, DC and Baltimore, Maryland contribute to the degraded air quality in this region. Overall, the emissions released from the Proposed Action will be an incremental addition to a larger air quality problem, but will not in and of themselves constitute a significant impact to air quality.

#### **4.1.4 MITIGATION**

Mitigation would lessen the minor impacts of the construction of the Proposed Action. During construction, the contractor should control fugitive dust emissions from soil piles and unpaved construction roads by surface treatment with penetration chemicals, soil stabilization chemicals, watering, and traffic-control regulations.

## 4.2 BIOLOGICAL RESOURCES

### 4.2.1 PROPOSED ACTION

The site is heavily wooded, rolling terrain with a total elevation change of 22 feet and slopes ranging from 5 to 17 percent. Other constraints include a 20-foot forest preservation buffer between the site and the golf course. The Proposed Action would include constructing a new facility, relocating the jogging path, relocating the NSA boundary fence 148 feet from the building, relocating the NSA perimeter surveillance road, and relocating the existing SATCOM complex fencing. Fencing realignments would incorporate the new facility into both the NSA campus and within the existing SATCOM secured perimeter. The site would require clearing of existing common brush and trees associated with the forested area. Outcroppings of rocks that have been interpreted as possible existing fill presently on the site were visible during a recent site visit. A balanced site is preferred and could require additional movement of soil and the possibility of retaining walls and additional cut.

#### Vegetation

A new 28,744-square-foot WSOC facility and an associated 56-car parking area would be constructed as part of the Proposed Action. Trenching and installation of primary electrical power feed from Substation #4, and eventual demolition of Building 8904 and Building 8904A are also planned. A new jogging trail route would be leveled and graveled and connect to the old jogging trail above and below the project area. The new trail would be established before the existing trail is disturbed by the construction project. The Proposed Action would require clearing approximately 4.5 acres of trees.

According to FGGM policy, mitigation for tree removal would be to plant (in caliper inches) 1 inch of P-1 trees for each 1 inch of P-1 trees removed, 1 inch of P-1 trees for each 2 inches of P-2 trees removed, and 1 inch of P-1 tree for each 4 inches of P-3 trees removed (See Section 3.3.2 for a list of Priority trees). Preservation of existing dominant trees shall receive the highest consideration in planning the development of proposed projects. Siting options shall be evaluated and presented for review. Mitigation tree planting should occur within the project area; where this is not practical, other planting locations will be provided by Directorate of Public Works, Environmental Division. Trees to be planted shall be from the P-1 list above, and shall include at least five species from this list for any given project. (Fort Meade Environmental Management System, undated)

Trees to be planted shall be at least 1.0-inch caliper, or as otherwise directed in writing by the Directorate of Public Works, Environmental Division. Existing trees shall be protected during construction activity. Grading, cutting, filling and compaction of soil beneath the trees' drip line shall be avoided. Mitigation shall conform to industry standards for acceptable tree management practices FGGM Policy–Tree Management. (Fort Meade Environmental Management System, undated)

Native vegetation would be planted around the new building once construction is complete. Landscaping activities would be coordinated with Natural Resource personnel in the FGGM Environmental Division. All construction equipment should be treated according to BMPs in a manner that would minimize the spread of any invasive species either onto or from the project site.

Trenching for installation of the primary electrical power feed would occur along existing roadways and other previously disturbed areas to the maximum extent practicable. This would minimize the amount of vegetation that would need to be removed.

## **Wildlife**

The majority of the species that currently use the proposed area have adapted to living in urban areas and co-existing with human activity. Many of these same species are also mobile generalist species that use a variety of interspersed and fragmented habitats, range over wide areas for food and cover, or are migratory and would use the site seasonally. Therefore, it is anticipated that most wildlife species would be able to avoid the disturbance by relocating to adjacent minimally disturbed areas. Clearing of vegetation and earth-moving activities may result in some unavoidable mortality to burrowing and less mobile fauna. This loss of habitat would result in a negligible adverse effect.

Construction noise and the presence of personnel could affect wildlife within the area. Construction ground disturbance and equipment noise-related impacts would include loss of habitat, displacement of wildlife, and short-term disruption of daily/seasonal behavior. At 50 ft from construction equipment, noise levels typically range from 70 to 98 dBA. The combination of increased noise levels and human activity would likely displace some small mammals and birds (e.g., common field and urban birds, and small rodents) that forage, feed, or nest within and adjacent to the construction site. Foraging birds would be subjected to increased energy demands if flushed by the construction noise, but this should be a short-term, minimal effect. Construction would not affect the wetlands that these birds use for resting, nesting, and foraging. Bird migration patterns would not be altered.

## **Threatened and Endangered Species**

Since there is no evidence that any federally endangered or threatened plant or wildlife species occur at the site of the Proposed Action other than potential transient species, no threatened or endangered species or critical habitat would be adversely affected by the Proposed Action.

## **Environmentally Sensitive Habitat**

New construction would follow standard methods to control erosion during construction. The construction proposed as part of the WSOC Facility would thus not likely directly or indirectly affect any wetlands on the installation including those associated with the Little Patuxent River.

### **4.2.2 NO-ACTION ALTERNATIVE**

Under the No-action Alternative, the new WSOC facility would not be constructed, and no additional impacts would occur to biological resources.

### **4.2.3 CUMULATIVE IMPACT**

Implementation of the Proposed Action would result in the loss of 4.5 acres of trees and shrubs and thus a cumulative impact to the amount of forest on FGGM when added to the loss from other current and planned construction projects. However, the program would follow FGGM Directorate of Public Works Environmental Division guidance in tree replacement on another area of the installation as mitigation. Removal of the trees would eliminate habitat for some

wildlife. However, as described above, it is anticipated that most wildlife species would be able to avoid the disturbance by relocating to adjacent minimally disturbed areas.

#### **4.2.4 MITIGATION**

According to FGGM policy, mitigation for removal of trees on site would be to plant (in caliper inches) 1 inch of P-1 trees for each 1 inch of P-1 trees removed, 1 inch of P-1 trees for each 2 inches of P-2 trees removed, and 1 inch of P-1 trees for each 4 inches of P-3 trees removed (See Section 3.3.2 for a list of Priority trees). Trees to be planted shall be from the P-1 list above, and shall include at least five species from this list for any given project. To the maximum extent practicable FGGM complies with Maryland Forest Conservation Act standards.

Native vegetation will be planted around the new building once construction is complete. All construction equipment should be treated according to BMPs in a manner that would minimize the spread of any invasive species either onto or from the project site. Trenching for installation of the primary electrical power feed would occur along existing roadways and other previously disturbed areas to the maximum extent practicable.

### **4.3 GEOLOGY AND SOILS**

#### **4.3.1 PROPOSED ACTION**

Naturally occurring levels of the metal, arsenic, in soils represents a potential future liability to the U.S. Army. This can be avoided by managing all soils on the installation or by testing requirements for offsite disposal/reuse. The preferred option for all FGGM projects is to balance all soils on-site in lieu of transporting excess soil off the installation. For projects that cannot meet this requirement, soil that is transported off the installation must be tested. (Fort Meade Directorate of Public Works Environmental Division, 2009) Erosion and Sediment Control, Stormwater Management, and NPDES permits will be pursued from the MDE through the FGGM Environmental Office for this project. The Erosion and Sediment Control Plan will be designed in accordance with MDE regulations as published in the "2010 Standards and Specifications for Soil Erosion and Sediment Control."

BMPs would be incorporated and maintained as part of the new WSOC facility program. BMPs at construction sites typically consist of various erosion and sediment control measures. At the proposed site, silt fences, straw bales, and other temporary measures could be placed in ditches and along parts of the site perimeter to control erosion during construction activities. These temporary erosion prevention measurements would be maintained in place until the replanted site vegetation is firmly established and the soil has stabilized. Regular inspections of the erosion and sediment control measures would be performed after any storm event by qualified personnel, and as required in the NPDES General Permit.

All disturbed areas would be stabilized and revegetated with native plant vegetation following construction activities. Proper seed selection would result in native plants with deep root systems, which would increase local times of concentration and reduce site outflows. Loss of pervious soils may result in increased surface runoff, perhaps contributing incrementally to impairment of local water bodies.

Buildings 8904 and 8904A are located in a previously disturbed area. Soils would be stabilized using the methods described above following the buildings' demolition.

### **Soil Characteristics Pertinent to Construction**

If soils at a proposed project site have a high erosion potential, construction should avoid creating or using areas of steep slope when composed of native soils. Soils at the site should not be left in an unvegetated state, where wind and water can easily strip the soil. Once cleared, these soils should be conserved through practices approved by the Soil Conservation District, such as covering during periods of inactivity with temporary seed mixtures.

Although soil characteristics at the proposed project site can be quite variable with depth, they are generally well suited to building sites except in wetland areas. Layers that restrict permeability and buried objects may hinder deep excavations. Soils at the site are fairly suited to lawns and landscaping. In accordance with construction best management practices, construction contractors will be instructed to halt work should they encounter suspected soil or groundwater contamination so that appropriate soil/groundwater sampling, analysis, and remediation may be performed.

### **4.3.2 NO-ACTION ALTERNATIVE**

Under the No-action Alternative, the new WSOC facility would not be constructed. No additional impacts to geology and soils would occur.

### **4.3.3 CUMULATIVE IMPACT**

The use of BMPs during and after construction would minimize the potential for cumulative impacts to area soils.

### **4.3.4 MITIGATION**

At the proposed site, anti-erosion procedures could include silt fences, straw bales, and other temporary measures placed in ditches and along parts of the site perimeter to control erosion during construction activities. These temporary erosion prevention measurements would be maintained in place until the replanted site vegetation is firmly established and the soil has stabilized. Regular inspections of the erosion and sediment control measures would be performed after any storm event by qualified personnel. Construction contractors will be instructed to halt work should they encounter suspected soil or groundwater contamination so that appropriate soil/groundwater sampling, analysis, and remediation may be performed.

## **4.4 HAZARDOUS MATERIALS AND WASTE**

### **4.4.1 PROPOSED ACTION**

Implementation of the Proposed Action would not result in an increase in the production or use of hazardous material or waste. There would be no impacts on aboveground storage. An aboveground storage tank with capacity for operating the generator system at its full standby

rating for 48 hours will be provided for this project. A direct fueling system with pump and controls will be provided with a backup pump.

Due to the possibility of naturally occurring arsenic soil at the site, soils will remain at the site during grading. This will require additional movement of earth material and the possibility of retaining walls and additional cut. Additional measures may include disposing of several feet of existing soil and replacing it with clean soil.

Due to the possibility of groundwater exceeding MDE cleanup standards for aluminum, iron, and manganese (Fort Meade, 2004b), the Army's work plan submitted to USEPA proposes to install two monitoring wells south and hydraulically down gradient of the site. Field surveys of the site found isolated surface waste of concrete, metal, and asphalt, and additional subsurface investigation was conducted. No further investigations are planned on the project site.

The project site is located within a former mortar range. This range has been subjected to geophysical investigations that identified over 1,000 magnetic anomalies, many of which were excavated and inspected. The predominant munitions found were 60 millimeter (mm) and 81mm mortars. All munitions were determined practice; none were found to contain energetic material. The munitions items found were located in the southern portion of the former Mortar Range, well to the south of the project site. The Baltimore District of the U.S. Army Corps of Engineers has analyzed the available data and determined the site to be "low probability" per DoD Standard 6055.9. Although historic range areas have been identified and studied, there is the potential that old ammunition and ordnance items may still be found at the project site and elsewhere on the installation. This potential can be addressed by one or more of the following as appropriate to the phase of construction: (1) A worker safety recognize, retreat and report program with an onsite MEC expert, (2) A worker safety recognize, retreat and report program with a pre-arranged on-call MEC expert, or (3) A worker safety recognize, retreat, and report program with emergency services support (911).

Army policy mandates that all new construction, renovation, and demolition projects include contract performance requirements to divert at a minimum 50 percent of non-hazardous construction and demolition debris from landfill disposal. The contract performance requirements must include removal and disposal of building materials through demolition, recovery, reuse, and recycling techniques. (U.S. Department of the Army, 2006) Before initiating any demolition activities for buildings 8904 and 8904A, the potential for environmental impacts of special hazards such as Asbestos Containing Material (ACM) and Lead Based Paint (LBP) would be evaluated and addressed as specified in the appropriate regulatory requirements. Demolition that involves LBP or ACM would be evaluated for compliance with the Occupational Safety and Health Administration standard at 29 CFR Part 1926.62; USEPA and Housing and Urban Development standards; and State, Federal, and Army regulations. Any lead paint abatement will comply with COMAR 26.16.01. Measures to control airborne asbestos and lead dust would be implemented. (Fort Meade, 2007)

#### **4.4.2 NO-ACTION ALTERNATIVE**

Under the No-action Alternative, a new WSOC facility would not be constructed. The existing hazardous materials management for the current mission would remain unchanged.

#### **4.4.3 CUMULATIVE IMPACT**

The impacts described in this section of the EA are cumulative impacts.

#### **4.4.4 MITIGATION**

Minor construction related hazardous substance release would be avoided using standard BMPs. No other mitigation measures would be necessary. The Proposed Action should be considered in conjunction with other actions in an installation context.

### **4.5 HEALTH AND SAFETY**

#### **4.5.1 PROPOSED ACTION**

The project is located within the former mortar range. Records indicate that all targets excavated were determined to be practice munitions debris, a practice landmine, flares, practice grenades, and discarded small arms ammunitions. None of these items were located and recovered from the area selected for improvement. However, FGGM construction safety guidelines will be followed to minimize the potential for accidents if additional munitions are found on site.

A balanced site is preferred due to naturally occurring arsenic in the soil. This will require additional movement of earth material and the possibility of retaining walls and additional cut. The site is heavily wooded rolling terrain that will require clearing of existing common brush and trees associated with a forested area. FGGM construction safety guidelines will be followed to minimize the potential for accidents and injuries during tree cutting, trenching activities, and other construction practices.

FGGM safety guidelines will also be followed during demolition of Buildings 8904 and 8904a to minimize the potential for accidents and injuries.

#### **4.5.2 NO-ACTION ALTERNATIVE**

Under the No-action Alternative, the new WSOC facility would not be constructed. No additional impacts to health and safety would occur.

#### **4.5.3 CUMULATIVE IMPACT**

Due to the small potential for impacts to health and safety from the Proposed Action, no cumulative impacts are anticipated.

#### **4.5.4 MITIGATION**

No mitigation measures would be required for implementation of the Proposed Action as it relates to health and safety.

## 4.6 INFRASTRUCTURE

This section discusses the potential environmental consequences of the Proposed Action on the utilities, potable water, wastewater, and transportation.

### 4.6.1 PROPOSED ACTION

#### **Electricity and Potable Water**

The proposed WSOC facility would connect to FGGM utility services (electricity, potable water, fire hydrants, and natural gas). A 115-kV transmission line brings electricity from BG&E to the Government-owned master substation on the installation, and two incoming feeders would provide the entire rated demand load to the proposed WSOC building. Potable water distribution to the new facility would be accommodated within the capacity of the installation's current water supply and distribution system and would not require system upgrades. Electrical and water needs associated with the Proposed Action are not anticipated to have a significant impact on the electrical and potable water systems on FGGM.

#### **Wastewater**

The proposed WSOC facility would connect to the current FGGM sanitary system. Due to the lower elevation of the nearest sanitary line connection site, a lift station would be required. This proposed WSOC facility would be connected to the same sanitary line as the current WSOC facility. This wastewater would continue to be fed to the WWTP. The estimated sewage flow for 70 employees is 1,400 gallons/day. Proposed service would be duplex grinder pumps with a 2-inch force main connection into manhole 5-14. The number of personnel assigned to the proposed WSOC facility is not anticipated to change (it will not increase or decrease). Therefore, the requirements associated with the Proposed Action are not anticipated to have an adverse impact on the wastewater treatment system.

#### **Stormwater Drainage**

Short-term impacts to stormwater could result from construction activities, to include erosion and sedimentation. These impacts should not be significant, and mitigation procedures would be implemented. Stormwater runoff is discussed in more detail in Section 4.9.

#### **Transportation**

##### *Construction*

Construction of the Proposed Action would only slightly increase the volume of traffic in the project area in the short term due to on-road use by construction and grading equipment, construction workforce vehicles, and vehicles delivering construction materials. Construction and worker vehicles are expected to have sufficient parking space, which would avoid further disturbance to main roads. No significant impacts to traffic during the construction phase are expected.

##### *Operation*

The Proposed Action does not require any additional personnel in order to operate. The operation of the proposed WSOC facility will be executed by the same personnel as at the

current WSOC facility. Therefore, no additional impacts are expected to impact the daily traffic associated with the operation of the proposed WSOC facility.

#### **4.6.2 NO-ACTION ALTERNATIVE**

Under the No-action Alternative, there would be no impacts to infrastructure systems in the proposed project area, as there would be no construction of a new WSOC facility.

#### **4.6.3 CUMULATIVE IMPACT**

The implementation of the Proposed Action would not impact the average daily traffic on roadways on FGGM or off-base. No adverse impacts are anticipated from electricity consumption or on the wastewater system from operation of the proposed WSOC facility.

#### **4.6.4 MITIGATION**

The proposed WSOC facility will comply with LEED Silver Level and Executive Order (EO) 13423, which promotes energy efficiency, water conservation, and the use of renewable energy products, and help foster markets for emerging technologies. Stormwater BMPs associated with the new facility will mitigate negative changes in overall water quality. Stormwater mitigation is discussed in more detail in Section 4.9.

### **4.7 LAND USE**

Impacts to land use were evaluated based on whether conflicts with adjacent land use, zoning, or other planning regulations, or incompatibility with existing land use, would result from any potential construction and operation of the proposed WSOC facility on FGGM.

#### **4.7.1 PROPOSED ACTION**

##### **Construction**

Under the Proposed Action, a 28,744-square-foot facility would be constructed on FGGM. While the construction of the WSOC facility would limit the future use of the approximately 5 acres of land, this would not alter the land use patterns of adjacent property or on-base land use. The current recreational jogging trail adjacent to the proposed site would be reconstructed before the construction of the proposed WSOC facility would commence. There would be a 20-foot forest preservation buffer between the proposed site and the golf course. The use of the golf course could be limited during the construction phase (e.g., moving and storage of heavy equipment, safety zone, and hard hat area). There would be no zoning or development conflicts associated with the proposed project. Therefore, the Proposed Action would have a negligible impact on land use during the construction phase.

##### **Operation**

During the siting process for the building, site constraints, including but not limited to any negative impact to adjacent buildings and future land use, were taken into consideration. Additionally, the mission of the proposed WSOC facility is currently operated by FGGM. There

has been no documented indication that the operation of the current WSOC facility has had an adverse impact on adjacent properties. Therefore, operation of the proposed WSOC facility would not have a negative impact on land use.

### **Demolition**

The current WSOC facilities (Buildings 8904 and 8904A) would be demolished approximately 9 months after the proposed WSOC facility is completed. The removal of these buildings is anticipated to free land area that could be considered for future use by FGGM. Any NEPA analysis required for the demolition of these facilities will be addressed under separate documentation.

### **4.7.2 NO-ACTION ALTERNATIVE**

Under the No-action Alternative, there would be no impacts to land use in the proposed project area, as there would be no construction or removal of trees associated with a new WSOC facility.

### **4.7.3 CUMULATIVE IMPACT**

Implementation of the Proposed Action would not affect land use within the region of influence because no adverse land use impacts were identified in Section 4.7.1. Recreational resources would continue to be available with short-term impact on an adjacent golf course hole during the construction period.

### **4.7.4 MITIGATION**

BMPs should be vigorously incorporated and maintained into all project plans.

## **4.8 SOCIOECONOMICS**

### **4.8.1 PROPOSED ACTION**

#### **Construction**

Construction of the proposed WSOC facility is expected to last 9 to 12 months and will require temporary construction workers. The construction phase could have a temporary positive effect on the local economy through the employment of some sectors of the local construction community.

#### **Operation**

The operation of the proposed WSOC facility does not require any additional personnel (temporary or permanent), and no decrease in FGGM employees is anticipated. The operation of the proposed WSOC facility would be executed by the personnel at the current WSOC facility. Therefore, the operation of the proposed WSOC would not have an impact on the socioeconomic conditions (demographics, housing, and income) of FGGM or the surrounding communities.

## **4.8.2 NO-ACTION ALTERNATIVE**

Under the No-action Alternative, there would be no impacts to socioeconomics in the proposed project area, as there would be no construction of a new WSOC facility.

## **4.8.3 CUMULATIVE IMPACT**

Overall impacts to socioeconomics from the Proposed Action are temporary and moderate in magnitude in the short-term and inconsequential in the long-term. However, through the BRAC 2005 process, FGGM will be the site for the relocation and consolidation of several DoD organizations, which are expected to have a greater positive impact in the long-term.

## **4.8.4 MITIGATION**

No mitigation measures would be required for implementation of the Proposed Action as it relates to Socioeconomics.

# **4.9 WATER RESOURCES**

## **4.9.1 PROPOSED ACTION**

### **Construction**

The construction phase of the project will require coverage under USEPA's NPDES Region 3 general permit for stormwater discharge from construction activities, and under the Construction General Permit. The construction contractor would be required to comply with the Maryland Erosion and Sediment Control Guidelines for State and Federal Projects (Maryland Department of the Environment, 2010a) and the Stormwater Management Guidelines for State and Federal Projects (Maryland Department of the Environment, 2010b) to avoid and minimize erosion at the construction site and sediment runoff to any non-tidal wetlands in the vicinity of the proposed construction site.

General construction impacts associated with the development of the proposed WSOC site could affect water resources by increased stormwater runoff from the site carrying sediment and contamination loads into surface water during times of heavy rain, and by contamination from construction activities infiltrating area soils and percolating down into the groundwater.

No impacts to surface water from the proposed project are anticipated, since there are no surface water features (lakes, ponds, streams) on the proposed project site. There would be no impacts to waterways protected under the Wild and Scenic Rivers program and wetlands since none occur in the vicinity of the proposed project site.

### **Operation**

The operation of the proposed WSOC will be executed in the same manner as the current WSOC facility. No impacts to surface water from the proposed project are anticipated. There are no surface water features (lakes, ponds, streams) on the proposed project site. The proposed site does not appear to be located near any regulated wetlands or wetland buffers

within the project area nor located within the 100-year floodplain. FGGM would continue to adhere to all appropriate and applicable water quality regulations including but not limited to Section 303(d) of the CWA, the Antidegradation Policy Implementation Procedure, Code of Maryland Regulation (COMAR) 26.08.02.04-1 and the general protection of the Chesapeake Bay tributaries and all groundwater aquifers that underlie FGGM. Additionally, there will be no impacts to waterways protected under the Wild and Scenic Rivers program since none occur in the vicinity of the proposed project site.

#### **4.9.2 NO-ACTION ALTERNATIVE**

Under the No-action Alternative, there would be no additional impacts to water (surface water, groundwater, wetlands, and floodplains) in the proposed project area, as there would be no construction of a new WSOC facility.

#### **4.9.3 CUMULATIVE IMPACT**

Implementation of the Proposed Action would not result in significant impacts on water quality within the region of influence.

#### **4.9.4 MITIGATION**

The incorporation of the mitigation measures and BMPs into the design phase of the project would reduce impacts to water resources below the level of significance. Under all circumstances, sediment runoff from the site should be captured and prevented from entering area surface water bodies, especially the Little Patuxent River. Water quality impacts associated with implementation of the Proposed Action should be considered in conjunction with other actions in an installation context.

### **4.10 UNAVOIDABLE ADVERSE IMPACTS**

Unavoidable negative impacts from implementation of the Proposed Action would be associated with construction activities.

#### **Construction**

Construction activities that would result in unavoidable adverse impacts include periodic high noise levels and fugitive dust emissions. These impacts would be short-term and generally limited to the immediate area. Removal of vegetation and compaction would occur in the work area with potential impacts on erosion, but to a very limited extent. The construction site is heavily wooded; therefore, some existing trees would be cleared from the site to accommodate construction requirements. Fuel products (petroleum, oils, lubricant) would be needed to operate the construction equipment. Emissions from equipment could contribute minimally to the short-term degradation of local air quality.

Approximately 217,800 square feet (5 acres) of previously undisturbed land that may be habitat to a limited number of plant and wildlife individuals would be permanently developed for the facility.

## 4.11 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES

Implementation of the Proposed Action would result in the irreversible and irretrievable commitments of resources including land, building materials, and supplies, and their cost; labor; planning and engineering costs; infrastructure capacity; federally owned property; and fossil fuels for construction vehicles.

*Irreversible resource commitments* are related to the use of nonrenewable resources and the effects that the uses of these resources would have on future generations. Such actions are considered irreversible because their implementation would affect a resource that has deteriorated to the point that renewal can occur only over a long period of time or at great expense, or because they would cause the resource to be destroyed or removed.

*Irretrievable resource commitment* of natural resources means loss of production or use of resources as a result of a decision. It represents opportunities forgone for the period of time that a resource cannot be used. Irretrievable refers to the permanent loss of a resource including extinction of a threatened or endangered species, disturbance of a cultural site, loss of land production, or use of natural resources (including minerals and coal). For example, production or loss of agricultural lands can be irretrievable, while the action itself may not be irreversible.

### Construction Materials

Construction of the proposed WSOC facility would result in both the irreversible and irretrievable use of construction materials. Many of the materials used for constructing the proposed WSOC facility, in particular the steel and other metals that will have to be committed, are ultimately recyclable but would remain an irreversible commitment of resources for the life of the project. Other construction materials, such as insulation materials, plastics, concrete, siding, piping, and so forth, would in large part likely represent an irretrievable use of materials, as upon any demolition of structures at the end of the project life, these materials would be ultimately disposed of at a landfill or be recycled.

Moderate quantities of fossil fuels would be irretrievably consumed during the construction of the facility. Diesel fuel and gasoline would be consumed by construction equipment such as bulldozers, backhoes, earth scrapers, motor graders, heavy haul trucks, large tractors, concrete trucks, asphalt pavers, concrete pavers, rollers, and compactors, and cranes, during the 2 years and 7 months estimated for completion of construction activities. The consumption use of fuel during construction activities would not constitute a long-term drain on local resources.

The construction of the proposed WSOC facility would require the removal of 4.5 acres of trees. This commitment would be irretrievable but not irreversible due to the established Tree Management policy which addresses mitigation for tree removal and replacement. The construction of the facility would be irreversible for the life of the facility. Although it is possible that the WSOC facility could be removed and the natural landscape renewed, this is unlikely in the foreseeable future.

## **Operation Materials**

Operation of the WSOC facility at FGGM would result in the irretrievable commitment of several resources, including electricity, natural gas, and fossil fuel from vehicles.

### **4.12 RELATIONSHIP BETWEEN SHORT-TERM USE OF THE HUMAN ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY**

NEPA requires consideration of the relationship between short-term uses of the environment and long-term productivity associated with a Proposed Action. This involves the consideration of whether a Proposed Action is sacrificing a resource value that might benefit the environment in the long term, for some short-term value to the sponsor or the public.

In the context of the short-term uses of the environment associated with the operation of the WSOC facility and the long-term impairment of environmental resources as they have been analyzed in this EA, short-term refers to that period of time encompassing the life span of the facility to the period of time encompassing its disassembly and subsequent restoration and rehabilitation activities. Long-term refers to that period of time following restoration and rehabilitation activities, during which consequent impacts from the Proposed Action still affect the environment.

Short-term uses of the environment under the Proposed Action include the development of approximately 217,800 square feet (5 acres) of land, temporary impacts to the physical environment during construction. Short-term adverse impacts would result from vehicular noise and emissions during construction; these impacts would be mitigated, as required. The short-term need for construction laborers and local materials to complete construction would provide a positive economic benefit.

The Proposed Action would enhance FGGM's long-term productivity by providing better facilities for service members, employees, and clients (those requesting services from WSOC).

To the extent that the operation of the WSOC facility contributes to the long-term use of fossil fuels (electricity and natural gas), this project does have a potential adverse impact on long-term productivity of air quality.

### **4.13 FEDERAL ACTIONS TO ADDRESS ENVIRONMENTAL JUSTICE IN MINORITY POPULATIONS AND LOW-INCOME POPULATIONS (EXECUTIVE ORDER 12898)**

An Environmental Justice analysis is included in this document to comply with the intent of EO 12898, Army, and DoD guidance. The EO states that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." In addition, the EO

requires that minority and low-income populations be given access to information and opportunities to provide input to decision-making on Federal actions. This EA and draft Finding of No Significant Impact were made available for public review and comment.

Proposed activities would be conducted in a manner that would not substantially affect human health and the environment. This EA has identified no effects that would result in disproportionately high or adverse effect on minority or low-income populations in the area. The activities would also be conducted in a manner that would not exclude persons from participating in, deny persons the benefits of, or subject persons to discrimination because of their race, color, national origin, or socioeconomic status.

#### **4.14 FEDERAL ACTIONS TO ADDRESS PROTECTION OF CHILDREN FROM ENVIRONMENTAL HEALTH RISKS AND SAFETY RISKS (EXECUTIVE ORDER 13045, AS AMENDED BY EXECUTIVE ORDER 13229)**

This EA has not identified any environmental health and safety risks that may disproportionately affect children, in compliance with EO 13045, as amended by EO 13229.

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## **5.0 References**



## 5.0 REFERENCES

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## **6.0 List of Preparers**



## 6.0 LIST OF PREPARERS

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### Government Preparers

Mark Hubbs, Environmental Protection Specialist/Archaeologist, U.S. Army Space and Missile Defense Command  
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M.S., Environmental Management, Samford University  
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## **7.0 Agencies and Individuals Contacted**



# 7.0 AGENCIES AND INDIVIDUALS CONTACTED

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The following agencies and individuals were consulted or provided information during the preparation of the EA.

## State and Federal Agencies

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Public Information Officer  
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State Highway Administration  
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### **Libraries**

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Fort Meade Post Library  
Building 4418  
Fort Meade, MD 21401

Ms. Ruby Jaby  
Crofton Branch Library  
1681 Riedel Rd  
Crofton, MD 21114

---

# **Appendix A Distribution List**



# APPENDIX A

## DISTRIBUTION LIST

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### State and Federal Agencies

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580 Taylor Avenue  
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Ms. Maricela Constantino  
U.S. Dept of the Interior Fish & Wildlife Svcs  
Chesapeake Bay Field Office  
177 Admiral Cochrane Drive  
Annapolis, MD 21401

Ms. Joanne Muller  
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Clearinghouse Coordinator  
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Mr. William Arguto  
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Resource Conservationist  
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ATTN: Devin Ray  
Chesapeake Bay Field Office  
177 Admiral Cochrane Drive  
Annapolis, MD 21401

Maryland Dept. of Transportation  
State Highway Administration  
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707 North Calvert Street  
Baltimore, MD 21202

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Development Maryland Historical Trust  
Division of Historical and Cultural Programs  
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---

## **Appendix B Correspondence**



# APPENDIX B CORRESPONDENCE



## Public Notice

**Environmental Assessment  
Wideband Satellite Communication Operation Center (WSOC)  
Fort George G. Meade  
Anne Arundel County, Maryland**

On behalf of Fort George G. Meade, The United States Army Space and Missile Defense Command (USASMDC), is preparing an Environmental Assessment (EA) for the construction of a new Wideband Satellite Communications (SATCOM) Operations Center (WSOC) to replace the existing Defense Satellite Communications System (DSCS) Operations Center (DSCSOC) at Fort George G. Meade (FGGM), Maryland. The base encompasses 5,027 developed acres in acres in northwestern Anne Arundel County (Enclosure 1).

The Proposed Action would provide space for SATCOM Operational Control equipment for DoD satellites. The new space would include operations rooms, equipment rooms, a training and conference room, private offices, general administrative areas, storage and supply rooms, an equipment maintenance area, and personnel and security support areas. Site preparation would include security systems, force protection construction, utilities, parking, fire protection and alarm systems, sidewalks/walkways, and drainage (Enclosure 2).

Components of the project would include:

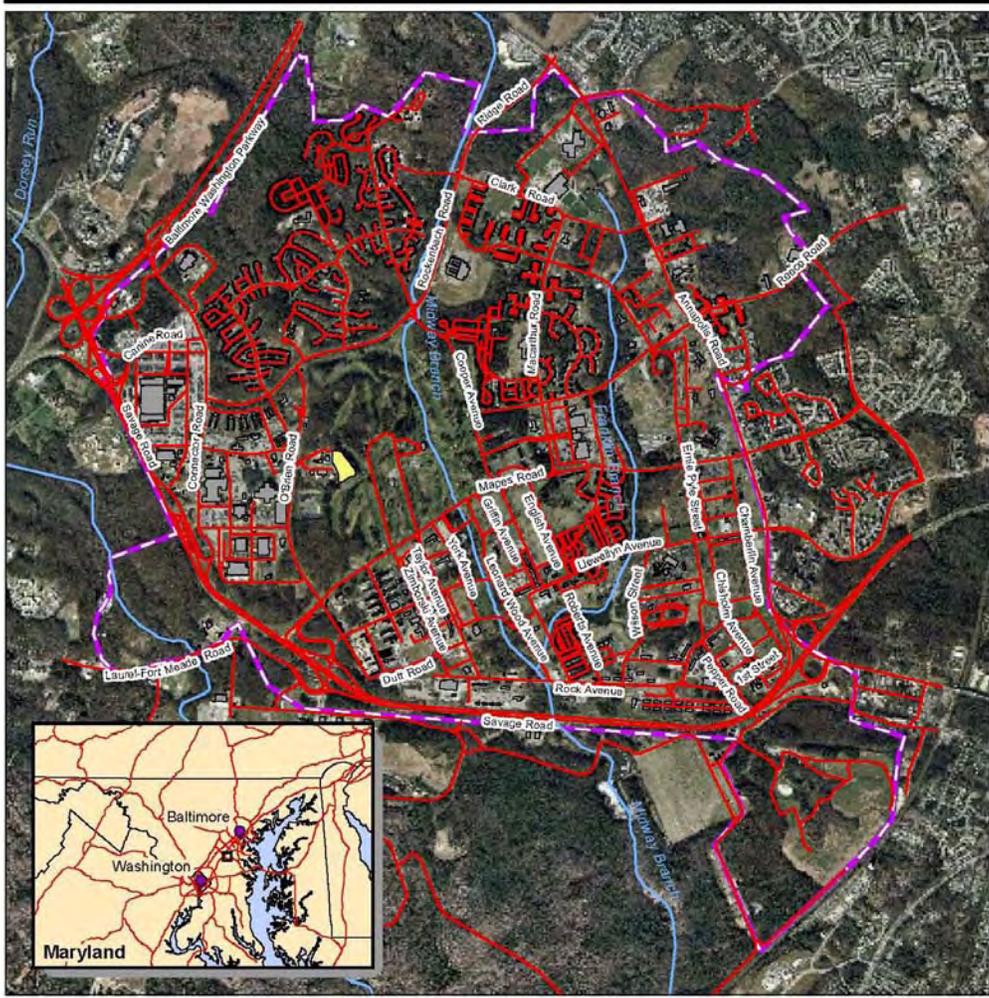
- Construction of a new 28,744-square-foot WSOC facility
- Construction of associated car parking area (minimum of 42 spaces plus visitors)
- Trenching and installation of primary electrical power feed from an existing Substation
- Demolition of Building 8904 and Building 8904A

The EA will evaluate the potential environmental effects that may occur as a result of the Proposed Action and will be prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended.

Interested parties are invited to submit written comments for consideration within 15 days of this notice. Any comments received will be considered in the preparation of the EA. This public notice is being distributed to organizations and individuals that are known to have an interest in this project (Enclosure 3). Please bring this matter to the attention of any other organization or individual with an interest in this matter. Comments must be submitted within 15 days of the date of this notice to: U.S. Army Space and Missile Defense Command, ATTN: Mark Hubbs-SMDC-ENN (FGGM WSOC EA), P.O. Box 1500, Huntsville, AL 35807-3801.

David Hasley  
Chief Environmental Planning Division  
Date: May 27, 2010

Enclosures



**EXPLANATION**

-  Road
-  Stream
-  Existing Structure
-  Project Area
-  Installation Area

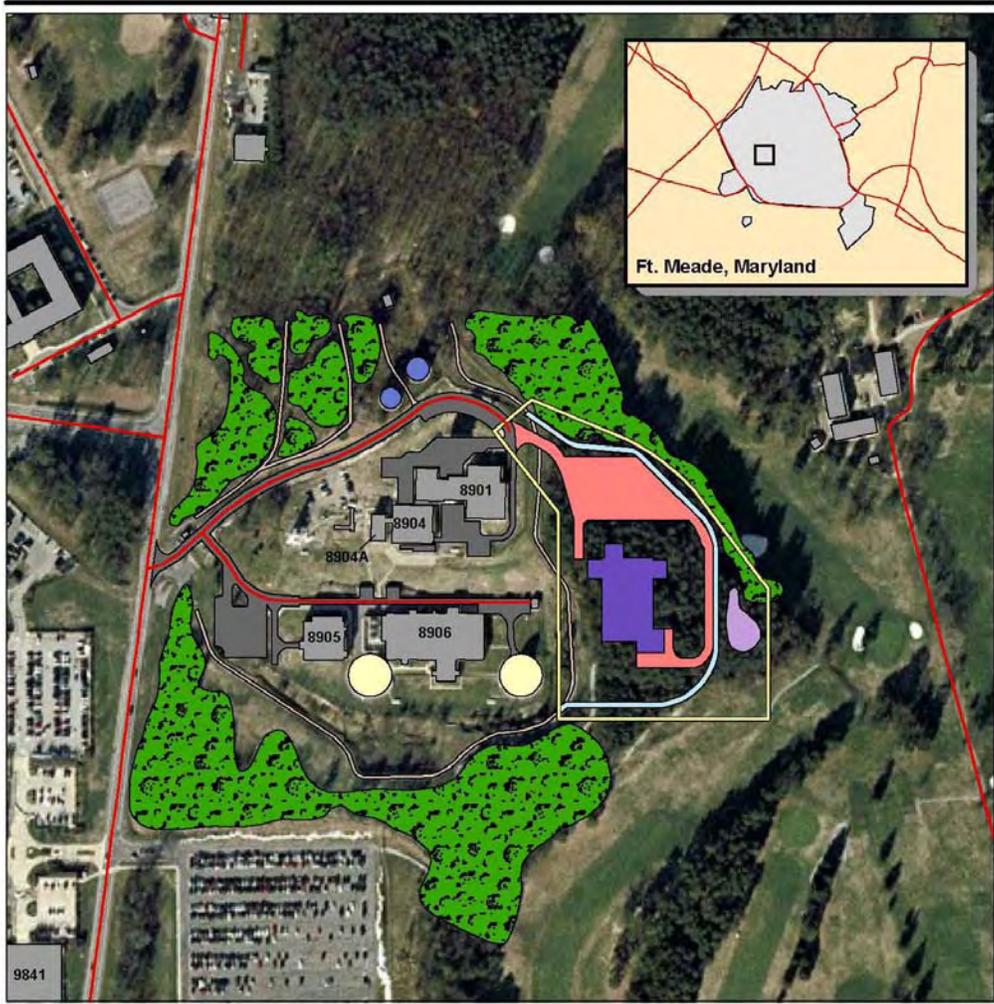


NORTH 0 0.5 1 2 Miles

**Installation Map**

Ft. George G. Meade, Maryland

**Enclosure 1**



**EXPLANATION**

- |                   |  |                    |
|-------------------|--|--------------------|
| Existing Road     | Proposed Roadway and Parking                 | Satellite Area     |
| WSOC Project Area | Proposed Wideband Satellite Operation Center | Water Tank         |
| Existing Roadway  | Stormwater Management Area                   | Natural Area       |
| Jogging Path      | Relocated Jogging Path                       | Existing Structure |



NORTH 0 250 500 1,000 Feet

**WSOC Site Layout**

Ft. George G. Meade, Maryland

**Enclosure 2**

**Public Notice List for the FGGM proposed WSOC  
For Fort George G. Meade**

**State and Federal Agencies**

Ms. Lori Byrne  
Maryland Dept of Natural Resources  
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Annapolis, MD 21401

Ms. Joanne Muller  
Maryland Dept. of Environment  
Clearinghouse Coordinator  
1800 Washington Blvd  
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Ms. Maricela Constantino  
U.S. Dept of the Interior Fish & Wildlife  
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Mr. William Arguto  
USEPA Region III  
1605 Arch Street  
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Fort Meade, MD 21401

**Regional and Local Offices**

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Mr. Joseph A. Haamid  
Resource Conservationist  
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Services  
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Chesapeake Bay Field Office  
177 Admiral Cochrane Drive  
Annapolis, MD 21401

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Division of Historical and Cultural Programs  
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**Enclosure 3**



Maryland Department of Planning

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

Richard Eberhart Hall  
Secretary  
Matthew J. Power  
Deputy Secretary

June 8, 2010

Mr. Mark Hubbs  
Environmental Manager  
Fort George G. Meade  
SMDC-ENN (FGGM WSOC EA)  
P.O. Box 1500  
Huntsville, AL 35807-3801

**STATE CLEARINGHOUSE REVIEW – ADDITIONAL REVIEWER COMMENTS RECEIVED**

**State Application Identifier:** MD20100604-0508

**Project Description:** Scoping prior to preparation of Environmental Assessment: Wideband Satellite Communication Operation  
Center: construct new facility and associated parking; install power feed; proposed demolition

**Project Address:** off O'Brien Road

**Project Location:** Anne Arundel County

**Clearinghouse Contact:** Bob Rosenbush

Dear Mr. Hubbs:

We are forwarding the comments made by Anne Arundel County, the Maryland Departments of Transportation, and Agriculture, and this Department regarding the referenced project for your information.

Anne Arundel County stated that it recommends implementing non-structural, storm water management practices, obtaining traffic studies, and analyzing data for potable water and sanitary sewer utilities since development will create additional demand. The Maryland Department of Transportation found the project consistent with its plans, programs, and objectives. The Maryland Department of Agriculture stated that the Agency did not anticipate any agricultural impacts as a result of the project. This Department mentioned its support for Base Realignment and Closure activities in the State.

Should you have any questions, contact the State Clearinghouse staff person noted above at 410-767-4490 or through e-mail at [brosenbush@mdp.state.md.us](mailto:brosenbush@mdp.state.md.us). Your cooperation and attention to the review process is appreciated.

Sincerely,

Linda C. Janey, J.D., Assistant Secretary  
for Clearinghouse and Communications

LCJ:BR

cc: John Dodds - ANARP  
Cindy Johnson - MDOT  
Gloria Chambers - MDA

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## Maryland Department of Agriculture

Agriculture | Maryland's Leading Industry

### Office of the Secretary

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**Anthony G. Brown**, Lt. Governor

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June 4, 2010

U.S. Army Space and Missile Defense Command  
ATTN: Mark Hubbs-SMDC-ENN (FGGM WSOC EA)  
P.O. Box 1500  
Huntsville, AL 25907-3801

Dear Sir:

This letter serves as a response to the Public Notice for the Environmental Assessment of the Wideband Satellite Communications Operation Center at Fort George G. Meade. Generally, this project does not appear to impact agricultural land. Therefore, the Maryland Department of Agriculture does not have any comment on the proposed project.

Also, please note, future Public Notices should be addressed to the following individual:

Ms. Gloria Chambers  
Executive Associate  
Maryland Department of Agriculture  
50 Harry S. Truman Parkway, Room 301  
Annapolis, MD 21401

Sincerely,

Julianne A. Oberg  
Public Information Officer



Maryland Department of Planning

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

Richard Eberhart Hall
Secretary
Matthew J. Power
Deputy Secretary

June 4, 2010

Mr. Mark Hubbs
Environmental Manager
Fort George G. Meade
SMDC-ENN (FGGM WSOC EA)
P.O. Box 1500
Huntsville, AL 35807-3801

STATE CLEARINGHOUSE REVIEW PROCESS

State Application Identifier: MD20100604-0508

Reviewer Comments Due By: June 8, 2010

Project Description: Scoping prior to preparation of Environmental Assessment: Wideband Satellite Communication Operation
Center: construct new facility and associated parking; install power feed; proposed demolition

Project Address: off O'Brien Road

Project Location: County of Anne Arundel

Clearinghouse Contact: Bob Rosenbush

Dear Mr. Hubbs:

Thank you for submitting your project for intergovernmental review. Participation in the Maryland Intergovernmental Review and Coordination (MIRC) process helps ensure project consistency with plans, programs, and objectives of State agencies and local governments. MIRC enhances opportunities for approval and/or funding and minimizes delays by resolving issues before project implementation.

The following agencies and/or jurisdictions have been forwarded a copy of your project for their review: the Maryland Department(s) of Natural Resources, the Environment, Transportation, Business and Economic Development, Agriculture; the Maryland Military Department; the County of Anne Arundel, and the Maryland Department of Planning; including the Maryland Historical Trust. They have been requested to contact your agency directly by June 8, 2010 with any comments or concerns and to provide a copy of those comments to the State Clearinghouse for Intergovernmental Assistance. Please be assured that after June 8, 2010 all MIRC requirements will have been met in accordance with Code of Maryland Regulations (COMAR 34.02.01.04- .06). The project has been assigned a unique State Application Identifier that should be used on all documents and correspondence. If you need assistance or have questions, contact the State Clearinghouse staff noted above at 410-767-4490 or through e-mail at brosenbush@mdp.state.md.us. Thank you for your cooperation with the MIRC process.

Sincerely,

[Handwritten signature of Linda C. Janey]

Linda C. Janey, J.D., Assistant Secretary
for Clearinghouse and Communications

LCJ:BR

Enclosure

cc: Beth Cole - MHT\*
10-0508\_NDC.NEW
Roland Limpert - DNR\*
Joane Mueller - MDE\*
Cindy Johnson - MDOT\*

Tammy Edwards - DBED\*
Gloria Chambers - MDA
Lawrence Leone - MILT\*

John Dodds - ANARP\*
Mike Paone - MDPLS\*

301 West Preston Street • Suite 1101 • Baltimore, Maryland 21201-2305
Telephone: 410.767.4500 • Fax: 410.767.4480 • Toll Free: 1.877.767.6272 • TTY Users: Maryland Relay
Internet: Planning.Maryland.gov



**MARYLAND**  
DEPARTMENT OF  
NATURAL RESOURCES

*Martin O'Malley, Governor*  
*Anthony G. Brown, Lt. Governor*  
*John R. Griffin, Secretary*  
*Joseph P. Gill, Deputy Secretary*

June 16, 2010

David Hasley  
US Army Space and Missile Defense Command  
PO Box 1500  
Huntsville, AL 35807-3801

**RE: Environmental Review for EA for USASMDC, construction of new wideband satellite communications (SATCOM) operations center (WSOC) to replace existing DSCSOC, Anne Arundel County, MD.**

Dear Mr. Hasley:

The Wildlife and Heritage Service has determined that there are no State or Federal records for rare, threatened or endangered species within the boundaries of the project site as delineated. As a result, we have no specific comments or requirements pertaining to protection measures at this time. This statement should not be interpreted however as meaning that rare, threatened or endangered species are not in fact present. If appropriate habitat is available, certain species could be present without documentation because adequate surveys have not been conducted.

Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,

Lori A. Byrne,  
Environmental Review Coordinator  
Wildlife and Heritage Service  
MD Dept. of Natural Resources

ER# 2010.0687.aa



**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

Anthony G. Brown  
Lieutenant Governor  
July 21, 2010

Shari T. Wilson  
Secretary

Robert M. Summers, Ph.D.  
Deputy Secretary

Mr. Mark Hubbs  
Fort George G. Meade  
SMDC-ENN (FGGM WSOC EA)  
P.O. Box 1500  
Huntsville, AL 35807-3801

RE: State Application Identifier: MD20100604-0508  
Project: Scoping prior...: Wideband Satellite Communications Operations Center

Dear Mr. Hubbs:

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 for the proposed project must be done so in accordance with applicable State and federal laws and regulations. Contact the Oil Control Program at (410) 537-3442 for additional information.
2. Any solid waste including construction, demolition and land clearing debris, which may be generated from the proposed project, must be properly disposed of at a permitted solid waste acceptance facility, or recycled if possible. Contact the Solid Waste Program at (410) 537-3318 for additional information.

Additional information is enclosed for your consideration.

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,

Joane D. Mueller  
MDE Clearinghouse Coordinator  
Office of Communications

Enclosures

cc: Bob Rosenbush, State Clearinghouse

**Scoping Prior to EA: Ft. Meade Construction Project**

**Maryland Department of the Environment - Science Services Administration**

**REVIEW FINDING: R1 Consistent with Qualifying Comments**  
**(MD2010 0604-0508)**

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 Little Patuxent River watershed, identified by the 8-digit code 02131105 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/WaterPrograms/TMDL/Maryland%20303%20dlist/2008\\_303d\\_search/index.asp](http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/Maryland%20303%20dlist/2008_303d_search/index.asp)

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:**

**Little Patuxent River (02131105)**

<b>Sediments:</b>	<b>Non-tidal. A TMDL is pending development.</b>
<b>Metals:</b>	<b>Non-tidal. A TMDL for Cadmium is pending development.</b>
<b>Biological:</b>	<b>Non-tidal. A TMDL is pending development.</b>

**B. TMDLs:** Development and implementation of the Comprehensive Plan should take into account consistency with TMDLs developed for the impaired waterbodies referenced above. Government 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:  
[www.mde.state.md.us/Programs/WaterPrograms/TMDL/Summittals/index.asp](http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/Summittals/index.asp)

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/getfile.aspx?file=26.08.02.04.htm> and policy implementation procedures are located at <http://www.dsd.state.md.us/comar/getfile.aspx?file=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/ResearchCenter/Data/waterQualityStandards/Antidegradation/index.asp>

#### **ADDITIONAL COMMENTS**

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/WaterPrograms/SedimentandStormwater/swm2007.asp>

Environmental Site Design (Chapter 5):

<http://www.mde.state.md.us/assets/document/Design%20Manual%20Chapter%2005%2003%2024%202009.pdf>



## 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>

July 28, 2010

U.S. Army Space and Missile Defense Command  
ATTN: Mark Hubbs SMDC-ENN (FGGM WSOC EA)  
P.O. Box 1500  
Huntsville, AL 35807-3801

*RE: Environmental Assessment Wideband Satellite Communication Operation Center (WSOC)  
Fort George G. Meade Anne Arundel County MD*

Dear David Hasley:

This responds to your letter, received, June 1, 2010, 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 reference 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/migratorybirds/issues/BaldEagle/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. This proposed permit process will not be available until the Service issues a final rule for the issuance of these take permits under the Bald and Golden Eagle Protection Act.

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 Devin Ray at (410) 573-4531.

Sincerely,



Leopoldo Miranda  
Supervisor

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