

## NOTICE OF AVAILABILITY

### Draft Environmental Assessment for the Construction and Operation of the Child Development Center (CDC) V U.S. Army Garrison Fort George G. Meade, Maryland

Interested parties are hereby notified that Fort George G. Meade (FMMD) has prepared a Draft Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969, regulations implementing the procedural provisions of the NEPA, 40 Code of Federal Regulations (CFR) 1500-1508, and *Environmental Analysis of Army Actions*, 32 CFR 651. The Draft EA evaluates the potential environmental, cultural, and socioeconomic effects associated with construction and operation of a permanent, medium-size standard design CDC facility to provide childcare services to the families of active-duty military stationed at FMMD, as well as staff of tenants on post, military retirees, and other eligible units and agencies off post. The site design also includes parking, sidewalks, age-appropriate outdoor playgrounds, fencing, landscaping, stormwater management facilities, and utility service connections.

Based on the draft EA, the Army has determined that implementation of the Proposed Action would have no significant adverse direct, indirect, or cumulative effects on the quality of the human or natural environment. Therefore, at the conclusion of the public comment period, it is anticipated that a Finding of No Significant Impact (FNSI) would be appropriate and would be signed for the CDC. An Environmental Impact Statement, therefore, is not deemed necessary to implement the Proposed Action.

The Draft EA and Draft FNSI is available for review and comment for 30 days from publication of this notice. Copies may be found online at <https://home.army.mil/meade/index.php/my-fort/all-services/environmental>. The documents can also be found at the following locations: Medal of Honor Memorial Library on Fort Meade and Odenton Regional Library, 1325 Annapolis Road, Odenton, MD. Additionally, copies of the Draft EA may be obtained by writing to the address below. Comments on the Draft EA may be submitted in writing within 30 days from the publication of this notice to: ATTN - Fort Meade CDC V Environmental Assessment, US Army Corps of Engineers, Baltimore District Planning Division, 2 Hopkins Plaza, 10th Floor, Baltimore, MD 21201; or via email to Rebecca Marson, US Army Garrison Fort George G. Meade DPW, Environmental Division at [rebecca.j.marson.civ@army.mil](mailto:rebecca.j.marson.civ@army.mil).

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**DEPARTMENT OF THE ARMY**  
**Fort George G. Meade**  
**Fort Meade, Maryland 20755-5115**

**FINDING OF NO SIGNIFICANT IMPACT**

**ENVIRONMENTAL ASSESSMENT**

*Proposed Child Development Center V at Fort George G. Meade*

**1.0 INTRODUCTION**

The U.S. Army Corps of Engineers, Baltimore District, completed an Environmental Assessment (EA) to analyze the potential impacts on the quality of the human environment associated with constructing and operating the proposed Child Development Center V (CDC V) at Fort George G. Meade (FMMD), Anne Arundel County, Maryland (MD). This EA was prepared pursuant to the National Environmental Policy Act (NEPA) of 1969 (42 United States Code Section 4321 *et seq.*); the Council on Environmental Quality (CEQ) regulations that implement NEPA (Title 40 Code of Federal Regulations [CFR], Parts 1500 to 1508); and 32 CFR 651.

**2.0 PURPOSE AND NEED FOR THE PROPOSED ACTION**

The purpose of the Proposed Action is to design, construct, and operate a permanent, medium-size standard design CDC V facility to help alleviate the deficit of childcare services available to the families of active-duty military as well as staff of tenants on installation, military retirees, and other eligible units and agencies off installation.

The total need of the family childcare program on FMMD is 1,200 spaces, where one space is comparable to providing daycare service to one child. Especially critical is the need for services for children who are four weeks to six years of age.

Maryland State law limits licensed care centers for children under two years of age through stringent restrictions as to where they can be located, resulting in a lack of care facilities in the area surrounding Fort Meade. This further increases the demands on FMMD's limited existing CDC facilities (CDC I, II, III, and IV). Waiting lists exist for daycare services at FMMD. The Proposed Action would provide a permanent replacement to facilities being used as a temporary measure to address some of the shortfall, but which have safety and capacity limitations.

**3.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES**

**3.1 Proposed Action**

**3.1.1 Location**

The Proposed Action site for the CDC V is an approximately 8-acre area on FMMD and formerly supported World War II-era barracks buildings that have since been demolished more than 20 years ago. The site is currently vacant and mostly wooded. The Proposed Action site is not located within areas of military munitions or historic range areas.

### **3.1.2 Conceptual Details**

The Proposed Action includes the design, construction, and operation of a new, approximately 26,450 square feet (SF), CDC V facility at FMMD. The Proposed Action design is for a standard-design, medium-sized CDC that would serve children 4 weeks to 6 years of age. The CDC V would have outdoor play spaces with age-appropriate playground equipment, safety surfacing, shaded areas, and fencing. In total, the Proposed Action includes the CDC V building, approximately 23,873 SF of play space, and no more than 110 parking spaces. The parking spaces would be maximized for available space to achieve as close to or equal to the authorized number of parking stalls.

The Proposed Action also includes site development, utilities and connections, lighting, paving, parking, sidewalks, curbs and gutters, storm drainage, information systems, landscaping, and signage. Air conditioning would be provided by standalone chillers located adjacent to the CDC V facility.

A stormwater retention pond may be created on the east side of the Proposed Action area if needed to satisfy the Maryland Department of Environment (MDE) Maryland Stormwater Design Manual Volumes I & II, revised in 2009 with Environmental Site Design requirements, the Maryland Stormwater Management Guidelines for State and Federal Projects (2015), all MDE's applicable Technical Memorandums, and the Energy Independence and Security Act Section 438.

The CDC V building would be sited in the middle of the flattest area on the site. With the existing site shaped like a bowl, this is also the low point of the site. The CDC V building would have as much as ten feet of fill built up under the foundation to raise the facility out of the low area. Much of this fill would be obtained from the hills on the northwest and southwest corners of the bowl. This would effectively flatten the area and provide positive drainage away from the building on all sides. The front of the building and the parking lot would be sloped as much as four percent to drain to the east toward a low point containing micro-bioretenion areas. Due to topography, overland water flows from west to east; as a result, there is offsite drainage from the high points northwest and southwest and from the outfall from an existing stormwater retention basin. A channel would be constructed west of the CDC V building to direct these flows north and east around the CDC V building to the existing culvert east of the Proposed Action area.

Pavements, walks, parking areas, playgrounds and other site features would be sited as much as possible according to the CDC standard design. The CDC V building has a central main entrance on the front (east) face. There would be a sidewalk extending from the front entrance to a two-isle parking lot east of the building. There would be two entrances to the parking lot to facilitate access and traffic flow. Three fenced-in playground areas would hug the building on the northwest, southwest, and southeast corners. Mechanical and electrical equipment would be placed on the north side of the CDC V building. The mechanical yard would be shielded from view from the parking lot by a brick wall. Maintenance entrances for mechanical, electrical, plumbing, and kitchen space would be from the east face of the north part of the building. Access would be provided by sidewalks and a maintenance road on the northeast corner of the building. The dumpster pad would be located north of the parking lot and would be enclosed by a brick wall. There would be a fire access turn around on the south side of the CDC V building to allow the building to be fully covered for fire protection. Stormwater management swales would surround the perimeter of the site, and a channel would catch off-site flows on the west and north limits of the site, redirecting these flows to the existing culvert at the eastern edge of the facility.

Measures by the U.S. Department of Defense (DoD) Minimum Antiterrorism for Buildings standards would be provided. Access for individuals with disabilities would be provided in compliance with the Architectural Barriers Act and Americans with Disabilities Act. Facilities would be designed for a minimum life of 40 years by DoD's Unified Facilities Criteria 1-200-02 including energy efficiencies, building envelope, and integrated building systems performance. Sustainability and energy enhancement measures would be included to meet the Leadership in Energy and Environmental Design Silver requirement.

### **3.2 NO ACTION ALTERNATIVE**

Under the No Action Alternative, the Proposed Action would not be implemented. This would leave FMMD with a continued critical shortage of childcare services, particularly infant and toddler care, which is the daycare category in the highest demand by most military families at FMMD.

### **3.3 ALTERNATIVES CONSIDERED BUT ELIMINATED**

Initial planning efforts considered several possible design layouts for either a large or medium-sized facility within a 24-acre area of study. Efforts to address site constraints of steep topography and streams led to the current proposed placement of the building.

#### **3.3.1 Alternative Site 1**

Alternative Site 1 is located within a residential area northeast of the Proposed Action area. The benefit of this site is that it is near residential housing without current CDC coverage; however, the site is a “green” site which would require new roads and bridges to support efficient traffic flow and avoid congestion of residential streets, grading to overcome steep slopes, and deforestation. This alternative was eliminated from further consideration because of its cost-prohibitive topography and roadway access limitations.

#### **3.3.2 Alternative Site 2**

Alternative Site 2 is located on a previously developed site with the former installation hotel. Utilizing this site would require the demolition of the hotel structure, which has already been slated for demolition to reduce the garrison’s inventory of outdated structures. Reuse of a previously developed site would allow use of existing road and utility infrastructure and require only minor tree removal. The site is located convenient to arterial roads and retail areas. However, this site was eliminated due to concerns it could cause adverse impacts on traffic congestion and safety to vehicles and occupants during childcare drop-off and pick-up periods in this busy area.

### **4.0 SUMMARY OF ENVIRONMENTAL IMPACTS**

As described in Chapter 3 of the EA, the construction and operation of the Proposed Action would have no significant impacts of an adverse nature on the human environment. Minor or negligible, direct adverse impacts caused by constructing the Proposed Action would be temporary, occurring during the approximately 12-month construction phase, and be limited in extent to the approximately 8-acre Proposed Action site. Due to the relatively isolated location of the Proposed Action site away from the main administrative areas, only a small number of Service members, staff, and personnel at FMMD may be aware of and impacted by the Proposed Action construction.

The Proposed Action would also have significant beneficial impacts during operation. Beneficial impacts caused by operating the Proposed Action would be permanent, with minor socioeconomic

benefits occurring to families who would no longer need to travel outside of FMMD to obtain childcare, reducing their time and travel expenses. Significant beneficial impacts would also occur to the welfare of children receiving childcare services that meet Army regulations at a new, modern facility at FMMD.

**Table 1** summarizes the information discussed in detail in Chapter 3 of the EA and defines the resource areas addressed and the potential environmental impacts associated with each phase of the Proposed Action and its potential cumulative impacts, as well as impacts associated with the No Action alternative.

**Table 1. Summary of Environmental Impacts**

<b>Resource Area</b>	<b>Construction</b>	<b>Operation</b>	<b>Cumulative</b>	<b>No Action</b>
<b>Visual Resources</b>	Short-term, minor, direct, adverse impacts from active construction site and land clearing.	Long-term, negligible, direct adverse impact from loss of forested area.	No change in impact findings.	Long-term, negligible, direct beneficial impact
<b>Topography</b>	Long-term, negligible, direct adverse impact from filling natural grade.	Long-term, negligible, direct adverse impact from filling.	No change in impact findings.	No impact
<b>Soils</b>	Short-term, minor, direct adverse impacts from construction causing loss of vegetative cover, erosion, and compaction.	Long-term, negligible, direct adverse impact from impervious hardscape cover and compaction.	No change in impact findings.	No impact
<b>Air Quality and Climate Change</b>	Short-term, negligible, direct adverse impacts from operating construction equipment and ground-disturbing activities.	Long-term, negligible, direct adverse impacts from heating and cooling interior space within the CDC V.	No change in impact findings.	Long-term, negligible, direct adverse impact from vehicles continuing to travel outside of FMMD to obtain childcare services.
<b>Noise</b>	Short-term, minor, direct adverse impacts from operating construction machinery.	Long-term, direct, negligible adverse impacts from vehicle traveling to and from the CDC V.	No change in impact findings.	No impact
<b>Stormwater</b>	Short-term, negligible, direct adverse impact from sedimentation of stormwater.	Long-term, negligible, direct adverse impact from increased stormwater volume.	No change in impact findings.	No impact

<b>Resource Area</b>	<b>Construction</b>	<b>Operation</b>	<b>Cumulative</b>	<b>No Action</b>
<b>Coastal Zone Management</b>	No impact. Construction would not impact coastal zone resources.	No impact. Operation would not impact coastal zone resources.	No change in impact findings.	No impact
<b>Biological Resources: Vegetation</b>	Long-term, minor, direct adverse impacts due to permanent loss of up to 8 acres of forest at Proposed Action site.	Long-term, negligible, direct adverse impact due to permanent loss during construction, but minimized through off-site replantings during operation.	No change in impact findings.	Long-term, beneficial impact by retaining existing forest at Proposed Action site.
<b>Biological Resources: Wildlife</b>	Long-term, negligible, direct adverse impacts to wildlife species dislocated by construction activities and permanent vegetation clearing.	Long-term, negligible, direct adverse impacts due to loss of habitat at the Proposed Action site.	No change in impact findings.	Long-term, beneficial impact on wildlife species continuing to utilize habitat at the Proposed Action site.
<b>Cultural Resources</b>	No impact. No historic properties are anticipated at the Proposed Action site.	No impact. No historic properties are anticipated at the Proposed Action site.	No change in impact findings.	No impact
<b>Transportation</b>	Short-term, negligible, direct adverse impact on traffic and roadways from construction activities and road closures.	Long-term, negligible, direct adverse impact from increased traffic on roadways adjacent to CDC V during drop-off and pick-up.  Long-term, negligible, direct beneficial impact by reducing travel distance for individual families obtaining childcare services at FMMD.	No change in impact findings.	Long-term, negligible, direct adverse impact to individual families continuing to travel longer distances to obtain childcare services outside of FMMD.

<b>Resource Area</b>	<b>Construction</b>	<b>Operation</b>	<b>Cumulative</b>	<b>No Action</b>
<b>Energy and Utilities</b>	No impact. Existing utility lines and connections are adjacent to the Proposed Action site. Construction would not disrupt service to existing utility customers.	No impact. Operational demand can be met by existing supply without decreasing quality of service to other customers at FMMD or in the surrounding community.	No change in impact findings.	No impact
<b>Socioeconomics and Environmental Justice</b>	Short-term, negligible, direct and indirect beneficial impacts from spending on construction wages, equipment, and building materials.	Long-term, minor, direct beneficial impacts to eligible families by reducing time and transportation costs to obtain childcare services. Long-term, minor, direct, beneficial impact to the Army. Long-term, negligible, direct adverse impact due to decreased enrollment at private childcare facilities outside of FMMD.	No change in impact findings.	Long-term, minor, direct adverse impact to individual families incurring time and expenses to travel outside of FMMD to obtain childcare services.
<b>Protection of Children</b>	Short-term, negligible, direct adverse impacts to children exposed to construction noise, traffic, particulate matter, and other construction-related activities; limited to occupants at the adjacent CDC II facility	Long-term, significant, direct and beneficial impacts to welfare of children receiving childcare meeting Army regulation at FMMD.	No change in impact findings.	Long-term, significant, direct adverse impacts to children receiving childcare services outside of FMMD and that may not meet Army regulation.

## **5.0 PUBLIC INVOLVEMENT**

Public participation opportunities with respect to this EA and decision making on the Proposed Action are guided by 32 CFR Part 651. Accordingly, the Draft EA and Draft Finding of No Significant Impact (FNSI) are being made available to the public for a 30-day review and comment period. These documents were made available online at <https://home.army.mil/meade/index.php/my-fort/all-services/environmental> and printed copies at the FMMD Medal of Honor Memorial Library and the Odenton Regional Library, Odenton, MD. A Notice of Availability (NOA) of the Draft EA/FNSI and the start of the 30-day review and comment period was published in the *Capital Gazette*. Additionally, the NOA was emailed to federal, state, and local agencies and stakeholder organizations with potential interested in the Proposed Action to solicit their comments during the 30-day review period.

## **6.0 CONCLUSION AND FINDING OF NO SIGNIFICANT IMPACT**

I have considered the results of the analysis in the EA, incorporated herein in its entirety, the comments received during the 30-day review and comment period, and associated cumulative effects.

Based on these factors, I have decided to proceed with the Proposed Action to construct and operate the CDC V at FMMD, providing a long-term solution that would meet applicable federal, state, local, and installation regulations. The Proposed Action would meet the mission requirements at FMMD, and, along with specified permits, plans and measures, would have no significant impact of an adverse nature on the quality of the human environment.

This analysis fulfills the requirements of NEPA, as implemented by the CEQ regulations (40 CFR Parts 1500-1508), as well as the requirements of the Environmental Analysis of Army Actions (32 CFR Part 651). Therefore, issuance of a FNSI is warranted, and an Environmental Impact Statement is not necessary.

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**MICHAEL A. SAPP**  
**COL, IN Commanding**

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**Date**

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**DRAFT**  
**ENVIRONMENTAL ASSESSMENT**

**Childcare Development Center V**

U.S. Army Garrison,  
Fort George G. Meade, Maryland

April 2024

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## **1 INTRODUCTION**

This Environmental Assessment (EA) has been 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 March 29, 2002, as Environmental Analysis of Army Actions. 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.

Fort George G. Meade, Maryland (FMMD) is approximately 5,108 acres and is located in the northwestern portion of Anne Arundel County, Maryland (MD), midway between Baltimore and Washington, D.C. FMMD is located near the communities of Odenton, Laurel, Columbia, and Jessup. FMMD is the largest employer in Maryland with a workforce of approximately 60,000 employees.

FMMD includes a main administrative area, seven Army Family Housing areas, an industrial and maintenance area, the exchange mall complex, four child development centers, and the Kimbrough Ambulatory Care Clinic.

This EA identifies, analyzes, and documents the potential impacts associated with the Proposed Action to design, construct, and operate an approximately 26,450 square foot (SF) Child Development Center (CDC), to be hereby identified as CDC V, at FMMD. The Proposed Action site is located in the northeastern portion of FMMD, as depicted on **Error! Reference source not found.** In addition, this EA evaluates the No Action Alternative.

FMMD is bounded by the Baltimore-Washington Parkway (MD 295) to the northwest, Annapolis Road (MD 175) to the east, Patuxent Freeway (MD 32) to the south and west, and the Mid-America Regional Council Penn Line and Amtrak Line to the southeast. Other significant nearby transportation arteries include US Route 1 and Interstate 95, which run parallel to and just north of the Baltimore-Washington Parkway (MD 295). Interstate 97, which connects Baltimore and Annapolis is located several miles east of FMMD and can be reached by taking MD 175 or MD 32 East. FMMD is predominately surrounded to the north, west, and east by residential areas, commercial centers, a mix of light industrial uses, and undeveloped areas. Directly to the south of FMMD are the Tipton Airport and the 12,750-acre Patuxent Research Refuge, part of the U.S. Fish and Wildlife Service's (USFWS) National Wildlife Refuge System.

## **1.1 Purpose And Need**

The purpose of the Proposed Action is to design, construct, and operate a permanent, medium-size standard design CDC V facility to help alleviate the deficit of childcare services available to the families of active-duty military as well as staff of tenants on installation, military retirees, and other eligible units and agencies off installation.

The total need of the family childcare program on FMMD is 1,200 spaces, where one space is comparable to providing daycare service to one child. Especially critical is the need for services for children who are four weeks to six years of age.

Maryland State law limits licensed care centers for children under two years of age through stringent restrictions as to where they can be located, resulting in a lack of care facilities in the area surrounding Fort Meade. This further increases the demands on FMMD's limited existing CDC facilities (CDC I, II, III, and IV). Waiting lists exist for daycare services at FMMD. The Proposed Action would provide a permanent replacement to facilities being used as a temporary measure to address some of the shortfall, but which have safety and capacity limitations.

A detailed description and conceptual layout of the Proposed Action is provided in Section 2.0.

## **1.2 Screening Criteria**

The screening criteria for the Proposed Action alternatives require a site that is: 1) available; 2) an adequate size to support a medium-sized CDC; 3) in the vicinity of residential areas and/or near an installation Access Control Point (ACP); and 4) consistent with the FMMD Master Plan.

## **1.3 Relevant Army Regulations**

Army CDCs for children under 6 years of age are designed and constructed in accordance with the U.S. Army Corps of Engineer's (USACE) Army Standard Design Criteria. The Army Standard and the Army Standard Design Criteria Room by Room Descriptions are mandatory criteria that must be followed. The Army does not follow Unified Facilities Criteria (UFC) 04-740-14 Child Development Centers. Use of the Standard Design is mandatory and can be found on the Military Construction Requirements, Standardization, and Integration website at: <https://mrsi.erd.c.dren.mil/cos/hnc/cdcu6/>.

Elements of the Standard Design include the need for children to exit directly to their age-appropriate outdoor play space from their activity room. The facility is to have a controlled entry area which is paramount for security. A staff lounge and training area are to be located in the vicinity of the administrative portion of the facility. The most recent applicable requirements for accessibility must be incorporated. Physical security and antiterrorism design must be in accordance with the latest version of the Department of Defense (DoD) Antiterrorism Minimum Construction Standards for Buildings. A video monitoring system to deter and reduce the risk of child abuse and protect staff from unwarranted allegations of abuse is a requirement. Outdoor play spaces should include playground equipment, safety surfacing, shaded areas, and fencing.

In addition, the Code 1 & 2 Directive cites that applicable Centers of Standardization and Mandatory Centers of Expertise requirements should be followed.

## 1.4 Scope of Environmental Assessment

Under the guidance provided in NEPA and in 32 CFR Part 651, an EA must be prepared for any proposed Federal action when the agency does not know or is uncertain whether significant environmental impacts are expected; if an action may significantly affect the environment, an Environmental Impact Statement (EIS) would be prepared. An EA provides sufficient evidence and analysis for determining whether or not to prepare an EIS. Actions that are determined to be exempt by law, emergencies, or categorically excluded do not require the preparation of an EA or EIS, but the decision and analyses would be documented in a Record of Environmental Consideration if required. An EA contains an evaluation of the environmental consequences of the Proposed Action and the No Action Alternative including direct, indirect, and cumulative effects, as well as a qualitative and quantitative (where possible) assessment of the level of significance of these effects. The EA results in either a Finding of No Significant Impact (FNSI) or a Notice of Intent to prepare an EIS.

This EA informs decision makers and the public of the likely environmental impacts of the Proposed Action and the No Action Alternative. This EA identifies, documents, and evaluates environmental effects of the proposed activity at FMMD. Environmental effects would include those related to construction and operation of the Proposed Action. The Proposed Action, No Action Alternative, and other alternatives considered but eliminated are detailed in Section 3.0.

The existing conditions at FMMD are described in Section 3.0, Existing Conditions and Environmental Consequences. These existing conditions, along with the No Action Alternative, serve as a baseline against which other alternatives will be measured to evaluate the effects of the construction and operation of the new CDC V. The evaluation of potential impacts from the Proposed Action are presented in Section 3.0, following the descriptions of each environmental resource area.

## 1.5 Public Involvement

Public participation opportunities with respect to this EA and decision making on the Proposed Action are guided by 32 CFR Part 651. This EA will be made available to the public for 30 days, along with a draft FNSI. The Draft EA will be made available online for public review at <https://home.army.mil/meade/index.php/my-fort/all-services/environmental> and a hard copy available at the FMMD Medal of Honor Memorial Library and the Odenton Regional Library, Odenton, MD. The Notice of Availability of the Draft EA will be published in the Capital Gazette. At the end of the 30-day public review period, the Army will consider any comments submitted by individuals, agencies, or organizations on the Proposed Action, the EA, or draft FNSI, if applicable. As appropriate, the Army may then execute the FNSI and proceed with implementation of the Proposed Action. If it is determined prior to issuance of a final FNSI that implementation of the Proposed Action would result in significant impacts, the Army will publish in the *Federal Register* a Notice of Intent to prepare an Environmental Impact Statement, commit to mitigation actions sufficient to reduce impacts below significance levels, or not take the action.

The National Historic Preservation Act (54 U.S. Code [USC] § 300101, et seq.) (NHPA) and its regulations in 36 CFR Part 800 direct federal agencies to consult with tribes when a proposed action or alternatives may have an effect on tribal lands or on properties of religious and cultural significance to a tribe. Consistent with the NHPA, DoD Instruction 4710.02, *Interactions with Federally Recognized Tribes*, FMMD has invited federally recognized tribes that are historically

affiliated with lands in the vicinity of the Proposed Action to consult on all proposed undertakings that have a potential to affect properties of cultural, historical, or religious significance to the tribes. The tribal consultation process is distinct from NEPA consultation and requires separate notification to all relevant tribes. The timelines for tribal consultation are also distinct from those of the other consultations. The FMMD point of contact for tribes is the Garrison Commander. The point of contact for consultation with the Tribal Historic Preservation Officer and the Advisory Council on Historic Preservation is the FMMD Cultural Resources Manager.

## 1.6 Environmental Laws and Regulations

Army decisions that affect environmental resources and conditions occur within the framework of numerous laws, regulations, and Executive Orders (EO). Some of these authorities prescribe standards for compliance while others require specific planning and management actions to protect environmental values potentially affected by Army actions. Key provisions of appropriate statutes and EOs are described in more detail throughout the text of this EA and in Table 1.

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

Acts	Compliance
Archaeological Resources Protection Act of 1979	FULL
Clean Air Act, as amended (42 United States Code [U.S.C.]	FULL
Clean Water Act, as amended (33 U.S.C. ch. 23 §1151)	FULL
Coastal Zone Management Act (CZMA) of 1972, as amended	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
Section 438 of the Energy Independence and Security Act (42 U.S.C. ch. 152 §17001 et seq.)	FULL
Endangered Species Act of 1973, as amended (16 U.S.C. ch. 35 §1531 et seq.)	FULL
Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661-667e)	FULL
Migratory Bird Treaty Act (16 U.S.C §§703-712, et seq.)	FULL
National Defense Authorization Act of 2018 (Public Law 115-91)	FULL
National Environmental Policy Act of 1969 (42 U.S.C. §4321 et seq.)	FULL
National Historic Preservation Act of 1966, as amended (16 U.S.C. ch. 1A, subch. II §470 et seq.)	FULL
Noise Control Act of 1972, as amended (42 U.S.C. §§4901-4918, et seq.)	FULL
North American Wetlands Conservation Act (16 U.S.C. 4401-4412)	FULL
Resource Conservation and Recovery Act (42 U.S.C. ch. 82 §6901 et seq.)	FULL
Safe Drinking Water Act, as amended (42 U.S.C. §300f)	FULL
Solid Waste Disposal Act of 1965, as amended (42 U.S.C 6901 et seq.)	FULL
Toxic Substances Control Act of 1976 (15 U.S.C. ch. 53, subch. I §§2601-2629)	FULL
Watershed Protection and Flood Prevention Act of 1954 (16 U.S.C. §1101, et seq.)	FULL
Wild and Scenic Rivers Act (16 U.S.C. 1271, et seq.)	FULL

Acts	Compliance
Sikes Act, as amended (16 U.S.C. 670a-670o)	FULL
<b>Executive Orders (EO)</b>	
Protection and Enhancement of the Cultural Environment (EO 11593)	FULL
Floodplain Management (EO 11988)	FULL
Protection of Wetlands (EO 11990)	FULL
Environmental Justice in Minority Populations and Low-Income Populations (EO 12898)	FULL
Federal Compliance with Pollution Control Standards (EO 12088)	FULL
Protection of Children from Environmental Health Risks and Safety Risks (EO 13045)	FULL
Invasive Species (EO 13112)	FULL
Consultation and Coordination with Indian Tribal Governments (EO 13175)	FULL
Efficient Federal Operations (EO 13834)	FULL
Chesapeake Bay Protection and Restoration (EO 13508)	FULL
Strengthening Federal Environmental, Energy, and Transportation Management (EO 13514)	FULL
Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability (EO 10457)	FULL
Safeguarding the Nation From the Impacts of Invasive Species (EO 13751)	FULL

## **2 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES**

### **2.1 Proposed Action**

#### **2.1.1 Location**

The Proposed Action site for the CDC V is an approximately 8-acre area on FMMD and formerly contained World War II (WWII) era barracks buildings that were demolished more than 20 years ago. The site is currently vacant and mostly wooded. The Proposed Action site is not located within areas of military munitions or historic range areas.

#### **2.1.2 Conceptual Details**

##### **2.1.2.1 Size and Capacity**

The Proposed Action includes the design, construction, and operation of a new, standard-design, approximately 26,450 SF, CDC V facility at FMMD. The Proposed Action design is for a standard-design medium-sized CDC that would serve children 4 weeks to 6 years of age. In total, the Proposed Action includes the CDC V building, approximately 23,873 SF of outdoor play space, and no more than 110 parking spaces. The parking spaces would be maximized for available space to achieve as close to or equal to the authorized number of parking stalls.

##### **2.1.2.2 Site Layout**

Pavements, sidewalks, parking areas, playgrounds and other features would be sited as much as possible according to the CDC standard design. The CDC V building has a central main entrance on the front (east) face. There would be a sidewalk extending from the front entrance to a two-isle parking lot east of the building. There would be two entrances to the parking lot to facilitate access and traffic flow. Three fenced-in playground areas with age-appropriate playground equipment, safety surfacing, shaded areas, and fencing would hug the building on the northwest, southwest, and southeast corners.

##### **2.1.2.3 Stormwater Management**

The CDC V building would be sited in the middle of the flattest area on the site. With the existing site shaped like a bowl, this is also the low point of the site. The CDC V building would have as much as ten feet of fill built up under the foundation to raise the facility out of the low area. Much of this fill would be obtained from the hills on the northwest and southwest corners of the bowl. This would effectively flatten the area and provide positive drainage away from the building on all sides.

A stormwater retention pond would be created on the east side of the Proposed Action area to satisfy the Maryland Department of Environment (MDE) Maryland Stormwater Design Manual Volumes I & II, revised in 2009 with Environmental Site Design (ESD) requirements, the Maryland Stormwater Management Guidelines for State and Federal Projects (2015), all MDE's applicable Technical Memorandums, and the Energy Independence and Security Act (EISA) Section 438.

The front of the building and the parking lot would be sloped as much as four percent to drain to the east toward a low point containing micro-bioretenion areas. Due to topography, overland water flows from west to east; as a result, there is offsite drainage from the high points northwest and southwest and from the outfall from an existing stormwater retention basin. Stormwater management swales would surround the perimeter of the site and a channel would be constructed

west of the CDC V building to direct these flows north and east around the CDC V building to the existing culvert to the east of the Proposed Action area.

#### **2.1.2.4 Utilities**

Mechanical and electrical equipment would be part of the CDC V building construction. The mechanical yard would be shielded from view from the parking lot by a brick wall. Maintenance entrances for mechanical, electrical, plumbing, and kitchen space would be from the east face of the north part of the building. Access would be provided by sidewalks and a maintenance road on the northeast corner of the building. The dumpster pad would be located north of the parking lot and would be enclosed by a brick wall. There would be a fire access turn around on the south side of the CDC V building to allow the building to be fully covered for fire protection. Air conditioning would be provided by standalone chillers located adjacent to the CDC V facility.

#### **2.1.2.5 Antiterrorism and Force Protection (ATFP)**

Measures by the DoD Minimum Antiterrorism for Buildings standards would be provided.

#### **2.1.2.6 Accessibility**

Access for individuals with disabilities would be provided in compliance with the Architectural Barriers Act and the Americans with Disabilities Act.

#### **2.1.2.7 Efficiency and Sustainability**

Facilities would be designed for a minimum life of 40 years by DoD's UFC 1-200-02 including energy efficiencies, building envelope, and integrated building systems performance. Sustainability and energy enhancement measures would be included to meet the Leadership in Energy and Environmental Design (LEED) Silver requirement.

## **2.2 No Action Alternative**

Under the No Action Alternative, the Proposed Action would not be implemented. This leaves FMMD with a continued critical shortage of childcare services, particularly infant and toddler care, which is the daycare category in the highest demand by most military families at FMMD.

## **2.3 Alternative Sites Eliminated from Consideration**

Initial planning efforts considered several possible design layouts for either a large or medium-sized facility. Efforts to address site constraints of steep topography and streams led to the current proposed placement of the building.

### **2.3.1 Alternative Site 1**

Alternative Site 1 is located within a residential area northeast of the Proposed Action area. The benefit of this site is that it is near residential housing without current CDC coverage; however, the site is a “green” site which would require new roads and bridges to support efficient traffic flow and avoid congestion of residential streets, grading to overcome steep slopes, and deforestation. This alternative was eliminated from further consideration because of its cost-prohibitive topography and roadway access limitations.

### **2.3.2 Alternative Site 2**

Alternative Site 2 is located on a previously developed site with the former installation hotel. Utilizing this site would require the demolition of the hotel structure, which has already been slated

for demolition to reduce the garrison's inventory of outdated structures. Reuse of a previously developed site would allow use of existing road and utility infrastructure and require only minor tree removal. The site is located convenient to arterial roads and retail areas. However, this site was eliminated due to concerns it could cause adverse impacts on traffic congestion and safety to vehicles and occupants during childcare drop-off and pick-up periods in this busy area.

### 3 EXISTING CONDITIONS AND ENVIRONMENTAL CONSEQUENCES

The U.S. Army is committed to fostering responsible stewardship of the natural resources held in its trust and has decreed to be a leader in the field of environmental stewardship. Conservation is a pillar of the Army’s environmental mission to ensure the future, including the recognition that the ecological approach to management of natural habitats will yield comprehensive benefits, promote best management practices, and promote beneficial impacts within and beyond the geographic boundaries of FMMD.

This section identifies and evaluates the anticipated environmental impacts associated with implementing the Proposed Action and the No Action alternative in accordance with the Council on Environmental Quality (CEQ) guidelines set forth in 40 CFR Part 1508.8.

#### 3.1 Framework for Analysis

To provide a framework for the analyses in this EA, FMMD defined a study area specific to each resource or sub-resource area. Referred to as a Region of Influence (ROI), these areas delineate a boundary where possible effects from the considered alternatives would have a reasonable likelihood to occur. Beyond these ROIs, potential adverse effects on resources would not be anticipated. For the purposes of analysis, potential effects are described as follows:

- *Beneficial* – positive effects that improve or enhance resource conditions
- *Adverse* – negative or harmful results
- *Negligible* – effects likely to occur but at levels not readily observable by evaluation
- *Minor* – observable, measurable, tangible effects qualified as below one or more significance threshold(s)
- *Moderate* – tangible effects that are readily apparent, qualified as below one or more significance threshold(s)
- *Significant* – obvious, observable, verifiable effects qualified as above one or more significance threshold(s); not mitigable to below significance

When relevant to the analyses in this EA, potential effects are further defined as direct or indirect; short- or long-term; and temporary, intermittent, or permanent.

To determine the potential for “significant” effects under the Proposed Action, FMMD defined impact thresholds to support the analyses in this EA. Based upon the nature of the Proposed Action and the affected environment, both qualitative and quantitative thresholds were used as benchmarks to qualify effects. Further, a cumulative effects analysis considering the Proposed Action in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at FMMD is presented in Section 3.16.

#### 3.2 Environmental Resources Dismissed from Further Analysis

Based on the scoping process and prior analyses of similar development projects at FMMD, the Proposed Action has no mechanism to impact several environmental resources listed in Table 2. As a result, these environmental resources have been eliminated from further impact analysis in this EA.

**Table 2. Resources Dismissed from Further Analysis**

Resource	Rationale
<b>Land Use</b>	The Proposed Action would develop the site for military support functions that are consistent with the FMMD Master Plan. The Proposed Action would not prevent or induce a change in use of other private or public lands in the communities outside of FMMD. Therefore, the Proposed Action would have no impact on land use at FMMD or in the surrounding community and this resource is dismissed from further analysis.
<b>Geology</b>	The Proposed Action would not alter or damage unique or recognized geologic features, adversely affect geologic conditions or processes, or expose people or property to geologic hazards that could result in injury or loss of property use. The Proposed Action would require ground disturbing activities including grading and excavation for the building foundation, parking areas, and utility corridors. The depth to bedrock at the Proposed Action site is at least 20 feet below grade, which is below the depth that grading and excavation would occur. Therefore, the Proposed Action would have no impact on geologic resources at the Proposed Action site or elsewhere at FMMD. Therefore, geology is dismissed from further analysis.
<b>Water Resources: floodplains, surface water, wetlands, and groundwater</b>	The Proposed Action site is outside of the 100- and 500-year floodplains and would have no mechanism to induce flooding at FMMD or in the communities outside of FMMD. The Proposed Action site does not contain surface waters or wetlands and has no mechanism to impact these resources at FMMD or in communities outside of FMMD. Groundwater depth is anticipated to be lower than any constructed elements, and no groundwater withdrawals are required for operation of the Proposed Action. Therefore, the Proposed Action would have no impact on floodplains, surface water, wetlands, or groundwater. Therefore, these resources are dismissed from further analysis.
<b>Energy and Utilities</b>	Utilities lines are adjacent to the Proposed Action. The Proposed Action is anticipated to have a utility demand rate that can be met by utility suppliers without impacting the quality of service provided elsewhere at FMMD or in the surrounding community. Therefore, this resource is dismissed from further analysis.
<b>Hazardous, Toxic, and Radioactive Substances</b>	<p>The Proposed Action site is not located within an Installation Restoration Program (IRP) area and is not located within areas of military munitions or historic range areas. Should suspected ammunition/ordnance items be discovered, the contractor would leave them in place, immediately execute a “stop work” condition, evacuate the area, and immediately contact the on-call UXO technician, Directorate of Emergency Services at 911, or 301-677-6622, and the DPW Environmental Division at 301-677-9188.</p> <p>There are no records that support the existence of underground storage tanks (USTs). FMMD has routine policies in place to address the unanticipated discovery of a UST. Operating the CDC V would not require the use of hazardous or toxic materials and</p>

Resource	Rationale
	would not generate hazardous or toxic wastes or radioactive substances. Should ANY unusual odors, colors, or unusual soil/water condition or waste/storage tank/buried debris of any kind be encountered during site work activities, the construction contractor would immediately execute a "stop work condition" and report the condition to the DPW-Environmental Division IRP Program Manager (Erin Geiger, <a href="mailto:erin.l.geiger2.civ@army.mil">erin.l.geiger2.civ@army.mil</a> , 301-677-9168) or DPW-ED at 301-677-9188. Accordingly, this resource is dismissed from further analysis.

### **3.3 Environmental Resources Carried Forward for Detailed Analysis**

Based on the results of internal and external scoping completed by FMMD and USACE, the following resources were carried forward for analysis in this EA: visual resources; topography; soils; air quality and climate change; noise; stormwater; coastal zone management; biological resources; cultural resources; transportation; socioeconomics and environmental justice; and protection of children.

### **3.4 Visual Resources**

#### **3.4.1 Definition of the Resources**

Visual resources can be defined as the natural and man-made features that constitute the aesthetic qualities of an area. Natural visual resources occur in the landscape, typically without human assistance, and include native or mostly undisturbed landforms, water bodies, vegetation, and animals, both wild and domesticated. Visual quality is defined as the impression a particular landscape has on its observers. The importance of visual resources and any changes in the visual character of an area is influenced by social considerations, including the public value placed on the area, public awareness of the area, and community concern for the visual resources in the area.

Visual resources also can include viewsheds, defined as the geographical area that is visible from a specific location. Viewsheds include all surrounding points that are in the line-of-sight with that location and exclude any points that are beyond the horizon or obstructed by other features. They can include cultural and historic landmarks, landforms of aesthetic value or significance, water surfaces, or vegetation. The viewshed informs the overall impression that a viewer receives of an area or its landscape.

#### **3.4.2 Existing Conditions**

##### **3.4.2.1 Installation-wide**

The visual characteristics of FMMD are dominated by areas improved with buildings, roadways, parking areas, landscaped grounds, and pockets of forest surrounded by development.

##### **3.4.2.2 Proposed Action Site**

The visual characteristics of the Proposed Action site are dominated by a mix of mature deciduous and coniferous trees. The asphalt-paved roads in the vicinity, along with minimal vehicular traffic on these roads, also influences the visual character. Nearby structures may be visible during winter months when the vegetation canopy cover at the site is minimal, but during summer months nearby structures would be largely screened from view from within the Proposed Action site.

### **3.4.3 Environmental Consequences**

#### **3.4.3.1 Evaluation Criteria**

The Proposed Action would be considered to have a significant effect to visual resources if: long-term alteration of the viewshed occurred and would require mitigation to resolve; negative alterations to the viewshed of a historical resource occurred; and if the action were not consistent with the overall viewshed of adjacent areas.

#### **3.4.3.2 Impacts from Construction of the Proposed Action**

Short-term, minor, direct, adverse impacts on visual aesthetics would be expected during the approximately 12-month construction period due to the presence of construction vehicles and other associated disturbances related to construction activities. Specifically, construction clearing is likely to require up to eight (8) acres of vegetation removal in preparation for the new building footprint and associated infrastructure. Loss of trees would ultimately be offset through tree replacement in accordance with the MD Forest Conservation Act (FCA) of 1991 (Code of Maryland Regulations [COMAR] Title 08.19.01.00) (MD Code Reg 08.19.01.00 1991) and the FMMD Tree Management Policy, as described in the Vegetation Section of Biological Resource Impacts (Section 3.11.2).

The receptors of the visual impacts would be limited to FMMD residents, visitors, and staff traveling along nearby roads. Because construction activities regularly occur throughout FMMD, construction activities associated with Proposed Action are not likely to be considered unusual or a nuisance.

#### **3.4.3.3 Impacts from Operation of the Proposed Action**

Operation of the Proposed Action would have long-term, negligible, direct adverse impact on the visual characteristics of the Proposed Action site due to permanent conversion of a wooded area into the CDC V grounds, which would be improved with the CDC V building, lighting, parking, sidewalks, curbs and gutters, storm drainage, landscaping, signage, and other infrastructure.

The CDC V building would be sited in the middle of the flattest area of the eight-acre site. Pavements, sidewalks, parking areas, play spaces, and other site features would be sited according to the CDC V standard design to the extent practicable.

The building design would have a central main entrance on the front (east) face. There would be a sidewalk extending from the front entrance to a two-isle parking lot east of the building. There would be two entrances to the parking lot to facilitate access and traffic flow. Three fenced play spaces would abut the building on the northwest, southwest, and southeast corners.

Mechanical and electrical equipment would be placed on the north side of the building. The mechanical yard would be shielded from view from the parking lot by a brick wall. Maintenance entrances for mechanical, electrical, plumbing, and kitchen space would be from the east face of the north part of the building.

Access to the CDC V building would be provided by sidewalks and a maintenance road on the northeast corner of the building. A dumpster pad would be located north of the parking lot and would be enclosed by a brick wall. There would be a fire access turn around on the south side of the building to allow the building to be fully covered for fire protection (USACE 2023).

The characterization of these impacts is relative to the perspective of the viewers. For the staff and parents in critical need of care for their children, the CDC V would likely be a welcome sight. Any vegetation disturbed during construction and subsequently restored would also be maintained during the operational phase. Views of FMMD are limited to personnel, contractors, and civilians within the property. The CDC V cannot be viewed from any homes or offices. Therefore, long-term impacts to visual resources from the implementation of the Proposed Action would be limited to the residents, staff, and visitors to FMMD, but would have no impact on visual receptors outside of FMMD.

#### **3.4.3.4 No Action**

Implementation of the No Action Alternative would not alter the existing visual or aesthetic conditions of the Proposed Action site. The Proposed Action site would remain in its current undeveloped, forested condition for the foreseeable future, but could be developed for other Army functions that are consistent with the FMMD Master Plan. Therefore, the No Action Alternative would result in no changes to visual resources at the Proposed Action site. Passersby may find aesthetic value in the undeveloped, forested condition of the site. As a result, the Proposed Action would have a long-term beneficial impact on aesthetic conditions.

### **3.5 Topography**

#### **3.5.1 Definition of the Resource**

Topography refers to the shape, height, and position of the land surface. Soil refers to the unconsolidated materials overlying bedrock or other parent material. Geology refers to the structure and configuration of the earth's surface and subsurface features. Characteristics of geology include geomorphology, subsurface rock types, and structural elements.

The ROI for topographic resources is the Proposed Action site.

#### **3.5.2 Existing Conditions**

##### **3.5.2.1 Installation-wide**

FMMD lies in the Atlantic Coastal Plain Physiographic Province, which is characterized by relatively flat topography that slopes towards the east (MGS 2020). FMMD has approximately 210 feet of topographic relief. The highest point is 310-feet above mean sea level (amsl), located in the northern most central portion of FMMD. The lowest elevation, less than 100 feet amsl, occurs in the southwestern portion of FMMD, along the Little Patuxent River. Most of the FMMD property slopes gradually to the south and southwest. Slopes at FMMD are generally less than 10% grade (USACE 2007). Slopes exceeding 10% are rare and occur primarily in pockets in the north-central and central parts of FMMD 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 (USACE 2023).

While much of the level land at FMMD has been developed, the greatest topographical change occurs in the southeast portion of FMMD. This area is more forested and used for range and training areas (MBI 2020).

##### **3.5.2.2 Proposed Action Site**

The Proposed Action site generally slopes to the east, with slopes as great as 3:1 in some areas.

### **3.5.3 Environmental Consequences**

#### **3.5.3.1 Evaluation Criteria**

Impacts to topography would be considered significant if the altered topography from a proposed action does not comply with the overall topography of adjacent land.

#### **3.5.3.2 Impacts from Construction and Operation of the Proposed Action**

Under the Proposed Action, the CDC V building would be located in the middle of the flattest area of the Proposed Action site, but filling and grading would still be required. Additionally, grading would be required to create stormwater drainage swales to facilitate stormwater flow from west to east, conforming to existing patterns within the watershed. These modifications to topography would be permanent but localized to the Proposed Action site. Therefore, the modifications to topography made during construction and maintained during operation would have a long-term, negligible, direct adverse impact on topographic conditions at the Proposed Action site, but no impact on overall topographic conditions at FMMD.

#### **3.5.3.3 No Action**

Under the No Action Alternative, existing topographic conditions at the Proposed Action site would remain unchanged. Thus, the No Action alternative would have no impact on topography.

## **3.6 Soils**

### **3.6.1 Definition of the Resource**

Soil refers to the unconsolidated materials overlying bedrock or other parent material. Soils are defined by their composition, slope, and physical characteristics. Attributes of soil, such as elasticity, load-bearing capacity, shrink-swell potential, and erodibility determine its suitability to support a particular land use.

Prime farmland, as defined by the United States Department of Agriculture in the *Farmland Protection Policy Act* ([7 USC §§ 4201–4209](#)), 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.

The ROI for soil resources is the Proposed Action site.

### **3.6.2 Existing Conditions**

#### **3.6.2.1 Installation-wide**

The U.S. Department of Agriculture (USDA) Natural Resources and Conservation Service (NRCS) has mapped 41 distinct soil types at FMMD. This section does not describe the wide range of soil types within the installation; none of the soil resources are utilized for agricultural purposes.

#### **3.6.2.2 Proposed Action Site**

Based on the USDA-NRCS soil map, the soil at the Proposed Action site is classified as Mattapex-Butlertown complex with 5-10% slopes, and Patapsco-Fort Mott-Urban land complex with 5-15% slopes (USDA NRCS 2023). The Mattapex-Butlertown complex soils are designated as farmland of statewide importance, but neither of the soils at the Proposed Action site are classified as prime farmlands. Additionally, the land at FMMD is designated for military use. Therefore, the Farmland Protection Policy Act is not applicable.

A geotechnical study was completed at the Proposed Action site in 2022 (USACE 2023). The results indicated that organic material was encountered in the upper few feet of soil. The soils onsite are predominantly sandy, classified as silty sands or poorly graded sands, with isolated thin clay lenses encountered in a few of the borings. Sands are generally loose to dense, with density increasing significantly with depth. It is known that small structures were previously demolished from the site, however several test pits were performed during the 2022 geotechnical investigation and no uncontrolled backfill or construction debris was encountered in the test pits. Infiltration tests were also completed and indicated average infiltration average rates ranged from 1 to 24 inches per hour (USACE 2023).

### **3.6.3 Environmental Consequences**

#### **3.6.3.1 Evaluation Criteria**

Impacts to soils would be considered significant if a proposed action would cause substantial soil erosion or loss of topsoil, which would result in damage to waterways, ground instability, or impact to animal or human habitats.

#### **3.6.3.2 Impacts from Construction of the Proposed Action**

The Proposed Action construction activities would have short-term, minor, direct adverse impacts on soils in the immediate area of the Proposed Action site.

Soil disturbances in the form of excavations, grading, earthmoving, and compaction would result from construction activities. As a result, soils would be compacted, soil layer structure would be disturbed and modified, and soils would be exposed, increasing the overall potential for erosion. Soil productivity (i.e., the capacity of the soil to produce vegetative biomass) would decline in disturbed areas and be eliminated for those areas within the footprint of the building, roads, parking lots, play spaces, fences, and other ancillary features of the Proposed Action. Exposed soils would be more susceptible to erosion by wind and surface run-off, leading to a minor loss.

Adverse impacts to soils from construction activities would be minimized by proper construction management and planning and the use of appropriate site Best Management Practices (BMPs) for controlling run-off, erosion, and sedimentation during site preparation and construction activities. Appropriate erosion and sediment controls, such as synthetic hay bales and silt fencing, would be installed during construction. Areas disturbed outside of the footprints of the new construction would be reseeded, replanted, and/or re-sodded following construction activities, which would decrease the overall erosion potential of the site and improve soil productivity.

The Erosion and Sediment Control Plans (ESCP) would be designed in accordance with MDE's 2011 MD Standards and Specifications for Soil Erosion and Sediment Control. Erosion and sediment control features are anticipated to include a stabilized construction entrance, silt fencing, earth dikes and/or diversion fencing, and sediment traps (USACE 2023).

Additionally, because the construction would disturb more than one acre of ground surface, FMMD (via the selected construction contractor) would apply to MDE for either a General or Individual Permit for Stormwater Associated with Construction Activity. As part of the permit application, an ESCP and Stormwater Pollution Prevention Plan (SWPPP) would be required as the Proposed Action is expected to exceed 5,000 SF. These plans would be prepared and submitted by FMMD to the MDE, Water Management Administration, for review and approval prior to the start of any construction activities. Areas disturbed within the equipment staging area would be

reseeded, replanted, and/or re-sodded following construction activities, which would decrease the overall erosion potential of the site and improve soil productivity.

Additionally, the construction contractor would implement spill and leak prevention and response procedures, including maintaining a complete spill kit at the site, to reduce the impacts of incidental releases of construction vehicle fluids (such as diesel or hydraulic fluids) to soil quality. The construction contractors would report releases of regulated quantities of petroleum-based fluids to FMMD Department of Public Works (DPW) and be responsible for cleanup per state regulatory requirements.

### **3.6.3.3 Impacts from Operation of the Proposed Action**

Operation of the Proposed Action would have a long-term, negligible, direct adverse impact on soil quality due to permanent cover by impervious surfaces and compaction. Soils exposed during construction and not covered with impervious surfaces would be revegetated, and the vegetation would be professionally maintained during operation to prevent exposing soils and resulting in erosion.

### **3.6.3.4 No Action**

Under the No Action Alternative, existing conditions would remain unchanged. The Proposed Action site would remain vegetated, and there would be no mechanisms or activities to impact soil quality. Thus, the No Action alternative would have no impact on soils.

## **3.7 Air Quality and Climate Change**

### **3.7.1 Definition of the Resource**

Air pollution is a threat to human health and damages trees, crops, other plants, waterbodies, and animals. It creates haze or smog that reduces visibility in national parks and cities and interferes with aviation. To improve air quality and reduce air pollution, Congress passed the Clean Air Act (CAA) and its amendments in 1970 and 1990, which set regulatory limits on air pollutants and help to ensure basic health and environmental protection from air pollution.

The USEPA has divided the country into geographical regions known as Air Quality Control Regions to evaluate compliance with the National Ambient Air Quality Standards (NAAQS). FMMD is located within the Metropolitan Baltimore Intrastate Air Quality Control Region for MD (40 CFR Part 81.28), which serves as the ROI.

### **3.7.2 National Ambient Air Quality Standards and Attainment Status**

USEPA Region 3 and MDE regulate air quality in MD. The CAA (42 USC 7401–7671q), as amended, gives USEPA the responsibility to establish the primary and secondary NAAQS (40 CFR Part 50, National Primary and Secondary Ambient Air Quality Standards, amended 1 July 2016, hereafter referred to as 40 CFR 50) acceptable concentration levels for seven criteria pollutants: particulate matter less than 10 microns (PM<sub>10</sub>), particulate matter less than 2.5 microns (PM<sub>2.5</sub>), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), ozone (O<sub>3</sub>; using volatile organic compounds [VOC] as a precursor to O<sub>3</sub>), and lead (Pb). Short-term standards (i.e., 1-, 8- and 24-hour periods) have been established for pollutants that contribute to acute health effects, while long-term standards (i.e., annual averages) have been established for pollutants that contribute to chronic health effects (Table 3). Each state has the authority to adopt standards stricter

than those established under the Federal program. MDE has adopted the NAAQS and is responsible for maintaining air quality standards for the State of MD.

Primary and secondary NAAQS for the aforementioned criteria are presented in areas that exceed the NAAQS ambient concentration (i.e., have poor air quality) and are labeled as nonattainment areas designated by Federal regulations. According to the severity of the pollution problem, areas exceeding the established NAAQS are categorized as marginal, moderate, serious, severe, or extreme nonattainment. Maintenance areas have recently met NAAQS but are considered to be at risk of not remaining in attainment if efforts are not continued to maintain better air quality.

FMMD is within the Metropolitan Baltimore Intrastate Air Quality Control Region for MD (40 CFR Part 81.28). Anne Arundel County is classified as a nonattainment area for the 8-hour O<sub>3</sub> and SO<sub>2</sub> NAAQS, and in attainment for all other criteria pollutants (USEPA 2020).

### **3.7.3 Hazardous Air Pollutants**

In addition to the ambient air quality standards for criteria pollutants, national standards exist for hazardous air pollutants (HAPs). The National Emission Standards regulate 188 HAPs based on available control technologies. The majority but not all HAPs are VOCs (USEPA 2020).

### **3.7.4 Clean Air Act Conformity**

State agencies develop air quality plans, which are also referred to as State Implementation Plans (SIPs), designed to attain and maintain the NAAQS and to prevent significant deterioration of air quality in areas which demonstrate air that exceeds NAAQS standards. MDE has individual SIPs for various pollutants, including NO<sub>2</sub>, PM<sub>2.5</sub>, 8-hour O<sub>3</sub>, regional haze, lead, etc. The 1990 amendments to the CAA require Federal agencies to ensure that their actions conform to the SIP in a nonattainment area and do not contribute to new violations of ambient air quality standards, an increase in the frequency or severity of existing violations, or a delay in timely state and/or regional attainment standards. The purpose of the General Conformity Rule (GCR) is to:

- Ensure Federal activities do not interfere with the budgets in the SIPs.
- Ensure the attainment and maintenance of NAAQS.
- Ensure actions do not cause or contribute to new violations of NAAQS.

USEPA has developed two distinctive sets of conformity regulations: one for transportation projects and one for non-transportation projects. Non-transportation projects are governed by general conformity regulations (40 CFR Part 93, Determining Conformity of Federal Actions to State or Federal Implementation Plans, dated November 24, 1993, hereinafter referred to as 40 CFR 93). The Proposed Action is a non-transportation project within a nonattainment area. Therefore, a general conformity analysis is required with respect to the 8-hour O<sub>3</sub> and the SO<sub>2</sub> NAAQS.

**Table 3. Federal and State Ambient Air Quality Standards**

NAAQS Pollutant	Primary/Secondary	Averaging Time	Level <sup>(1)</sup>	Form
Carbon Monoxide	Primary	8-hour	9 ppm	Not to be exceeded more than once per year
		1-hour	35 ppm	
Nitrogen Dioxide	Primary	1-hour	100 ppb	98th percentile, averaged over 3 years
	Primary and secondary	Annual	53 ppb	Annual Mean
Ozone	Primary and secondary	8-hour	70 ppb	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
Particulate Matter (PM <sub>2.5</sub> )	Primary	Annual	12 µg/m <sup>3</sup>	Annual mean, averaged over 3 years
	Secondary	Annual	15 µg/m <sup>3</sup>	Annual mean, averaged over 3 years
	Primary and secondary	24-hour	35 µg/m <sup>3</sup>	98th percentile, averaged over 3 years
Particulate Matter (PM <sub>10</sub> )	Primary and secondary	24-hour	150 µg/m <sup>3</sup>	Not to be exceeded more than once per year on average over 3 years
Lead	Primary and secondary	Rolling 3-month average	0.15 µg/m <sup>3</sup>	Not to be exceeded
Sulfur Dioxide	Primary	1-hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

*1 - Units of measure for the standards are parts per million (ppm) by volume, parts per billion (ppb) by volume, and micrograms per cubic meter of air (µg/m<sup>3</sup>)*

The GCR specifies threshold emissions levels by pollutant to determine the applicability of conformity requirements for a project. Due to the proximity to the urbanized east coast of the United States, Baltimore County is considered an Ozone Transport Region (OTR), as is Anne Arundel County. The OTR has a marginal 8-hour ozone (2015) and moderate 8-hour ozone (2008) nonattainment classification (USEPA 2020). Because ozone formation is driven by other direct emissions, the air quality analyses focus on ozone precursors that include VOCs and NO<sub>x</sub>. In accordance with USEPA policy, precursors that form PM<sub>2.5</sub> (NO<sub>x</sub> and SO<sub>2</sub>) have also been evaluated. The applicable emission *de minimis* thresholds established by USEPA are summarized in Table 4.

Regulated under 40 CFR 93(b), the GCR also prohibits any department, agency, or instrumentality of the Federal Government from engaging in, providing financial assistance for, approving, or supporting any activity that does not conform to applicable SIP designated for areas being in nonattainment of established NAAQS. A SIP is a compilation of a state’s air quality control plans and rules, approved by USEPA, in an effort to reduce or eliminate the severity and number of NAAQS violations and achieve expeditious attainment of these standards.

**Table 4. General Conformity de minimis Threshold Values**

Criteria Pollutant	Tons/Year
<b>40 CFR 93.153(b)(1) – For purposes of paragraph (b) of this section the following rates apply in nonattainment areas (NAAs):</b>	
<b>Ozone (VOCs or NO<sub>x</sub>):</b>	
Serious NAAs	50
Severe NA's	25
Extreme NAAs	10
Other ozone NAAs outside ozone transport region:	100
<b>Other ozone NAAs inside an ozone transport region:</b>	
VOC	50
NO <sub>x</sub>	100
Carbon Monoxide: All maintenance areas	100
SO <sub>2</sub> or NO <sub>x</sub> : All NAAs	100
<b>PM<sub>10</sub>:</b>	
Moderate NAAs	100
Serious NAAs	70
<b>PM<sub>2.5</sub> (direct emissions, SO<sub>2</sub>, NO<sub>x</sub>, VOC, and Ammonia):</b>	
Moderate NAAs	100
Serious NAAs	70
Pb: All NAAs	25
<b>40 CFR 93.153(b)(2) – For purposes of paragraph (b) of this section the following rates apply in maintenance areas:</b>	
<b>Ozone (NO<sub>x</sub>), SO<sub>2</sub> or NO<sub>3</sub></b>	
All maintenance areas	100
<b>Ozone (VOCs)</b>	
Maintenance areas inside an ozone transport region	50
Maintenance areas outside an ozone transport region	100
Carbon monoxide: All maintenance areas	100
PM <sub>10</sub> : All maintenance areas	100
PM <sub>2.5</sub> (direct) emissions: SO <sub>2</sub> , NO <sub>x</sub> , VOC, and ammonia	100
All maintenance areas	100
Pb: All maintenance areas	25

### 3.7.5 Climate Change

Greenhouse gases (GHGs) are compounds that contribute to the greenhouse effect. The greenhouse effect is a natural phenomenon where gases trap heat within the surface-troposphere (lowest portion of Earth's atmosphere) system, causing heating at Earth's surface. The primary long-lived GHGs directly emitted by human activities are CO<sub>2</sub>, methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>). The heating effect from these gases is considered the probable cause of the global warming observed over the

last 50 years (NASA 2019). Global warming and climate change can affect many aspects of the environment. In the past, the USEPA has recognized potential risks to public health or welfare and signed an endangerment finding regarding GHGs under Section 202(a) of the CAA (74 Federal Register 66496, December 15, 2009), which found that the current and projected concentrations of the six key well-mixed GHGs—CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>—in the atmosphere threaten the public health and welfare of current and future generations.

To estimate global warming potential (GWP), all GHGs are expressed relative to a reference gas, CO<sub>2</sub>, which is assigned a GWP equal to 1. All six GHGs are multiplied by their GWP and the results are added to calculate the total equivalent emissions of CO<sub>2</sub> (CO<sub>2</sub>e). However, the dominant GHG gas emitted is CO<sub>2</sub>, accounting for 81% of all GHG emissions as of 2018, the most recent year for which data is available (USEPA 2020).

EO 14008 requires climate considerations to be an essential element of US foreign policy and national security. EO 14008 directs the US to rejoin the Paris Agreement and to implement and build upon the Agreement's three over-arching objectives (a safe global temperature, increased climate resilience, and financial flows aligned with a pathway toward low GHG emissions and climate-resilient development).

### **3.7.6 Existing Conditions**

#### **3.7.6.1 Regional Climate**

The climate at FMMD is affected by its proximity to Chesapeake Bay, Delaware Bay, and the Atlantic Ocean. The daily average high temperatures range from 40 degrees Fahrenheit (°F) during January to 87°F during July (NCDC 2020). Daily average low temperatures range from 23°F during January to 67°F during July. The record minimum and maximum temperatures are -7°F and 105°F, respectively. The annual average precipitation amounts to 43 inches and is uniformly distributed throughout the year. The annual average snowfall amounts to 16 inches. At least a trace of precipitation occurs on approximately one-third of the days during the year. Prevailing winds are from the west-northwest. Southwesterly winds are more frequent during the summer months and northwesterly winds are more frequent during the winter months. The region is frequently under the influence of the Bermuda High Pressure System during the summer months. Air quality problems in the region are typically associated with this summer phenomenon (USACE 2007).

#### **3.7.6.2 Emission Sources - Installation-wide**

Current emission sources of criteria pollutants and GHGs at FMMD are associated with staff and visitor vehicles, building HVAC, generators, water heaters, and routine grounds maintenance activities. Stationary sources elsewhere at FMMD include boilers, generators, water heaters, incinerators, fuel storage tanks, fuel-dispensing facilities, vehicle maintenance shops, laboratories, degreasing units, and similar testing units. Mobile sources of emissions include private and government-owned vehicles. Fugitive sources include dust generated from construction activities and roadway traffic. Sources of HAP emissions at FMMD include stationary, mobile, and fugitive emissions.

#### **3.7.6.3 Emission Sources - Proposed Action Site**

The Proposed Action site is currently wooded and has no source of emissions. The nearest emissions sources are other residential, school, and administrative buildings, and emissions would

be generated from routine operation of stationary HVAC units and mobile sources associated with vehicles traveling to and from these buildings.

#### **3.7.6.4 Sensitive Receptors - Installation-wide**

The CEQ NEPA regulations require evaluation of the degree to which a proposed action affects public health (40 CFR 1508.27). Children, elderly people, and people with illnesses are especially sensitive to the effects of air pollutants; therefore, hospitals, schools, convalescent facilities, and residential areas are sensitive receptors for air quality impacts, particularly when located within one mile from the emissions source.

FMMD houses religious institutions, residential areas, one ambulatory care center, seven schools, Child and Youth Services Centers, and four CDCs. There are several sensitive receptors, including other hospitals, schools, religious institutions, and elderly and childcare facilities within one mile of FMMD.

#### **3.7.6.5 Sensitive Receptors - Proposed Action Site**

The Proposed Action site is currently wooded and has no sensitive receptors. Within a 1-mile radius of the Proposed Action site, the nearest sensitive receptor is an existing CDC. There are no religious institutions or medical centers located within 1 mile of the Proposed Action site.

### **3.7.7 Environmental Consequences**

#### **3.7.7.1 Evaluation Criteria**

Emission thresholds associated with federal CAA conformity requirements are the primary means of assessing the significance of potential air quality impacts associated with implementation of a Proposed Action under NEPA. A formal conformity determination is required for federal actions occurring in nonattainment or maintenance areas when the total direct and indirect stationary and mobile source emissions of nonattainment pollutants or their precursors exceed *de minimis* thresholds. Significant air quality impacts would occur if implementation of an action alternative would directly or indirectly:

- Expose people to localized (as opposed to regional) air pollutant concentrations that violate state or federal ambient air quality standards;
- Cause a net increase in pollutant or pollutant precursor emissions that exceeds relevant emission significance thresholds (such as CAA conformity *de minimis* levels or the numerical values of major source thresholds for nonattainment pollutants); or,
- Conflict with adopted air quality management plan policies or programs.

Federal, state, and local air pollution standards and regulations set the criteria for determining the significance of air quality impacts. Impacts would also be potentially significant if estimated emissions would exceed the thresholds that trigger a conformity determination under Section 176(c) of the CAA of 1990.

#### **3.7.7.2 Methodology**

The environmental impact methodology for air quality impacts presented in this EA is derived from Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention* (February 2020). The Proposed Action is broken down into basic units. For example, a basic development project that consists of replacing a building with a new building could be broken down into demolition (SF), grading (SF), building construction (SF and height), architectural coatings (SF),

and paving (SF). These data are then input into the Air Force's Air Conformity Applicability Model (ACAM), which models emissions based on the inputs and estimates air emissions for each specific criteria and precursor pollutant, as defined in the NAAQS. The calculated emissions are then compared against the applicable threshold based on the attainment status of the ROI. If the annual net increase in emissions from the project are below the applicable thresholds, then the Proposed Action and Alternatives are not considered significant and would not be subject to any further conformity determination. Assumptions of the model, methods, and detailed summary results are provided in Appendix B of this EA.

ACAM modeling for the Proposed Action utilized conceptual design elements presented in the DD1391 prepared by FMMD. The inputs assume that implementing the Proposed Action would require land clearing, grading, building construction, and paving within an approximately 8-acre area within the Proposed Action site. The construction and grading areas anticipate an area assumed to be greater than the existing structures to allow for construction area accessibility, utilities improvements, and laydown storage. For the purpose of the model, all construction activities would be assumed to occur over a continuous 12-month period beginning in fiscal year (FY) 2024 and concluding in FY 2025.

### **3.7.7.3 Impacts from Construction of the Proposed Action**

The Proposed Action would result in short-term, negligible, direct adverse impacts to air quality, primarily due to operating construction equipment and ground-disturbing activities. Under the Proposed Action, potential air quality impacts from construction activities would occur from: 1) combustion emissions due to the use of fossil fuel-powered equipment and vehicles, and 2) particulate emissions during earth-moving activities.

#### **3.7.7.3.1 Fugitive Dust**

Particulates are the main air pollutant of concern from construction projects. Construction activities would generate both coarse and fine particulate emissions which would temporarily affect local air quality. The number of particulate emissions can be estimated from the amount of ground surface exposed, the type and intensity of activity, soil type and conditions, wind speed, and dust control measures used. To limit these emissions, construction BMPs, generally including water- or chemical-based dust suppression, would be implemented to reduce fugitive dust generation and further prevent it from becoming airborne.

No long-term increases in fugitive dust are expected to occur, because this source of emissions is limited and would cease upon completion of the Proposed Action. Particulate matter emissions would be moderated through dust reduction measures (e.g., watering of exposed soils) as needed, thereby minimizing the total quantity of fugitive dust emitted during construction activities.

#### **3.7.7.3.2 Off-Road and On-Road Heavy Construction Equipment**

Emissions would be generated from diesel-fueled off-road construction vehicles (backhoes, loaders, graders, etc.), on-road heavy-duty vehicles (multi-axle delivery vehicles), light duty vehicles, as well as those from construction workers' passenger vehicles.

Construction equipment would also emit minor amounts of HAPs. The main sources of HAPs would occur from the combustion of diesel fuel. Construction would be temporary and minor. HAPs emissions could be further moderated through implementation of BMPs such as restricting excessive idling, adherence to equipment maintenance programs, use of particulate filters, and use of ultra-low sulfur diesel fuel, if applicable.

### 3.7.7.4 Impacts from Operation of the Proposed Action

Operation of the Proposed Action would result in long-term, negligible, direct adverse impacts to air quality. Emissions would be generated from heating and cooling the CDC V building and from vehicles driven by staff and families traveling to and from the CDC V.

Table 5 presents a summary of the estimated construction and operational emissions of criteria pollutants and GHGs, represented as CO<sub>2</sub>e, due to implementation of the Proposed Action. Based on these data, total combined direct and indirect emissions associated with the Proposed Action were estimated on a calendar-year basis for the “worst-case” and “steady state” (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the Proposed Action according to the requirements of 40 CFR 93, Subpart B. Based on this analysis, the requirements of this rule are not applicable because none of the emissions exceed the General Conformity *de minimis* thresholds. A Record of Non-Applicability for CAA conformity with supporting calculations is presented in Appendix B .

**Table 5. Estimated Annual Construction and Operational Emissions**

Emission Source	Emissions (tons/year)						
	VOC <sup>(1)</sup>	CO	NO <sub>x</sub> <sup>(1)</sup>	SO <sub>2</sub> <sup>(2)</sup>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub> e
Proposed Action Construction Emissions - 2024	0.227	1.753	1.296	0.004	6.713	0.048	407.6
Proposed Action Construction Emissions - 2025	0.437	1.196	0.555	0.006	0.028	0.028	252.7
Proposed Action Operation Emissions – 2026 onward	0.059	0.738	0.135	0.006	0.012	0.012	171.8
General Conformity <i>de minimis</i> threshold <sup>(3)</sup>	50	NA	50	100	NA	NA	NA
Exceeds <i>de minimis</i> threshold?	No	No	No	No	No	No	NA
<i>1 – Not in attainment in Baltimore, MD</i> <i>2 – Not in attainment in the Anne Arundel and Baltimore Counties</i> <i>3 - De minimis thresholds are not applicable to pollutants for which the area is in attainment for the NAAQS.</i>							

It is anticipated that the Proposed Action construction and operation would not cause a perceivable impact to GHG emissions because the increase would not contribute a significant amount to FMMD’s overall CO<sub>2</sub>e emissions. Mitigation efforts to reduce GHGs can be implemented by maintaining emission control technology on construction and operation equipment. FMMD would include GHG emissions from any operational equipment and continue to report GHG emissions in the future as part of the Permit to Operate requirements.

### 3.7.7.5 No Action

Under the No-Action Alternative, the Proposed Action would not be constructed, and existing conditions would remain unchanged. Due to the anticipated increase of families seeking off-installation daycare facilities, vehicular traffic would also increase to and from FMMD. This

increased travel could also result in an increase in emission levels over current conditions. Thus, the No Action Alternative could have a long-term, negligible, direct adverse impact on air quality and greenhouse gas emissions due to increased distances that vehicles travel each day.

## **3.8 Noise**

### **3.8.1 Definition of the Resource**

Noise is traditionally defined as unwanted sound that interferes with normal activities in a way that reduces the quality of the environment. Magnitudes of sound, whether wanted or unwanted, are usually described by sound pressure. There are two primary types of sound sources that generate noise: stationary and transient. Sounds produced by these sources can be intermittent or continuous. A stationary source is usually associated with a specific land use or site, such as construction activities or the operation of generators. Transient sound sources, such as vehicles and aircraft, move through the area. The human auditory system is sensitive to fluctuations in air pressure above and below the barometric static pressure. The loudness of sound as heard by the human ear is measured on the A-weighted decibel (dBA) scale.

The Noise Control Act of 1972 establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. The Act also serves to (1) establish a means for effective coordination of federal research and activities in noise control; (2) authorize the establishment of federal noise emission standards for products distributed in commerce; and (3) provide information to the public with respect to the noise emission and noise reduction characteristics of such products. The Act provided the framework for states and local authorities to establish noise regulations.

Sound pressure levels are quantified in decibels (dB), which is dependent on both frequency and intensity, and is given a level on a logarithmic scale. The way the human ear hears sound intensity is quantified in dBA, which are level “A” weights according to weighting curves. Sound levels for common activities and construction work are presented in Table 6. Noise levels and durations from these activities would vary depending on the specific equipment being used, and the impact from this noise on a receptor would depend on the distance between the receptor and the source of the noise. Generally, noise levels decrease by approximately 6 dBA for every doubling of distance for point sources (such as a single piece of construction equipment), and approximately 3 dBA for every doubling of distance for line sources (such as a stream of motor vehicles on a busy road at a distance).

According to the DoD, the Federal Aviation Administration, and the U.S. Department of Housing and Urban Development criteria, residential units and other noise-sensitive land uses are “clearly unacceptable” in areas where the noise exposure exceeds the day-night level (DNL) of 75 dB, “normally unacceptable” in regions exposed to noise between the DNL of 65 to 75 dB, and “normally acceptable” in areas exposed to noise where the DNL is 65 dB or less (Table 6). The Federal Interagency Committee on Noise developed land use compatibility guidelines for noise in terms of DNL. For outdoor activities, USEPA recommends DNL of 55 dB as the sound level below which there is no reason to suspect that the general population would be at risk from any of the effects of noise.

**Table 6. Common Sound Levels and Exposure Conditions**

Source	Decibel Level	Exposure Concern
Soft Whisper	30	Normal safe level
Quiet Office	40	
Average Home	50	
Conversational Speech	65	
Highway Traffic	75	May affect hearing in some individuals depending on sensitivity, exposure length, etc.
Noisy Restaurant	80	
Average Factory and Construction Equipment Vehicles	80-90	
Pneumatic Drill	100	
Automobile Horn	120	
Jet Plane	140	Above 140 decibels may cause pain.
Gunshot Blast	140	

### **3.8.2 Existing Conditions**

#### **3.8.2.1 Installation-wide**

The noise-scape at FMMD is consistent with that of a modern military installation, where noises are generated from vehicular traffic traveling to and from the installation, building operations, small arms firing ranges, and installation operations and maintenance equipment. Seasonal noise additions include the normal operation of heating, ventilation, and air conditioning (HVAC) systems of buildings, and snow removal in the winter. None of these activities produce excessive levels of noise. The noise-scape within FMMD is influenced by activities occurring outside of FMMD; these activities include the Baltimore Washington International Airport, which is located approximately four miles northeast of FMMD; the Tipton Airport, which is located adjacent to FMMD; and vehicle traffic at urban and suburban areas surrounding FMMD.

#### **3.8.2.2 Proposed Action Site**

The Proposed Action site is currently wooded and there are no human-related noises generated within the site. Noises would be associated with birds and other wildlife using the site. Noises from vehicular traffic along adjacent streets, and the sounds from children playing at the nearby existing CDC facility, may be evident within the site.

### **3.8.3 Environmental Consequences**

#### **3.8.3.1 Evaluation Criteria**

Noise impacts would be significant if a proposed action would create appreciable long-term noise increases in areas of incompatible land use. Additionally, continuous construction noises above 65 dBA may be considered to have a significant adverse effect if audible at residential properties or other sensitive receptors during daytime hours, or results in excessive ground-borne vibration to persons or property. See Sections 3.7.6.4 and 3.7.6.5 for a discussion of the sensitive receptors in the vicinity of the FMMD.

#### **3.8.3.2 Impacts from Construction of the Proposed Action**

The Proposed Action construction activities would have short-term, minor, direct adverse impacts on noise in the immediate area of the Proposed Action site, primarily due to sounds associated

with machinery used to clear vegetation, and excavate and grade soils, as well as hand tools and mechanized equipment used to construct the CDC V building and pavements.

Construction activities would take place during daylight hours and during weekdays. Construction equipment is expected to include gas and/or diesel-powered equipment such as excavators, cranes, backhoe-loaders, welders, aerial lifts, graders, pavers/paving equipment, rollers, and concrete mixing trucks. Once mobilized to the site, the majority of construction equipment would remain within the Proposed Action construction boundary until construction activity for which the equipment was needed is complete. Within the Proposed Action construction area, noise from construction activities would vary depending on the type of equipment being used at the time.

The Proposed Action could generate noise levels during the earth moving phase (site clearing activities involving pieces of equipment) that could range from 72 to 98 dBA when measured 50 feet from the respective piece of equipment. The impact from this noise on a receptor depends on the distance between the noise source and receptor and any buffers in between. Generally, noise levels decrease by approximately 6 dBA for every doubling of distance for point sources (such as a single piece of construction equipment), and approximately 3 dBA for every doubling of distance for line sources (such as a stream of motor vehicles on a busy road at a distance). The nearest noise receptor would be the existing CDC facility.

Noise impacts would be further minimized by equipping construction equipment with appropriate sound-muffling devices (i.e., from the original equipment manufacturer or better), and limiting engine idling to less than 5 minutes. Examples of expected construction noise during daytime hours at specified distances are shown in Table 7.

**Table 7. Estimated Noise Levels from Construction Activities**

Distance from Noise Source in feet (meters)	Estimated Noise Level in dBA
50 (15.2)	90–94
100 (30.5)	84–88
150 (45.7)	81–85
200 (61.0)	78–82
400 (121.9)	72–76
800 (243.8)	66–70
1,200 (365.8)	< 64

Construction workers would be working in close proximity to construction equipment and could be exposed to noise levels above 90 dBA. This is above the permissible noise exposure level defined by the Occupational Safety and Health Administration (OSHA). These levels would be reduced to permissible levels through feasible administrative or engineering controls, and/or the use of BMPs such as the use of hearing protection equipment to ensure compliance with applicable OSHA standards.

### **3.8.3.3 Impacts from Operation of the Proposed Action**

The Proposed Action would result in long-term, direct, minor adverse impacts on noise conditions in the immediate area surrounding the Proposed Action site. These noises would be primarily associated with vehicles traveling to and from the CDC V for drop-off and pickup of children; staff and maintenance personnel; and operating the HVAC unit. Noise levels would likely be comparable to other CDC facilities, which have not resulted in noise complaints from other tenants

at FMMD. To ensure noises from landscaping equipment and other maintenance activities do not become a nuisance, such equipment would be maintained in good working order. Additionally, maintenance equipment would be operated during daylight working hours.

#### **3.8.3.4 No Action**

Under the No Action Alternative, no new noise sources would be generated at the Proposed Action site. Therefore, the No Action Alternative would result in no changes to noise conditions at FMMD.

### **3.9 Stormwater**

#### **3.9.1 Definition of the Resource**

Stormwater is surface water runoff generated from precipitation and has the potential to introduce sediments and other pollutants into surface waters. Stormwater is regulated under the CWA Section 402 National Pollutant Discharge Elimination System (NPDES) program. Impervious surfaces such as buildings, roads, parking lots, and even some natural soils increase surface runoff.

Stormwater infrastructure includes the man-made conveyance systems that function together with natural drainages to collect and control the rate of surface runoff during and after a precipitation event. In urbanized areas, stormwater that is not infiltrated into the ground or discharged to a waterbody may be conveyed to stormwater management systems. Stormwater management systems are designed to contain runoff on site during construction and to maintain predevelopment stormwater flow characteristics following development through either the application of infiltration or retention practices.

##### **3.9.1.1 Code of Maryland Stormwater Regulations**

Provisions of Code of MD Regulations 26.17.02.01 (*MDE, Water Management, Purpose, and Scope*) require that all jurisdictions in MD implement a stormwater management program to control the quality and quantity of stormwater run-off resulting from new development. The regulations state:

*The primary goals of the State and local stormwater management programs are to maintain after development, as nearly as possible, the predevelopment run-off characteristics, and to reduce stream channel erosion, pollution, siltation and sedimentation, and local flooding by implementing environmental site design to the maximum extent practicable and using appropriate structural best management practices only when necessary.*

*These regulations for stormwater management apply to the development or redevelopment of land for residential, commercial, industrial, or institutional use, but do not apply to agricultural land management practices. These provisions specify the minimum content of county and municipal ordinances, responsibilities of the Administration regarding the review of the county and municipal stormwater management programs, and approval of State-constructed projects for stormwater management by the MDE.*

*These provisions apply to all new development and redevelopment projects that do not have final approval for erosion and sediment control and stormwater management plans by May 4, 2010.*

COMAR Title 26.17.02.05 (*When Stormwater Management is Required*) (MD Code Reg 26.17.02.05 2009) exempts any developments that do not disturb over 5,000 SF of land area or 100 cubic yards (CY) of earth. Conversely, developments disturbing over 5,000 SF of land or 100

CY of earth require stormwater management. The Stormwater Management Plan requirements are outlined in COMAR Title 26.17.02.09 (*Stormwater Management Plans*) (MD Code Reg 26.17.02.09 2009). The Proposed Action includes the 26,450 SF building, 23,873 SF of play space, and up to 110 parking spaces; therefore, it would exceed 5,000 SF.

Environmental Site Design (ESD) requires a developer to demonstrate that all reasonable opportunities for meeting stormwater requirements using ESD have been exhausted. This is achieved by using natural areas and landscape features to manage run-off from impervious surfaces, and that structural BMPs have been used only where absolutely necessary. The 2015 Stormwater Management Guidelines for State and Federal Projects would be implemented to the maximum extent technically feasible for the Proposed Action.

FMMD maintains a Stormwater Pollution Prevention Plan that provides BMPs for controlling and preventing siltation and contaminants associated with construction and industrial activity sites from reaching area surface waters.

### **3.9.1.2 Energy Independence and Security Act of 2007**

EISA Section 438 instructs federal agencies to "use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate," for any project with a footprint that exceeds 5,000 SF.

The Proposed Action includes the design, construction, and operation of an approximately 26,450 SF CDC V facility, which exceeds 5,000 SF. However, the COMAR stormwater management regulations (MD Code Reg 26.17.02.05 2009) are more stringent and therefore supersede Section 438 of EISA.

### **3.9.1.3 Municipal Separate Storm Sewer System (MS4) Phase II**

The FMMD, Environmental Division, Stormwater Program is required to meet the Municipal Separate Storm Sewer System (MS4) Phase II permit requirements for the treatment of approximately 200 acres of impervious surface. FMMD complies with the MS4 Phase II State and federal permit which obligates minimum control measures for construction and post-construction run-off control.

## **3.9.2 Existing Conditions**

### **3.9.2.1 Installation-wide**

Stormwater run-off at FMMD is conveyed to the three primary drainages, with the majority of stormwater run-off carried by Midway and Franklin Branches. All of the natural drainages discharge into the Little Patuxent River, which ultimately drains into Chesapeake Bay.

Run-off from developed areas at FMMD is conveyed through an extensive network of drainpipes and associated drainage structures, supplemented by swales, ditches, other drains, and retention ponds (FMMD 2005). In recent years, FMMD has followed federal and MDE environmental site design standards for development. Additionally, FMMD has a Stormwater Management Plan and employs a number of stormwater management initiatives, including low impact development, to manage stormwater. Some examples of these include creating rain gardens, replacing concrete storm drains with grass swales, installing tree box filters, and creating stormwater retention ponds.

### **3.9.2.2 Proposed Action Site**

As previously described, the Proposed Action site generally slopes to the east and has slopes as great as 3:1 in some areas. This topographic relief influences the flow of stormwater, which drains from the west to the east from high points on the northwest and southwest corners to a culvert on the northeast portion of the site. Stormwater then drains to a V-shaped channel to the east, where it infiltrates into the ground or continues to flow overground until reaching Franklin Branch, which flows north to south.

Stormwater that flows onto the Proposed Action site consists of the high points of the hills to the northwest and southwest of the site, and the outfall to an existing stormwater retention basin, located to the west of the Proposed Action site (USACE 2023).

### **3.9.3 Environmental Consequences**

#### **3.9.3.1 Evaluation Criteria**

Impacts to water resources would be considered significant if impacts (1) substantially deplete groundwater supplies or interfere with groundwater recharge, (2) result in a violation of federal and/or state water quality standards, (3) cause an unpermitted direct impact on a water of the US, or (4) alter existing drainage patterns that adversely affect local flora and fauna.

As previously described in Table 2, there are no floodplains, surface waters, or wetlands on the Proposed Action site, and groundwater is not anticipated to be encountered during construction or withdrawn during operations. Additionally, groundwater monitoring wells are not expected at the location. If the construction contractor believes a monitoring well location may interfere with construction or boring activities, they would immediately contact the DPW Installation Restoration Program Manager (Erin Geiger, [erin.l.geiger2.civ@army.mil](mailto:erin.l.geiger2.civ@army.mil), 301-677-9168) or DPW, Environmental Division at 301-677-9188. The contractor would not disturb monitoring wells during site activities and no activities (including, but not limited to, parking, driving, storing of materials, boring, excavation, etc.) would be conducted within 10 feet of any monitoring well. It would be the sole responsibility of the contractor to report and replace or repair any damage to a well or to the area within 10 feet of the well by a Maryland-licensed driller.

Accordingly, the following Water Resources analysis focuses on stormwater and coastal zone management. A Coastal Zone Consistency Determination is included in Appendix C.

#### **3.9.3.2 Impacts from Construction of the Proposed Action**

As previously described, the Proposed Action site is shaped like a bowl, with the low point in the middle portion of the site and steep slopes along the north, west, and south. As a result, the Proposed Action site would require as much as ten feet of fill to raise the low area for the CDC V foundation and parking areas. Much of this fill would be obtained from the hills on the northwest and southwest corners of the bowl.

As a result, construction activities would require vegetation clearing, filling, and grading. Stormwater within the site would become laden with sediment. To minimize the potential for this stormwater to become laden with sediment and migrate off-site, appropriate ESCP and SWPPP BMPs (previously described under the Soils heading in Section 3.6) would be implemented and maintained by the construction contractor to control stormwater run-off, erosion, and sedimentation during construction activities. Appropriate erosion and sediment controls, such as synthetic hay bales and silt fencing, would be installed and maintained during construction. Areas

disturbed outside of the footprints of the new construction would be reseeded, replanted, and/or re-sodded following construction activities, which would decrease the overall erosion potential of the site and improve soil productivity.

Additionally, the Proposed Action would maintain FMMD's voluntary minimum 100-foot riparian forest buffer between the construction site and streams and wetlands.

With the implementation of permit-related construction BMPs, the Proposed Action construction would have a short-term, negligible, direct adverse impact on stormwater quality.

### **3.9.3.3 Impacts from Operation of the Proposed Action**

The Proposed Action would be designed to operate with stormwater management systems that comply with the MDE Stormwater Design Manual Volumes I & II, revised in 2009 with ESD requirements, the MD Stormwater Management Guidelines for State and Federal Projects (2015), all MDE's applicable Technical Memorandums, and the EISA Section 438. In addition, sustainable site design strategies would be used to maximize LEED site credits. The designer of record would be responsible for obtaining stormwater management and erosion and sediment control approval from MDE prior to construction.

Additionally, the Proposed Action meets the definition of "new development" as it relates to MDE's ESD water quality calculations. The stormwater management design would utilize micro-scale practices distributed throughout the site including bioretention and swales. Non-structural practices such as impervious disconnection and sheet flow to conservation areas would be implemented where grading allows.

To comply with these design requirements, the Proposed Action would be designed to provide positive drainage away from the CDC V building on all sides. The front of the CDC V building and the parking lot would be sloped as much as four percent to drain to the east toward a low point containing micro-bioretention areas to the east of the access road. To manage off-site stormwater that currently flows onto the site from the high points of the hills to the northwest and southwest of the site and the outfall to the existing stormwater pond, new bypass channels would be constructed along the west and north sides of the CDC V facility, redirecting these flows to an existing culvert, which discharges stormwater to a V-shaped channel, where stormwater is then allowed to infiltrate into the ground (USACE 2023).

EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, requires that all new construction comply with the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings (Guiding Principles). The Proposed Action would therefore employ design and construction strategies that reduce stormwater run-off.

Furthermore, Section 438 of the EISA requires that any development or redevelopment project involving a federal facility with a footprint exceeding 5,000 SF shall use site planning, design, construction, and maintenance strategies to maintain or restore the predevelopment hydrology of the property with regard to temperature, rate, volume, and duration of flow. The footprint of this project includes the 26,450 SF building, 23,873 SF of play space, and up to 110 parking spaces. Therefore, it exceeds the 5,000 SF requirement and compliance with this requirement would be required and could be met through the implementation of low-impact development (LID) technologies, which would strive to maintain or restore natural hydrologic functions of a site and achieve natural resource protection. Examples include, but are not limited to, minimizing total site impervious areas, direct building drainage to vegetative buffers, use permeable pavements where

practical, and break up flow directions from large, paved surfaces. Additionally, compliance with Section 438 of the EISA is expected to be superseded by the more stringent requirements of COMAR.

To satisfy stormwater quantity requirements, the Proposed Action design would attenuate the 10-year, 24-hour storm, maintaining the post-project peak discharge rate equal to or less than the pre-project discharge rate. Quantity volume is expected to be provided in the surface storage of stormwater bioretention areas. An additional stormwater retention pond may be constructed to gather any additional stormwater volume required; the decision to construct this pond would be determined during the final design process (USACE 2023).

As a result, operation of the Proposed Action would have a long-term, negligible, direct adverse impact on stormwater conditions due to the increased stormwater volume generated from the new impervious surfaces. To ensure stormwater quality meets permit requirements, the operational stormwater management systems, including the bioretention swales and, if warranted, the stormwater retention pond, would be routinely maintained by FMMD to ensure these features function according to their design criteria.

#### **3.9.3.4 No Action**

Under the No Action Alternative, existing conditions at the Proposed Action site would remain unchanged. No new impervious surfaces would be created at the site and stormwater from upgradient off-site areas would continue to follow their existing flow paths. Thus, the No Action alternative would have no impact on stormwater conditions.

### **3.10 Coastal Zone Management**

#### **3.10.1 Definition of the Resource**

The CZMA of 1972 (16 USC §1451, et seq., as amended) provides assistance to states in cooperation with federal and local agencies, for developing land and water use programs in the coastal zone. CZMA policy is implemented through state coastal zone management programs. Federal lands are excluded from the jurisdiction of these state programs. However, activities on federal lands are subject to CZMA federal consistency requirements if the federal activity would affect any land or water or natural resource of the coastal zone, including reasonably foreseeable effects. Specifically, in accordance with Section 307 of the CZMA and 15 CFR 930 subpart C, federal agency activities affecting a land or water use, or natural resource of a state's coastal zone must be consistent to the maximum extent practicable with the enforceable policies of the state's coastal management program.

According to 15 CFR 930.41, the reviewing state has 60 days from receipt of the Consistency Determination to "concur" or "object." States are not required to concur with a Negative Determination. However, if a response from the state is not received by the 60<sup>th</sup> day of submittal (unless a one-time extension was requested), the federal agency may presume state agency concurrence. Additionally, 15 CFR 930.43 provides that should a state object to a Consistency Determination, the state and federal agencies should attempt to resolve their differences. However, if no resolution can be met, the federal agency may proceed if federal law prohibits the agency from being fully consistent or if that federal agency has concluded that its proposed action is fully consistent with the enforceable policies of the management program, though the state agency objects. If a federal agency decides to proceed with a federal agency activity that is objected to by

a state agency, or to follow an alternative suggested by the state agency, the federal agency shall notify the state agency of its decision to proceed before the project commences.

### **3.10.2 Existing Conditions**

#### **3.10.2.1 Installation-wide and Proposed Action Site**

All of FMMD, including the Proposed Action site, is located within the MD Coastal Zone and is therefore subject to regulations pursuant to the MD Coastal Zone Management Program (CZMP). This includes Chesapeake Bay, into which water from streams and their tributaries on FMMD flow. MDE regulates activities that are proposed within the CZMP through federal consistency requirements. Under these requirements, applicants for federal and state licenses or permits must certify their proposed activity would be conducted in a manner consistent with the State's CZMP. If a state permit is not required for a project, MDE has the authority to "concur" or "object" to the federal consistency determination.

### **3.10.3 Environmental Consequences**

#### **3.10.3.1 Evaluation Criteria**

Factors considered in evaluating coastal zone management impacts include the potential for the Proposed Action to be inconsistent with the federal and state enforceable policies. The Proposed Action would be considered to have a significant adverse effect on the coastal zone if the Proposed Action were inconsistent with enforceable policies under the MD Coastal Zone Management Program (CZMP) required by Section 307 of the CZMA of 1972, as amended, and permits and mitigation, if required for construction within the coastal zone, were not obtained.

As part of compliance with the federal CZMA, MD CZMP and MD Chesapeake Bay Critical Area Protection Act, consideration of the location of coastal zones and critical areas would be incorporated into the design of the CDC V with the objective being to avoid these areas or minimize adverse impacts wherever possible.

#### **3.10.3.2 Impacts from Construction and Operation of the Proposed Action**

Construction and operation of the Proposed Action are anticipated to have no impact on resources of the MD coastal zone because none of the activities would impact surface waters or wetlands at or beyond FMMD.

FMMD has determined that the Proposed Action would be consistent with the MD CZMP. A Coastal Zone Consistency Determination is provided in Appendix C for review and concurrence by the MD CZMP.

#### **3.10.3.3 No Action**

Under the No Action Alternative, the Proposed Action would not be implemented. Thus, existing conditions at the Proposed Action site would remain unchanged and have no impact on coastal zone resources.

## **3.11 Biological Resources**

### **3.11.1 Definition of the Resource**

Biological resources include native or naturalized plants and animals and the habitats (e.g., wetlands, forests, and grasslands) in which they live. Protected biological resources include plant

and animal species listed by the State of MD as rare, threatened, or endangered or by the USFWS as threatened or endangered. Special concern species are not afforded the same level of protection, but their presence is taken into consideration by resource agency biologists involved in reviewing projects and permit applications.

The ROI for biological resources is the Proposed Action site.

### **3.11.1.1 Endangered Species Act**

The Endangered Species Act (ESA) established protection for threatened and endangered species and the ecosystems upon which they depend. Sensitive and protected biological resources include plant and animal species listed as threatened, endangered, or special status by USFWS. The ESA also allows the designation of geographic areas as critical habitat for threatened or endangered species. Under the ESA, an “endangered species” is defined as any species in danger of extinction throughout all, or a large portion, of its range. A “threatened species” is defined as any species likely to become an endangered species in the foreseeable future. USFWS maintains a list of candidate species being evaluated for possible listing as threatened or endangered under the ESA. Although candidate species receive no statutory protection under the ESA, USFWS has attempted to advise government agencies, industry, and the public that these species are at risk and may warrant protection in the future under the ESA.

### **3.11.1.2 Migratory Bird Treaty Act**

The Migratory Bird Treaty Act (MBTA) makes it unlawful for anyone to take migratory birds or their parts, nests, or eggs unless permitted to do so by regulations. Per the MBTA, “take” is defined as “pursue, hunt, shoot, wound, kill, trap, capture, or collect” ([50 CFR § 10.12](#)). Birds protected under the MBTA include nearly all species in the US except for non-native/human-introduced species and some game birds.

EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, requires all federal agencies undertaking activities that may negatively impact migratory birds to follow a prescribed set of actions to further implement MBTA. EO 13186 directs federal agencies to develop a Memorandum of Understanding (MOU) with USFWS that promotes the conservation of migratory birds.

The *National Defense Authorization Act for Fiscal Year 2003* ([Public Law 107-314, 116 Stat. 2458](#)) provided the Secretary of the Interior the authority to prescribe regulations to exempt the armed forces from the incidental take of migratory birds during authorized military readiness activities. Congress defined military readiness activities as all training and operations of the US Armed Forces that relate to combat and the adequate and realistic testing of military equipment, vehicles, weapons, and sensors for proper operation and suitability for combat use. Further, in October of 2012, the Authorization of Take Incidental to Military Readiness Activities was published in the *Federal Register* ([50 CFR § 21.15](#)), authorizing incidental take during military readiness activities unless such activities may result in significant adverse effects on a population of a migratory bird species.

In December 2017, the U.S. Department of the Interior issued M-Opinion 37050, which concluded that the take of migratory birds from an activity is not prohibited by the MBTA when the purpose of that activity is not the take of a migratory birds, eggs, or nests. On August 11, 2020, the U.S. District Court, Southern District of New York, vacated M-Opinion 37050. Thus, incidental take

of migratory birds is again prohibited. The interpretation of the MBTA remains in flux, and additional court proceedings are expected.

### **3.11.1.3 Bald and Golden Eagle Protection Act**

The *Bald and Golden Eagle Protection Act* ([16 USC §§ 668–668d](#)) (BGEPA) prohibits actions to “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle [or any golden eagle], alive or dead, or any part, nest, or egg thereof.” Further, the BGEPA defines “take” as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb,” and “disturb” is defined as “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, injury to an eagle, a decrease in productivity by substantially interfering with the eagle’s normal breeding, feeding or sheltering behavior, or nest abandonment by substantially interfering with the eagle’s normal breeding, feeding, or sheltering behavior.” The BGEPA also prohibits activities around an active or inactive nest site that could result in disturbance to returning eagles.

### **3.11.1.4 Aquatic Resources**

Aquatic resources are habitats that contain either permanent or sufficient temporary water to support plant or wildlife species that require water or hydric soils for at least part of their life cycle.

### **3.11.1.5 Invasive Species**

Invasive species are non-native species in an ecosystem whose introduction causes or is likely to cause economic or environmental harm, or harm to human, animal, or plant health. EO 13751, *Safeguarding the Nation from the Impacts of Invasive Species*, requires federal agencies to identify actions that may affect invasive species; use relevant programs to prevent introductions of invasive species; detect, respond, and control such species; monitor invasive species populations; and provide for restoration of native species. Invasive species damage native habitat and impede management by outcompeting native species.

## **3.11.2 Existing Conditions**

### **3.11.2.1 Vegetation - Installation-wide**

It is the intent of FMMD to maintain a campus-like environment and conserve forested areas to the maximum extent practical in accordance with the MD FCA, while continuing to sustain and support current and future missions. This includes managing the FMMD forest conservation program in accordance with the 2013 MOU between the State of MD and the DoD concerning federal consistency requirements of the CZMA.

Development and construction projects are required to follow the current MD FCA and FMMD Tree Management Policy. FMMD requires that the equivalent of 20% of a project area be forested. All projects of 40,000 SF or larger must comply with the FMMD policy. Other projects, such as the Proposed Action, are evaluated on a case-by-case basis. Site developments must preserve or establish 20% forest cover, regardless of whether the site was forested before the construction.

FMMD participates in the Army’s conservation reimbursable and fee collection program for forestry. This program exists to provide ecosystem-level management that supports and enhances the land’s ability to support each installation’s respective military missionscape, while simultaneously obtaining ecologically responsible results that satisfy all federally mandated

requirements for natural resources. Program revenues are generated through the sale of forest products. The fair market value of all forest products removed due to the Proposed Action shall be deposited into the Army's Reimbursable Forestry Account to be utilized for natural resource activities and ecosystem management at Army installation.

Vegetative cover at FMMD consists of forestland, open land/meadow, and developed areas with maintained turf and street trees. These components constitute FMMD's green infrastructure. The green infrastructure of MD was mapped into hubs and corridors using satellite imagery, road and stream locations, biological data, and other information. Hubs are typically unfragmented forest areas hundreds or thousands of acres in size and are vital to maintaining the state's ecological health. They provide habitat for native plants and animals, protect water quality and soils, regulate climate, and perform other critical functions. Corridors are linear remnants of natural land such as stream valleys and mountain ridges that allow animals, seeds, and pollen to move from one area to another. They also protect the health of streams and wetlands by maintaining adjacent vegetation. Preserving linkages (corridors) between the remaining blocks of habitat (hubs) would ensure the long-term survival and continued diversity of MD plants, wildlife, and environment. FMMD maintains both green infrastructure hubs and corridors.

Less than one-third, or approximately 1,500 acres, of the FMMD property is forested. Many native forests were cleared for agriculture prior to the formation of FMMD. Larger remaining forested tracts are located towards the perimeter of FMMD. Many of these larger tracts are connected by riparian forest corridors. Larger tracts are around 70 years old, but some stands predate the installation. Development at FMMD has resulted in forest fragments and recently reforested areas.

As described in the Integrated Natural Resources Management Plan (INRMP), extensive development has resulted in the retention of few areas of native vegetation at FMMD, most of which are associated with stream corridors (FMMD 2004). The largest wooded area at FMMD is in the southwest corner and is associated with the Little Patuxent River. The dominant vegetation in this area is red maple (*Acer rubrum*), sweet gum (*Liquidambar styraciflua*), black gum (*Nyssa sylvatica*), northern arrowwood (*Viburnum recognitum*), Japanese honeysuckle (*Lonicera japonica*), greenbriar (*Smilax rotundifolia*), and poison ivy (*Toxicodendron radicans*).

As stated in the INRMP, smaller wooded areas are scattered throughout FMMD in the uplands (FMMD 2004). They are dominated by white, red, and chestnut oak (*Quercus alba*, *Q. rubra*, *Q. prinus*); mockernut and pignut hickory (*Carya tomentosa* and *C. glabra*); flowering dogwood (*Cornus florida*); blueberry (*Vaccinium corymbosum*); greenbriar; loblolly and pitch pine (*Pinus taeda* and *P. rigida*); and poison ivy.

Most of the developed portions of FMMD have been landscaped using a combination of turf grasses interspersed with native and exotic trees and shrubs, including elm (*Ulmus* sp.), maple (*Acer* sp.), flowering cherry (*Prunus* sp.), black willow (*Salix nigra*), flowering dogwood, and an assortment of holly cultivars (*Ilex* sp.) (FMMD 2004).

A Rare, Threatened, and Endangered (RTE) plant species survey was performed at FMMD in 2013 by EEE Consulting, Inc. (EEE Consulting, Inc. 2014). No federal-listed plants were documented on FMMD.

**3.11.2.2 Vegetation - Proposed Action Site**

The Proposed Action site is wooded with a mix of mature deciduous and coniferous trees. The site was previously developed with WWII era barracks buildings, but they were demolished more than 20 years ago. As a result, many of the trees on the site are at least 20 years old.

**3.11.2.3 Common Terrestrial Wildlife - Installation-wide**

**3.11.2.4 In 2013, Environmental Systems Analysis, Inc. conducted a study for fauna and wildlife populations, including breeding amphibians and a Burba Lake fisheries study (ESA 2014). Most of the observed animal species are common to Anne Arundel County and the Central MD area. During the fauna study, a total of 13 bird and 11 mammal species were identified (Table 8). During the amphibian breeding study, 11 reptile and amphibian species were identified (Common Terrestrial Wildlife - Proposed Action Site**

A survey for wildlife at the Proposed Action site has not been completed. Based on the vegetation composition at the site, the site is likely to provide suitable habitat for the common wildlife species found throughout FMMD.

Table 9). The species observed during the 2013 survey were very similar to those found during the 2009 flora and fauna survey performed by USACE (USACE 2009).

**Table 8. Mammals and Birds Present at FMMD in 2013**

Scientific Name	Common Name
<i>Odocoileus virginianus</i>	White-tailed deer
<i>Procyon lotor</i>	Raccoon
<i>Sciurus carolinensis</i>	Eastern gray squirrel
<i>Urocyon cinereoargenteus</i>	Gray fox
<i>Homo sapiens</i>	Human
<i>Didelphimorphia</i>	Opossum
<i>Lepus curpaeums</i>	Eastern cottontail
<i>Zenaida macroura</i>	Mourning dove
<i>Vulpes</i>	Red fox
<i>Anas platyrhynchos</i>	Mallard
<i>Butorides virescens</i>	Green heron
<i>Cardinalis</i>	Northern cardinal
<i>Agelaius phoeniceus</i>	Redwing blackbird
<i>Felis catus</i>	Domestic cat
<i>Cyanocitta cristata</i>	Eastern blue jay
<i>Quiscalus quiscula</i>	Common grackle
<i>Passeridae sp.</i>	Sparrow
<i>Fringillidae sp.</i>	Finch
<i>Branta canadensis</i>	Canada goose
<i>Corvus brachyrhynchos</i>	American crow
<i>Marmota monax</i>	Groundhog

Scientific Name	Common Name
<i>Species unknown</i>	Mouse
<i>Dumetella carolinensis</i>	Gray catbird
<i>Turdus migratorius</i>	American robin

### 3.11.2.5 Common Terrestrial Wildlife - Proposed Action Site

A survey for wildlife at the Proposed Action site has not been completed. Based on the vegetation composition at the site, the site is likely to provide suitable habitat for the common wildlife species found throughout FMMD.

**Table 9. Reptiles and Amphibians Present at FMMD in 2013**

Scientific Name	Common Name
<i>Pseudacris crucifer</i>	Spring peeper (frog)
<i>Lithobates clamitans</i>	Green frog
<i>Lithobates sylvatica</i>	Wood frog
<i>Acris crepitans</i>	Eastern cricket frog
<i>Lithobates sphenoccephalus</i>	Southern leopard frog
<i>Anaxyrus americanus</i>	American toad
<i>Ambystoma opacum</i>	Marbled salamander
<i>Ambystoma maculatum</i>	Spotted salamander
<i>Terrapene carolina</i>	Eastern box turtle
<i>Chelydra serpentina</i>	Common snapping turtle
<i>Plestiodon fasciatus</i>	Common five-lined skink

### 3.11.2.6 Rare, Threatened, or Endangered Species – Installation-wide

Under the ESA, an “endangered species” is defined as any species in danger of extinction throughout all or a significant portion of its range. A “threatened species” is defined as any species likely to become an endangered species in the foreseeable future. The ESA also provides for recovery plans to be developed describing the steps needed to restore a species population. Critical habitat for federally listed species includes “geographic areas on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection.” Critical habitat can include areas not occupied by the species at the time of the listing but that are essential to the conservation of the species. The Sikes Act provides for cooperation by the DOI and DoD with State agencies in planning, development, and maintenance of fish and wildlife resources on military reservations throughout the US.

On FMMD there are eight (8) species listed as either endangered, threatened or candidate species under the auspices of the ESA (Table 10). The presence of one Northern long-eared bat (endangered) and one Indiana bat (endangered) have been acoustically detected on FMMD. No hibernaculum or summer roost trees have been identified on FMMD or in Anne Arundel County, MD (USACE 2023).

### 3.11.2.7 Rare, Threatened, or Endangered Species - Proposed Action Site

A survey for federal listed species at the Proposed Action site has not been completed. Based on the vegetation composition at the site, the site may provide suitable roosting habitat for bats.

**Table 10. Federally Listed Species that Occur or May Occur on FMMD**

Common Name	Scientific Name	Federal Listing	Maryland State Listing	Installation Presence
<b>Northern long-eared bat</b>	<i>Myotis septentrionalis</i>	Endangered	Endangered S1	Present, but transient (Acoustic only)
<b>Indiana bat</b>	<i>Myotis sodalis</i>	Endangered	Endangered S1	Present, but transient (Acoustic only)
<b>Tricolored bat</b>	<i>Perimyotis subflavus</i>	Under Review (Candidate)	Endangered S1	Present, but transient (Acoustic only)
<b>Wood turtle</b>	<i>Glyptemys insculpta</i>	Under Review (Candidate)	Vulnerable S3	Known presence <sup>1</sup>
<b>Spotted turtle</b>	<i>Clemmys guttata</i>	Under Review (Candidate)	Vulnerable S3	None known, occurs on a neighboring parcel
<b>Rusty patch bumble bee</b>	<i>Bombus affinis</i>	Endangered	SH	Historic, locally extirpated
<b>Little brown bat</b>	<i>Myotis lucifugus</i>	Under Review (Candidate)	Critically imperiled S1	Known presence
<b>Monarch</b>	<i>Danaus plexippus</i>	Under Review (Candidate)	Secure S5B	Present
1 - A single individual was found near Burba Lake that may have been a pet release. Surveys are ongoing to determine if a population exists at FMMD.				

### 3.11.2.8 State-Listed Wildlife and Plant Species - Installation-wide

State-listed species are not protected under the ESA; however, whenever feasible, FMMD cooperates with State authorities in an effort to identify and conserve state-listed species.

The state-listed wildlife species that have been detected on FMMD include the glassy darter (*Etheostoma vitreum*), American brook lamprey (*Lethenteron appendix*), coastal plain swamp sparrow (*Melospiza georgiana nigrescens*) and Northern waterthrush (*Parkesia noveboracensis*). Findings from a 2013 study for wildlife and plant populations (ESA 2014) provided updates on the glassy darter (*Etheostoma vitreum*). The glassy darter was observed and documented in previous fish surveys conducted on FMMD, from 1992 through 2004. The glassy darter has been identified as occurring at FMMD, within the 9500 Tract of the Little Patuxent River, and immediately downstream and off-site of FMMD.

Three state-listed plant species have been detected on FMMD. These include blunt-lobe grapefern (*Sceptridium oneidense*), Torrey’s rush (*Juncus torreyi*), and partridge pea (*Chamaecrista fasciculata* var. *macrosperma*), and one state-wide extirpated species, spotted Joe-pye-weed (*Eutrochium maculatum*). During the 2013 RTE plant species survey, two of the previously

identified state listed RTE species were found: American chestnut (*Castanea dentata*) and dwarf azalea (*Rhododendron atlanticum*) (EEE Consulting, Inc. 2014). One MD Watch List plant, pearly everlasting (*Anaphalis margaritacea*), was found within the Firing Range Powerline and the Range Road Corridor; and one MD State Rare/Watch List plant, tall swamp marigold (*Bidens coronata*), was found within the Firing Range Powerline.

### **3.11.2.9 State-Listed Wildlife and Plant Species - Proposed Action Site**

A survey for state listed wildlife and plant species at the Proposed Action site has not been completed. Based on the undeveloped nature of the site, there could be suitable habitat for state listed wildlife and plant species found at FMMD.

### **3.11.2.10 Aquatic Habitat - Installation-wide**

Water bodies that flow through FMMD provide habitat for several aquatic organisms (USACE 2007). Over two dozen species of fish are known to occur on FMMD, including, but not limited to, the creek chubsucker (*Erimyzon oblongu*), eastern mudminnow (*Umbra pygmaea*), tessellated darter (*Etheostoma olmstedi*), American brook lamprey (*Lampetra appendix*), American eel (*Anguilla rostrata*), smallmouth bass (*Micropterus dolomieu*), largemouth bass (*Micropterus salmoides*), glassy darter (*Etheostoma vitreum*), redbreast sunfish (*Lepomis auritus*), bluegill (*Lepomis macrochirus*), and pumpkinseed (*Lepomis gibbosus*).

A total of five species and 422 fish were collected as part of the 2013 Burba Lake survey effort (ESA 2014). The most abundant species collected was bluegill (*Lepomis machrochirus*), followed by green sunfish (*Lepomis cyanells*), red ear sunfish (*L. microlophus*), mosquito fish (*Gambusia afinis*), and largemouth bass (*Macropterus salmoides*), in descending order of abundance.

### **3.11.2.11 Aquatic Habitat - Proposed Action Site**

The Proposed Action site contains no aquatic ecosystems. Therefore, there are no aquatic species at the site. The nearest aquatic ecosystem is an intermittent stream located to the west and south of the Proposed Action site; the stream originates at a 24-inch diameter corrugated metal pipe connected upstream to a stormwater management pond. The stream does not meet the parameters for hydric soils and therefore is not considered a wetland (USACE 2023a).

## **3.11.3 Environmental Consequences**

Factors considered in the analysis of potential impacts to biological resources include any anticipated adverse impacts to fish and wildlife as well as to habitat and compliance with FMMD's obligations as outlined in both the FMMD INRMP and MD FCA and FMMD Tree Management Policy.

Because the Proposed Action site does not have any aquatic habitat, this environmental resource is not analyzed further in this EA.

### **3.11.3.1 Evaluation Criteria**

Substantial impacts to vegetation would occur if a proposed action (1) would result in a permanent net loss of habitat at a landscape scale or (2) could result in a long-term loss or impairment of a substantial portion of local habitat on which native species depend.

Substantial impacts to terrestrial wildlife resources would occur if a proposed action (1) would result in a permanent net loss of habitat at a landscape scale or (2) could result in a long-term loss or impairment of a substantial portion of local habitat on which native species depend.

Significant adverse impacts to RTE species would occur if a proposed action would (1) jeopardize the continued existence of any federal listed threatened or endangered species or result in destruction of critical habitat or (2) eliminate a sensitive habitat such as breeding areas, habitats of local significance, or rare or state-designated significant natural communities needed for the survival of a species.

### **3.11.3.2 Vegetation - Impacts from Construction of the Proposed Action**

Construction of the Proposed Action would result in long-term, minor, direct adverse impacts on vegetation. This impact would be caused by clearing the Proposed Action site of existing forest vegetation.

### **3.11.3.3 Vegetation - Impacts from Operation of the Proposed Action**

The Proposed Action would be designed to comply to the maximum extent practicable with the MD FCA and the FMMD Tree Management Policy and have a goal to retain at least 20% of the forested area within the limits of disturbance.

Forest conservation requirements for the Proposed Action would be met utilizing a combination of on-site plantings in and around the built environment to the maximum allowable extent practicable with the approval of FMMD DPW Environmental Division. Where on-site plantings cannot meet forest conservation requirements, then off-site forest conservation area plantings would be planted at 1 tree per 400 SF with at least 50 percent of those trees having the potential of attaining a 2-inch or greater diameter at breast height within seven years. Forestry practices that cannot feasibly be performed within the Proposed Action site shall be performed on other designated land areas within FMMD. The design team would work with the FMMD DPW Environmental Division to identify potential off-site forest conservation areas (USACE 2023).

The landscape design would comply with the UFC 3-201-02 Landscape Architecture and the UFC 4-020-02 DoD Security Engineering Facilities Design Manual. Proposed plantings and planting locations consider applicable Antiterrorism/Force Protection guidelines for placement of plant material, referencing UFC 4-010-01 DoD Minimum Antiterrorism Standards for Buildings and UFC 4-010-02 DoD Minimum Antiterrorism Standoff Distances for Buildings.

Additionally, the landscape design would comply with MDE requirements, including species selections utilized in the stormwater management facilities and permanent and temporary vegetative stabilization to address erosion and sediment control. Special care would be given in the selection and location of hardy, native, and adaptive species that can survive drought and the increasing uncertainties of climate change with minimal to no maintenance, meeting the sustainability requirements of the USACE mission. Specifically, the use of sod would be restricted to only those areas where quick turfgrass establishment is critical to a disciplined aesthetic and efficient function of the best management practices. Native seed mixtures are proposed for areas where aesthetics and maintenance are a lower priority.

The Proposed Action would include 1:1 street tree replacement for street trees removed from the Proposed Action site and would require, to the maximum extent practical, planting of street trees on streets around the perimeter of the Proposed Action site with preference given to the

preservation of specimen trees. Specimen tree replacement ratios would be calculated on a case-by-case basis.

Interior landscape areas would be restricted to required environmentally sensitive design best management practices and landscape islands within the parking area to limit the risk of children encountering pests such as deer ticks. In addition, upon completion of construction, trees would be planted with the goal that 70% of parking would be shaded within 15 years (MBI 2020). FMMD uses Anne Arundel County parking lot interior tree requirements as guidance and would incorporate these trees to the maximum extent practical. The grounds surrounding the CDC V building would be primarily turfgrass establishment to further discourage hazardous pests in the area. Street trees comprised of native species would be planted to establish an attractive frontage.

Operation of the Proposed Action would not require additional clearing of vegetation at the Proposed Action site. As a result, operation of the Proposed Action would have a long-term, negligible, direct adverse impact on vegetation resources due to permanent loss of vegetation at the Proposed Action site, but which would be minimized through replacement plantings.

#### **3.11.3.4 Vegetation - No Action**

Under the No Action Alternative, existing plant composition at the Proposed Action site would remain unchanged. The No Action alternative would retain the forested conditions at the Proposed Action site for the foreseeable future. As a result, the No Action Alternative would have a long-term, beneficial impact on vegetation.

#### **3.11.3.5 Wildlife - Impacts from Construction of the Proposed Action**

The Proposed Action would result in long-term, negligible, direct adverse impacts to wildlife species inhabiting the Proposed Action site. This impact would be due to the disruptive presence and use of construction equipment and the permanent clearing of vegetation.

Wildlife species that currently utilize the Proposed Action site on a transient basis would be anticipated to utilize other available habitat at FMMD, including the larger tracts of forested land that are present to the east and north of the Proposed Action site. As a result, tree clearing at the Proposed Action site would be minor in scale compared to the forest habitat on other areas of FMMD and the clearing is not anticipated to result in a permanent net loss of habitat at a landscape scale. Further, it is anticipated that reforestation under the current MD FCA and FMMD Tree Management Policy would contribute to the local forested habitat that would be available to wildlife species. Therefore, impairment to a substantial portion of local wildlife habitat is not anticipated.

There are two federal and state endangered species, Indiana bat and Northern long-eared bat that have been acoustically detected at FMMD. However, no hibernaculum or summer roost trees have been identified at FMMD or in Anne Arundel County, MD. As it is unlikely that any threatened or endangered species are present at the Proposed Action site, no unpermitted “take” of a threatened or endangered species is anticipated to occur from implementing the Proposed Action.

In response to FMMD’s initial coordination request, USFWS provided recommendations on November 21, 2023 for the project to minimize potential adverse impacts to bat and bird species, to include avoiding tree clearing in the spring/summer, minimizing the footprint of construction to preserve trees, planting native and pollinator-friendly species, use of bioswales, use of bird-friendly windows, and minimizing nighttime lighting. USFWS further notes that planting of native

vegetation can provide critical refugia for many species, including the Monarch butterfly, a candidate species for listing under the ESA.

On November 17, 2023, MD Department of Natural Resources (MDNR) Wildlife and Heritage Service provided recommendations that forest clearing and permanent forest loss be minimized to the greatest extent possible, and that, to compensate for permanent forest loss, forest conservation/reforestation be pursued off-site in accordance with the Maryland Forest Conservation act. Also, the MDNR indicated there should be no forest removal during the summer active season of May 1 – July 31 of any given year.

### **3.11.3.6 Wildlife - Impacts from Operation of the Proposed Action**

The Proposed Action would result in long-term, negligible, direct adverse impacts to wildlife species due to the permanent conversion of forested habitat to hardscape and landscaped grounds at the Proposed Action site. This adverse impact would be minimized by reforestation that would occur under the current MD FCA and FMMD Tree Management Policy, which would contribute to the local forested habitat available to wildlife species on a long-term basis.

### **3.11.3.7 Wildlife - No Action**

Under the No Action Alternative, existing conditions at the Proposed Action site would remain unchanged. Existing forest habitat would remain available for wildlife species. No new habitat would be required to be created elsewhere at FMMD. However, by retaining the forest habitat for the foreseeable future, the No Action Alternative would have a long-term, beneficial impact for those individual wildlife species that utilize the Proposed Action site.

## **3.12 Cultural Resources**

### **3.12.1 Definition of the Resource**

Cultural resources are any prehistoric or historic district, site, building, structure, or object considered important to a culture or community for scientific, traditional, religious, or other purposes. These resources are protected and identified under several federal laws and EOs including the *Archaeological and Historic Preservation Act of 1960*, as amended ([54 USC § 300101](#) et seq.), the *American Indian Religious Freedom Act of 1978* ([42 USC § 1996](#)), the *Archaeological Resources Protection Act of 1979*, as amended ([16 USC §§ 470aa–470mm](#)), the *Native American Graves Protection and Repatriation Act of 1990* ([25 USC §§ 3001–3013](#)), the NHPA, as amended through 2016, and associated regulations ([36 CFR Part 800](#)). The NHPA requires federal agencies to consider effects of federal undertakings on historic properties prior to deciding or taking an action and integrate historic preservation values into their decision-making process. Federal agencies fulfill this requirement by completing the NHPA Section 106 consultation process, as set forth in 36 CFR Part 800. NHPA Section 106 also requires agencies to consult with federally recognized Tribes with a vested interest in the undertaking. NHPA Section 106 requires all federal agencies to seek to avoid, minimize, or mitigate adverse effects to historic properties (36 CFR § 800.1(a)).

Cultural resources include the following subcategories:

- Archaeological (i.e., prehistoric or historic sites where human activity has left physical evidence of that activity, but no structures remain standing);

- Architectural (i.e., buildings, structures, groups of structures, or designed landscapes that are of historic or aesthetic significance); and
- Traditional Cultural Properties (resources of traditional, religious, or cultural significance to Tribes).

Significant cultural resources are those listed on the National Register of Historic Places (NRHP) or determined to be eligible for listing. To be eligible for the NRHP, properties must be 50 years old and have national, state, or local significance in American history, architecture, archaeology, engineering, or culture. They must possess sufficient integrity of location, design, setting, materials, workmanship, feeling, and association to convey their historical significance and meet at least one of four criteria for evaluation:

1. Associated with events that have made a significant contribution to the broad patterns of our history (Criterion A);
2. Associated with the lives of persons significant in our past (Criterion B);
3. Embody distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction (Criterion C); and/or
4. Have yielded or be likely to yield information important in prehistory or history (Criterion D).

Properties that are less than 50 years old can be considered eligible for the NRHP under criteria consideration G if they possess exceptional historical importance. Those properties must also retain historic integrity and meet at least one of the four NRHP criteria (Criteria A, B, C, or D). The term “historic property” refers to National Historic Landmarks, NRHP-listed, and NRHP-eligible cultural resources.

The NHPA, as amended, as well as federal legislation, and DoD regulations (particularly Army Regulation 200-1, *Environmental Protection and Enhancement*), requires the Army and other federal agencies to locate, identify, evaluate, and treat cultural resources under their ownership, administration, and control in a manner that fosters the preservation of the resources.

For cultural resources analyses, the ROI is defined by the Area of Potential Effect (APE). The APE is defined as the “geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist,” (36 CFR § 800.16(d)) and thereby diminish their historic integrity. The direct and indirect APE for this EA is the Proposed Action site.

### **3.12.2 Existing Conditions**

#### **3.12.2.1 Installation-wide**

The most recent Integrated Cultural Resources Management Plan (ICRMP) for FMMD was preliminarily finalized in March 2020 by USACE, Baltimore District (USACE 2020) as an update to the existing 2011 ICRMP and is currently undergoing revision. The new ICRMP covers the period from 2018 through 2022 and provides guidelines and procedures to enable FMMD to meet its legal responsibilities related to historic preservation and cultural resources management at FMMD.

### 3.12.2.1.1 Archaeological Resources

The entirety of FMMD has undergone Phase I-level archaeological investigations for the presence of archaeological resources, therefore no new archaeological fieldwork was completed for the 2020 ICRMP which is currently being updated.

There are 41 known archaeological sites on FMMD, but none are listed in the NRHP. All the sites have been evaluated for NRHP eligibility and only one site, 18AN1240, was found to be eligible. Thirty-three other sites have been evaluated for NRHP eligibility and were found ineligible. The remaining seven sites are historic cemeteries, which were evaluated in the 2007 ICRMP update and found to be ineligible for the NRHP, although they would be maintained due to the presence of buried human remains and recommended for avoidance.

### 3.12.2.1.2 Buildings

Previous investigations identified and evaluated all buildings located on FMMD that were built prior to 1960 for NRHP eligibility. The Base Realignment and Closure Act of 2005 led to a variety of construction actions, which required cultural resource reviews and some field investigations; however, no new cultural resources were identified during these projects.

Twenty-four buildings were evaluated for NRHP eligibility from 2015 to 2018 and draft forms submitted to the MD Historical Trust (MHT) for their concurrence. The Maintenance Guidelines for the Historic District were updated in 2018. FMMD also did an exhaustive review of their complete building inventory from 2017 to 2018 to confirm which buildings had been evaluated for the NRHP and found ineligible, with clear concurrence from the MHT. Twenty-three buildings were then evaluated in 2019 as part of the effort to clear up any discrepancies between MHT and FMMD's records.

### 3.12.2.1.3 Historic Properties

FMMD has five historic properties that have been determined eligible for listing in the NRHP. The historic architectural properties are the Fort Meade Historic District, three bridges/culverts built by German prisoners of war (POWs) during WWII, and the water treatment plant (Building 8688). There are 13 contributing buildings in the Fort Meade Historic District, none of which are near the Proposed Action site. In 2003, ownership and management of 113 historic family housing units were transferred to a private, non-Federal entity, as part of the 1996 Military Housing Privatization Initiative.

### 3.12.2.1.4 Historic Culverts

FMMD also has several historic culverts. A portion of the southwestern portion of FMMD was utilized as a POW camp during WWII. The first group of POWs, consisting of 1,632 Italian and 58 German soldiers, arrived at FMMD in September of 1943. In May 1944, the FMMD POW camp was expanded to house 2,000 German POWs. In 1944, the German POWs began operating the laundry at FMMD and may have been involved in conducting maintenance and repair work in the military family housing residences on FMMD. Additionally, German POWs constructed three culverts at FMMD, all of which were designed by the USACE. These culverts are among the few tangible reminders of the POW presence at FMMD and in Maryland during WWII.

## **3.12.2.2 Proposed Action Site**

The Proposed Action site previously contained WWII era barracks buildings, but these were demolished more than 20 years ago. The site is currently vacant and mostly wooded. As a result, there are no above-ground historic properties at the site.

Based on the prior archaeological investigations at FMMD, the Proposed Action site does not contain below-ground archaeological properties.

### **3.12.3 Environmental Consequences**

#### **3.12.3.1 Evaluation Criteria**

Adverse effects on historic properties as a result of the Proposed Action include the following:

- Physical destruction of or damage to all or part of the property.
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous substance remediation, and provision of handicapped access, which is not consistent with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (36 CFR Part 68) and applicable guidelines.
- Removal of the property from its historic location.
- Change of the character of the property's use or of physical features within its setting that contribute to its historic significance.
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features.
- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

For the purposes of this EA, an impact is considered significant if it alters the integrity of a NRHP-listed, eligible, or potentially eligible resource or potentially impacts traditional cultural properties.

#### **3.12.3.2 Impacts from Construction of Proposed Action**

No historic properties have been identified within the Proposed Action site, therefore no impact on cultural resources is anticipated. However, there is the potential for an inadvertent discovery of cultural resources during construction work involving subsurface disturbance. To ensure potential impacts to unanticipated historical and archaeological sites are avoided, FMMD initiated Section 106 consultation with the MD State Historic Preservation Officer (SHPO) to ascertain potential impacts of the Proposed Action to historical and archaeological properties prior to implementing the Proposed Action.

On October 11, 2023, the MHT provided written concurrence that there are no historic properties affected by this undertaking (the Proposed Action) and therefore the undertaking would have no adverse effect on historic properties. A copy of the concurrence letter is provided in Appendix A.

Additionally, to minimize the potential impact to previously unknown cultural resources during subsurface work, FMMD would implement an "Accidental Discovery" plan to comply with the NHPA, Archaeological Resources Protection Act of 1979, Native American Graves Protection and Repatriation Act (NAGPRA), American Indian Religious Freedom Act, 36 CFR Part 79, and Executive Order 13007: Indian Sacred Sites. Under this plan, if prehistoric or historic artifacts that could be associated with Native American, early European, or American settlement are encountered at any time during construction or operation of Proposed Action, FMMD would cease all activities involving subsurface disturbance in the vicinity of the discovery. Should human remains or other cultural items, as defined by NAGPRA, be discovered during project construction, all work would immediately cease until the FMMD Cultural Resources Manager, MD SHPO, and selected Tribes are contacted to properly identify and appropriately treat

discovered items in accordance with applicable state and federal law(s). Implementation of these measures would ensure that the Proposed Action would have “No Adverse Effect” on historic properties or cultural resources.

### **3.12.3.3 Impacts from Operation of the Proposed Action**

Operation of the Proposed Action would not require subsurface disturbances through could impact previously unknown cultural resources. As a result, operation of the Proposed Action would have no impact on cultural resources.

### **3.12.3.4 No Action**

Under the No Action alternative, existing conditions would remain unchanged for the foreseeable future. There would be no intentional ground disturbances that could impact cultural resources. Thus, the No Action alternative would have no impact on cultural resources.

## **3.13 Transportation**

### **3.13.1 Definition of the Resource**

Transportation refers to the system of roadways, highways, and transit services in the vicinity of the installation that potentially could be affected by a Proposed Action.

Existing roads are important man-made constraints. Depending on their efficiency and quality, they should be maintained to maximize past investments. Built elements of the pedestrian scale such as sidewalks play an important role in shaping how personnel view and experience an installation’s outdoor space. Built constraints are elements that an installation is responsible for designing and maintaining. They should support a larger vision while facilitating mission readiness.

The ROI for transportation includes the roadways immediately surrounding the Proposed Action site but is expanded to include transportation resources throughout FMMD and in the surrounding community where noted.

### **3.13.2 Existing Conditions**

#### **3.13.2.1 Installation-wide**

FMMD is located in Anne Arundel County and is served by the surrounding roadway network:

- Baltimore-Washington Parkway (MD Route 295).
- MD Route 175 (Annapolis Road).
- MD Route 32.
- MD Route 198.

FMMD is accessible from the following five access control gates:

- Gate 1: Mapes Road and MD Route 32,
- Gate 2: Mapes Road and MD Route 175
- Gate 3: Rockenbach Road and MD Route 175, and
- Gate 7: Reece Road and MD Route 175 (Demps Visitor Control Center).

#### **3.13.2.2 Proposed Action Site**

The Proposed Action site is accessible from an existing, two-lane road.

### **3.13.3 Environmental Consequences**

#### **3.13.3.1 Evaluation Criteria**

A Proposed Action is considered to have a significant effect on traffic and roadways if it would cause a reduction of more than two levels of service at roads and intersections within the ROI, or an increase in daily traffic of more than 20% above pre-action levels.

#### **3.13.3.2 Impacts from Construction of the Proposed Action**

The Proposed Action would have a short-term, negligible, direct adverse impact on traffic and roadways in the form of construction traffic in the immediate area of the Proposed Action site. Vehicle and pedestrian traffic along the access road would be prohibited during construction, but no other facilities are currently accessed from this road, and construction activities associated with the Proposed Action are not anticipated to impact emergency service vehicles. Traffic along other nearby roads may be temporarily prohibited during construction activities that require accessing subsurface utility lines. These roads are within the FMMD campus and there are numerous alternate routes that avoid them.

The existing roadway network within FMMD provides sufficient access for any heavy equipment that may be required for the construction phase of the Proposed Action, therefore none of the construction equipment used would require modifications to transportation infrastructure or traffic patterns. The number of construction workers associated with the project would add a negligible increase (less than 1% increase) to the overall daily traffic volume within FMMD.

To ensure that construction vehicles do not degrade the quality of the roadways within FMMD, gravel construction pads, brushes, and/or water rinse areas would be installed at the construction site exit to ensure loose soil would be physically removed from construction equipment before the equipment travels on FMMD roadways.

#### **3.13.3.3 Impacts from Operation of the Proposed Action**

Operating the CDC V would increase daily vehicle traffic volume along nearby roads used to access the facility. The increase would be due to families and staff traveling to and from the CDC V. Traffic volumes would temporarily increase during morning drop-off and afternoon pick-up. No deficiencies have been identified in the current roadway infrastructure that would require correction to support this temporary daily increase in traffic volumes. However, should operating the CDC V lead to a decrease in traffic flow or roadway quality, FMMD would identify corrective actions that could be implemented to improve traffic conditions. As a result, operating the Proposed Action would have a long-term, negligible, direct adverse impact on traffic conditions on the roadways immediately adjacent to the CDC V, but not elsewhere at FMMD.

By providing childcare services at FMMD, the Proposed Action would decrease the distance that families would otherwise travel to obtain childcare at a location outside of FMMD. This represents a long-term, negligible, direct beneficial impact on traffic conditions as it relates to distance traveled for individual families.

The Proposed Action would also result in a reduction in the traffic volume at exits and entrances to FMMD and on roadways outside of FMMD. However, this reduction in traffic volume represents a negligible percentage (<1%) of the total daily traffic volume entering and exiting FMMD and on roadways outside of FMMD. Therefore, the Proposed Action would be considered to have no impact on traffic conditions at FMMD gates and roadways outside of FMMD.

### **3.13.3.4 No Action**

The No Action Alternative would have a long-term, negligible, direct adverse impact on traffic conditions as it relates to increased travel distance for individual families. Under the No Action alternative, families would continue to travel outside of FMMD to obtain childcare services, increasing the distance they must travel to and from FMMD on a daily basis.

## **3.14 Socioeconomics and Environmental Justice**

### **3.14.1 Definition of the Resource**

Socioeconomics is the relationship between economics and social elements, such as population levels and economic activity. Several factors can be used as indicators of economic conditions for a geographic area, such as demographics, median household income, unemployment rates, percentage of dependents living below the poverty level, employment, and housing data. Employment data identify gross numbers of employees, employment by industry or trade, and unemployment trends. Data on industrial, commercial, and other sectors of the economy provide baseline information about the economic health of a region. Socioeconomic data are typically presented at county, state, and national levels to characterize baseline socioeconomic conditions in the context of regional, state, and national trends.

The ROI for socioeconomic impacts is Anne Arundel County, MD. This ROI was selected because it represents the geographic area that is most directly and indirectly impacted by major activities occurring at FMMD. Socioeconomic data is provided in this section to establish baseline conditions. Data consists primarily of publicly available information for FMMD, Anne Arundel County, the State of Maryland, and the US, primarily from the US Census Bureau (USCB).

EO 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, (February 11, 1994) requires Federal Agencies to consider whether their actions will result in disproportionate adverse impacts to minority (People of Color) and low-income populations. EO 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All*, (April 26, 2023) expands and deepens the directives and concepts outlined in EO 12898. EO 14096 defines environmental justice (EJ) as the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment. EO 14096 directs federal agencies to identify, analyze, and address disproportionate and adverse human health and environmental effects and hazards of federal activities.

### **3.14.2 Existing Conditions**

#### **3.14.2.1 Employment**

FMMD is the Army's second largest installation by population with more than 60,000 employees that represent the Army, Navy, Air Force, Marines and Coast Guard (FMMD Alliance 2020).

FMMD generates a total of \$17.8 billion in economic activity in MD, or 49.4% of the total \$36 billion in economic impact from all the military posts in the state (FMMD Alliance 2020). It is the largest level of employment, payrolls and purchases in MD. FMMD creates or supports 125,729 jobs earning an estimated \$9.2 billion in employee compensation. The direct FMMD employment of 48,389 accounts for 1.4% of all employment in MD and when multiplier impacts are included, the 125,729 jobs created or supported by FMMD account for 3.6% of all employment in MD.

**3.14.2.2 Household Income and Property Value**

The USCB reports that the median household income in Anne Arundel County, MD is \$107,823 (USCB 2021). Males in Anne Arundel County, MD have an average income that is 1.27 times higher than the average income of females, which is \$64,257. Median household income in FMMD is \$71,045 (USCB 2021). Males in FMMD, MD have an average income that is 1.26 times higher than the average income of females, which is \$61,332. The income inequality in FMMD (measured using the Gini index) is 0.461, which is lower than the national average. The poverty rate for Anne Arundel County is 6.2%, compared to 9.6% for Maryland.

The median property value in FMMD, MD is \$218,000, and the homeownership rate is 2.32% as the majority of FMMD housing is not owned by occupants but rather managed by the Army through privatized housing agreements. The median property value of owner-occupied housing units in Anne Arundel County, MD is \$418,200, and the homeownership rate is 75%.

**3.14.2.3 EJScreen**

USEPA’s EJScreen, based on nationally consistent data and an approach that combines environmental and demographic indicators in maps and reports, was used to evaluate potential EJ communities in the Proposed Action vicinity. A total of five census block groups were analyzed (240037406021, 240037401041, 240037406023, 240037406022, and 240037401043), to include areas within FMMD itself, as well as its surrounding communities to the east and south of the Proposed Action location (USEPA 2024).

***Table 11. Socioeconomic Indicators for Environmental Justice***

Socioeconomic Indicator	Percentage in Block Groups	State Average (MD)	Percentile in State	National Average	Percentile in Nation
People of Color	63%	49%	63	39%	74
Low Income	17%	22%	49	31%	32

Source: USEPA EJ Screen Community Report (<https://ejscreen.epa.gov/mapper/ejscreen>)

People of Color are defined in US EPA’s EJScreen as the percent of individuals in a block group who list their racial status as a race other than white alone and/or list their ethnicity as Hispanic or Latino. That is, all people other than non-Hispanic white-alone individuals. Low income is defined as the percent of a block group's population in households where the household income is less than or equal to twice the federal "poverty level."

The USEPA EJScreen tool looks at 13 environmental indicators, combined with socioeconomic information such as that presented in **Table 13**. The EJ index highlights block groups with the highest intersection of low-income populations, People of Color, and a given environmental indicator (USEPA 2024). USEPA EJ Screen rated the project in the 80-95<sup>th</sup> percentile across the nation for ozone, superfund proximity, and hazardous waste proximity. A map of the five block groups analyzed and the EJScreen Community Report is included in **Appendix E**. Based on the information presented in **Table 13** and the Community Report in **Appendix E**, EJ communities are located within the vicinity of the Proposed Action.

Persons with disabilities and/or Tribal affiliation are also included under the definition of EJ populations pursuant to EO 14096. In the block groups considered, the percentage of the

population with Tribal affiliation is zero. The percentage of persons with disabilities is 8.6 percent, lower than both the state and national averages (**Appendix E**).

### **3.14.3 Environmental Consequences**

#### **3.14.3.1 Evaluation Criteria**

Impacts to socioeconomics would be considered significant if they were to cause substantial changes to the sales volume, income, employment, or population in the ROI.

Socioeconomic considerations typically include construction costs and the local economic benefits consequent to increases in personnel. Economic impacts are defined to include direct effects, such as changes to employment and expenditures that affect the flow of dollars into the local economy and indirect effects, which result from the “ripple effect” of spending and re-spending in response to the direct effects. Induced impacts are the result of spending of the wages and salaries of the direct and indirect employees on items such as food, housing, transportation, and medical services. This spending creates induced employment in nearly all sectors of the economy, especially service sectors, and can flow outside of the ROI.

#### **3.14.3.2 Impacts from Construction of the Proposed Action**

Short-term, negligible, direct, and indirect beneficial impacts to socioeconomics are expected from the Proposed Action during the construction period, as jobs created from the construction of the Proposed Action would generally stimulate economic activity within the ROI. An indirect benefit outside the ROI would also occur due to wages and spending on building materials. While the economic benefits would be beneficial to the employees of the firms selected to implement the construction work, the overall impact on socioeconomic conditions at FMMD and within Anne Arundel County would be negligible. Additionally, neither the design work nor construction activities would induce long-term changes in employment, housing, or demands on education or community resources within the community because the time frame of the Proposed Action construction phase is of a short duration (12 months), such that temporary or permanent relocation of workers and/or their families would not be reasonably anticipated to occur.

Although USEPA’s EJScreen places the Proposed Action vicinity in the 85<sup>th</sup>-90<sup>th</sup> percentile for ozone, superfund proximity and hazardous waste proximity, the Proposed Action would not have a potential disproportionate impact on communities with EJ concerns caused by the presence and accumulation of other environmental impacts within FMMD or Anne Arundel County. The emissions of ozone precursors from the operation of construction equipment and construction worker commutes were presented in **Table 5**, Section 3.7. The estimated emissions of ozone precursors were less than the *de minimus* thresholds and are not anticipated to result in an adverse effect to surrounding communities.

As noted in **Table 2**, the Proposed Action site does not contain IRP sites and is not located within areas of military munitions or historic range areas. No Superfund sites are located in the Proposed Action area or vicinity.

Impacts would be negligible and would not exceed those to the general population. Impacts would not occur in communities with environmental justice concerns that have been impacted by cumulative or multiple adverse exposures. Further, this Proposed Action would take place on FMMD in an administrative and residential area that does not have a socially vulnerable, low-

income population. Therefore, the Proposed Action would have no mechanism for impact on communities with EJ concerns.

### **3.14.3.3 Impacts from Operation of the Proposed Action**

Operating the Proposed Action would provide long-term, minor, direct beneficial impacts to eligible families who are able to obtain childcare services at FMMD instead of outside FMMD. Remaining at FMMD reduces time and transportation expenses associated with driving outside of FMMD to obtain childcare services.

Operating the Proposed Action would also have a long-term, minor, direct, beneficial impact to the Army because the provision of a new, modern, well-designed facility would be a significant improvement for the Army's investment, materially reducing operating costs. These savings in costs and improved investments to the Army would increase with each succeeding generation of users.

Long-term, negligible, direct adverse impacts may occur to private off-site childcare providers from the decreased enrollment of children who instead receive care at the FMMD CDC V.

### **3.14.3.4 No Action**

Under the No Action Alternative, existing conditions would remain unchanged. There would be a long-term, minor, direct adverse impact associated with the continued time and transportation expenses incurred by families traveling outside of FMMD to obtain childcare services. The No Action alternative would continue the current non-compliance with the Army policy of providing desirable childcare facilities, particularly for its lower enlisted ranks to ensure safety, welfare, and morale, particularly for young Soldiers and their families.

## **3.15 Protection of Children**

### **3.15.1 Definition of the Resource**

Federal agencies are directed by EOs to address and assess environmental health and safety risks to children.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, states that each federal agency "(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks."

The ROI for protection of children is FMMD.

### **3.15.2 Existing Conditions**

#### **3.15.2.1 Installation-wide**

There are no designated play/recreation areas available to the general public anywhere at FMMD, including the play spaces at the CDCs, golf course, tracks and fields, and other designated recreational areas at FMMD.

#### **3.15.2.2 Proposed Action Site**

The Proposed Action site is in the vicinity of another CDC, which has designated outdoor play areas for children receiving daycare services provided by professional staff. Access into and out

of these play areas is controlled and the perimeter is secured with fencing, which prevents children from leaving the CDC facilities without supervision.

As a result, the Proposed Action site would not be considered accessible to these children. However, the Proposed Action site is not secure; older children living at FMMD could access the site from the abutting roadways.

### **3.15.3 Environmental Consequences**

#### **3.15.3.1 Evaluation Criteria**

An impact would be considered significant if it resulted in potential disproportionately high and adverse impacts to environmental health and safety risks to children consistent with EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*.

#### **3.15.3.2 Impacts from Construction of the Proposed Action**

There would be short-term, negligible, direct adverse impacts to children during construction in the form of increased noise, traffic, particulate matter, and other associated construction-related impacts to children at the nearby CDC.

These impacts would be temporary, and additional measures to avoid adverse impacts to children would include the installation of temporary construction safety fencing around the construction perimeter to prevent unauthorized access to the Proposed Action site by any age group, including children.

#### **3.15.3.3 Impacts from Operation of the Proposed Action**

The impact from operating the Proposed Action on children would be long-term, significant, direct, and beneficial. The Proposed Action would help to alleviate the deficit of childcare services at FMMD. These childcare services would become available to the families of active-duty military, as well as staff of tenants at FMMD, military retirees, and other eligible units and agencies outside of FMMD. The Proposed Action would benefit the welfare of children who receive structured childcare at a modern, well-equipped facility programmed with professionally trained staff and meeting Army Regulation 608-10, *Personal Affairs, Child Development Services* (Army 2017).

#### **3.15.3.4 No Action**

Under the No Action Alternative, there would be long-term, significant, direct adverse impacts to children. The No Action Alternative would leave FMMD with a continued critical shortage of childcare services, particularly infant and toddler care, which is the daycare category in the highest demand by most military families. The total need of the family childcare program on FMMD is 1,200 spaces, where one space is comparable to providing daycare service to one child. Especially critical is the need for service for children who are 4 weeks to 6 years of age. The lack of a care facility of this type in the Fort Meade area further increases the demands on FMMD's existing CDC facilities. Waiting lists are common, and, as a result, service members continue to have to seek childcare outside of FMMD at facilities not required to meet Army regulations for child development services (Army 2017).

### 3.16 Cumulative Impacts

#### 3.16.1 Definition of Cumulative Impacts

CEQ regulations stipulate that the cumulative impacts analysis within an EA should consider the potential environmental impacts resulting from “the incremental impacts of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions” (40 CFR 1508.7). CEQ guidance in Considering Cumulative Impacts affirms this requirement, stating that the first steps in assessing cumulative impacts involve defining the scope of the other actions and their interrelationship with a proposed action. The scope must consider geographic and temporal overlaps among the proposed action and other actions. It must also evaluate the nature of interactions among these actions.

Cumulative impacts are most likely to arise when a relationship or synergism exists between a proposed action and other actions expected to occur in a similar location or during a similar time period. Actions overlapping with or in close proximity to the proposed action would be expected to have more potential for a relationship than those more geographically separated. Similarly, actions that coincide, even partially, in time would tend to offer a higher potential for cumulative impacts.

- To identify cumulative impacts the analysis needs to address three fundamental questions:
- Does a relationship exist such that affected resource areas of the proposed action might interact with the affected resource areas of past, present, or reasonably foreseeable actions?
- If one or more of the affected resource areas of the proposed action and another action could be expected to interact, would the proposed action affect or be affected by impacts of the other action?
- If such a relationship exists, then does an assessment reveal any potentially significant impacts not identified when the proposed action is considered alone?

The scope of the cumulative effects analysis involves both the geographic extent of the effects and the time frame in which the effects could be expected to occur. For this EA, the geographic extent of the cumulative effects analysis is the FMMD property. Table 12 identifies projects occurring within the same general time frame at FMMD and whose effects, when added to those of the Proposed Action, may result in cumulative effects. The following subsections include a discussion of potential cumulative impacts by environmental resource area.

**Table 12. Actions at FMMD Potentially Causing Cumulative Effects of Importance**

Project	Description
<b>FMMD Stream Improvements Project</b>	Restoration of eight impaired stream reaches in Midway Branch, Franklin Branch, Rogue Harbor, and Severn Run watersheds at FMMD to improve water quality, reduce flooding, enhance fish habitat, prevent further stream degradation, and provide numerous co-benefits for FMMD and neighboring communities, while also helping FMMD maintain compliance with federal and state water quality requirements. The closest stream to the Proposed Action site is Franklin Branch.
<b>Phased Barracks Construction</b>	FMMD proposes to design and construct up to nine new barracks facilities to house 1,600–1,800 unaccompanied enlisted personnel, to be constructed in three phases at three sites in close proximity on FMMD. The first phase is currently under design.

Project	Description
<b>Operations Facility</b>	Construct a new two-story operational building with associated parking on available space within the southeast portion of FMMD.
<b>Programmatic EIS for a Tenant Organization at FMMD</b>	The Final EIS was completed in 2017 for a new operational complex.
<b>Proposed Road Improvements at FMMD</b>	November 2017 EA completed for eleven road improvement projects within FMMD to increase safety, efficiency, and traffic flow. Sidewalks would be rebuilt to regulation and design standards. All projects would include stormwater management, LID, and landscaping (including street trees, lighting, and street furniture) would be added in accordance with MD state law, Army and Installation Design Guidelines, policy, and regulations.
<b>Tenant Organization</b>	Construct and operate a new facility on FMMD. The administrative and academy buildings would be constructed in three phases and consolidate mission operations into one main facility that encourages collaboration with other agencies with similar missions on FMMD. This proposed project, if implemented, would be constructed and operated in fiscal year 2026/2027.

### **3.16.2 Potential Cumulative Impacts by Environmental Resource Area**

The following analysis examines the potential cumulative impacts on the natural and human-made environment that would result from the cumulative impacts of the Proposed Action, in combination with the other actions described above. Based on the assessment of past, present, and reasonably foreseeable future actions at and in the vicinity of the Proposed Action site, a limited number of resource topics analyzed in this EA would be reasonably expected to experience cumulative impacts; these are vegetation and wildlife; air quality and greenhouse gases; stormwater; and socioeconomics and Protection of Children.

#### **3.16.2.1 Air Quality**

The cumulative adverse impacts on air quality from implementation of the Proposed Action would remain at negligible levels. Short-term emissions from construction activities would temporarily impact air quality and this impact would cease once construction is completed. Estimated operational emissions from the Proposed Action would increase overall emissions from FMMD to a negligible degree. When combined with other projects, the emissions from construction and operation of the Proposed Action would not result in FMMD exceeding the thresholds for any criteria pollutant or violating any MDE air quality regulations and permit limits.

#### **3.16.2.2 Stormwater**

Development projects at FMMD that individually or collectively increase stormwater volume beyond the capacity of the existing facilities for stormwater retention would be considered a detriment. This would occur due to increased impervious surfaces, leading to the impairment of the existing stormwater management systems. The Proposed Action would manage stormwater

according to MDE and FMMD requirements. As a result, on a cumulative basis, stormwater impacts would not increase to a significant adverse level.

### **3.16.2.3 Vegetation and Wildlife**

Together, the Proposed Action, in combination with projects listed on Table 12, could cumulatively result in the loss of vegetation and habitat for wildlife at FMMD. However, implementation of the Proposed Action would be consistent with existing designated land uses and policies. The 2020 Fort Meade Area Development Plan identified the Proposed Action site as a developable area and the construction of the proposed CDC V as part of its 16–20-year long-range implementation plan (USACE 2020a). Where feasible, projects are converting underutilized vacant lots to more productive use in keeping with the nature of the surrounding areas. The buildings for some projects are considered improvements as well as replacements for outdated and dilapidated structures located elsewhere on the installation, making way for more beneficial uses.

The cumulative impacts of the Proposed Action, combined with the other proposed projects at FMMD, would result in the cumulative clearing of acreage to accommodate the proposed new facilities. However, given the stated requirements of the MD FCA, the FMMD Tree Management Policy, the long-term goals of the FMMD Area Development Plan, and others, all of which would be adhered to, there would be both replacement for vegetation lost as well as improvement upon the types of vegetation currently growing in these areas. Thus, considered from a cumulative basis, the Proposed Action would not increase from having minor adverse impacts to a significant adverse impact.

### **3.16.2.4 Socioeconomics**

The cumulative socioeconomic impacts of the Proposed Action, combined with the other projects at FMMD, would not increase to significant beneficial levels because the scale of these projects is negligible in context to overall expenditure levels at FMMD and Anne Arundel County. Likewise, the minor beneficial impact to families would not increase to significant beneficial levels because the Proposed Action would not affect other non-daycare-related expenses that families would continue to incur.

### **3.16.2.5 Protection of Children**

The cumulative impacts of the Proposed Action on the protection of children, combined with the other projects at FMMD, would remain at significant beneficial levels because these other projects would not directly or indirectly impact childcare services at FMMD.

## 4 SUMMARY OF ENVIRONMENTAL CONSEQUENCES

As described in Chapter 4 of this EA, the construction and operation of the Proposed Action would not generate any significant adverse impacts, while significant beneficial impacts would be achieved during operation of the Proposed Action.

Minor or negligible, direct adverse impacts caused by constructing the Proposed Action would be temporary, occurring during the approximately 12-month construction phase, and be limited in extent to the approximately 8-acre Proposed Action site. Due to the relatively isolated location of the Proposed Action site away from the main administrative areas, only a small number of Service members, staff, and personnel at FMMD may be aware of and impacted by the Proposed Action construction.

Beneficial impacts caused by operating the Proposed Action would be permanent, with minor socioeconomic benefits occurring to families that no longer require traveling outside of FMMD to obtain childcare, reducing their time and travel expenses. Significant benefits would occur to the welfare of children receiving childcare services that meet Army regulations at a new, modern facility at FMMD.

Table 133 summarizes the potential impacts of the Proposed Action and the No Action Alternative. The summary is based on information discussed in detail in Chapter 4 of this EA and includes a concise definition of the issues addressed and the potential environmental impacts associated with each phase of the Proposed Action and its potential cumulative impacts.

**Table 13. Summary of Environmental Consequences**

<b>Resource Area</b>	<b>Construction</b>	<b>Operation</b>	<b>Cumulative</b>	<b>No Action</b>
<b>Visual Resources</b>	Short-term, minor, direct, adverse impacts from active construction site and land clearing.	Long-term, negligible, direct adverse impact from loss of forested area.	No change in impact findings.	Long-term, negligible, direct beneficial impact
<b>Topography</b>	Long-term, negligible, direct adverse impact from filling natural grade.	Long-term, negligible, direct adverse impact from filling.	No change in impact findings.	No impact
<b>Soils</b>	Short-term, minor, direct adverse impacts from construction causing loss of vegetative cover, erosion, and compaction.	Long-term, negligible, direct adverse impact from impervious hardscape cover and compaction.	No change in impact findings.	No impact
<b>Air Quality and Climate Change</b>	Short-term, negligible, direct adverse impacts from operating construction equipment and ground-disturbing activities.	Long-term, negligible, direct adverse impacts from heating and cooling interior space within the CDC V.	No change in impact findings.	Long-term, negligible, direct adverse impact from vehicles continuing to travel outside of FMMD to obtain childcare services.

<b>Resource Area</b>	<b>Construction</b>	<b>Operation</b>	<b>Cumulative</b>	<b>No Action</b>
<b>Noise</b>	Short-term, minor, direct adverse impacts from operating construction machinery.	Long-term, direct, negligible adverse impacts from vehicle traveling to and from the CDC V.	No change in impact findings.	No impact
<b>Stormwater</b>	Short-term, negligible, direct adverse impact from sedimentation of stormwater.	Long-term, negligible, direct adverse impact from increased stormwater volume.	No change in impact findings.	No impact
<b>Coastal Zone Management</b>	No impact. Construction would not impact coastal zone resources.	No impact. Operation would not impact coastal zone resources.	No change in impact findings.	No impact
<b>Biological Resources: Vegetation</b>	Long-term, minor, direct adverse impacts due to permanent loss of up to 8 acres of forest at Proposed Action site.	Long-term, negligible, direct adverse impact due to permanent loss during construction, but minimized through off-site replantings during operation.	No change in impact findings.	Long-term, beneficial impact by retaining existing forest at Proposed Action site.
<b>Biological Resources: Wildlife</b>	Long-term, negligible, direct adverse impacts to wildlife species dislocated by construction activities and permanent vegetation clearing.	Long-term, negligible, direct adverse impacts due to loss of habitat at the Proposed Action site.	No change in impact findings.	Long-term, beneficial impact on wildlife species continuing to utilize habitat at the Proposed Action site.
<b>Cultural Resources</b>	No impact. No historic properties are anticipated at the Proposed Action site.	No impact. No historic properties are anticipated at the Proposed Action site.	No change in impact findings.	No impact

Resource Area	Construction	Operation	Cumulative	No Action
<b>Transportation</b>	Short-term, negligible, direct adverse impact on traffic and roadways from construction activities and road closures.	Long-term, negligible, direct adverse impact from increased traffic on roadways adjacent to CDC V during drop-off and pick-up.  Long-term, negligible, direct beneficial impact by reducing travel distance for individual families obtaining childcare services at FMMD.	No change in impact findings.	Long-term, negligible, direct adverse impact to individual families continuing to travel longer distances to obtain childcare services outside of FMMD.
<b>Energy and Utilities</b>	No impact. Existing utility lines and connections are adjacent to the Proposed Action site. Construction would not disrupt service to existing utility customers.	No impact. Operational demand can be met by existing supply without decreasing quality of service to other customers at FMMD or in the surrounding community.	No change in impact findings.	No impact

Resource Area	Construction	Operation	Cumulative	No Action
<b>Socioeconomics</b>	Short-term, negligible, direct, and indirect beneficial impacts from spending on construction wages, equipment, and building materials.	Long-term, minor, direct beneficial impacts to eligible families by reducing time and transportation costs to obtain childcare services. Long-term, minor, direct, beneficial impact to the Army. Long-term, negligible, direct adverse impact due to decreased enrollment at private childcare facilities outside of FMMD.	No change in impact findings.	Long-term, minor, direct adverse impact to individual families incurring time and expenses to travel outside of FMMD to obtain childcare services.
<b>Protection of Children</b>	Short-term, negligible, direct adverse impacts to children exposed to construction noise, traffic, particulate matter, and other construction-related activities; limited to occupants at the adjacent CDC II facility	Long-term, significant, direct, and beneficial impacts to welfare of children receiving childcare meeting Army regulation at FMMD.	No change in impact findings.	Long-term, significant, direct adverse impacts to children receiving childcare services outside of FMMD and that may not meet Army regulation.

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## 6 ACRONYMS AND ABBREVIATIONS

Acronym	Definition
ACAM	Air Conformity Applicability Model
ACM	asbestos-containing materials
ACP	Access Control Point
amsl	above mean sea level
APE	Area of Potential Effect
BG&E	Baltimore Gas and Electric
BGEPA	Bald and Golden Eagle Protection Act
BMP	Best Management Practice
CAA	Clean Air Act
CCS	Chesapeake and Coastal Service
CDC	Child Development Center
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environment Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CH <sub>4</sub>	methane
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
COMAR	Code of Maryland Regulations
CWA	Clean Water Act
CY	cubic yard
CZMA	Coastal Zone Management Act
CZMP	Coastal Zone Management Program
dB	decibel
dBA	A-weighted decibel
DNL	Day night level
DoD	Department of Defense
DPW	Department of Public Works
EA	Environmental Assessment
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EO	Executive Order
ESA	Endangered Species Act
ESCP	Erosion and Sediment Control Plan
ESD	Environmental Site Design
FCA	Forest Conservation Act
FEMA	Federal Emergency Management Agency

Acronym	Definition
FMMD	Fort George G. Meade
FNSI	Finding of No Significant Impact
FY	Fiscal year
GCR	General Conformity Review
GHGs	Greenhouse gases
GPM	gallons per minute
GWP	global warming potential
HAP	Hazardous Air Pollutants
HFCs	hydrofluorocarbons
HVAC	Heating, Ventilation, and Air Conditioning
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated National Resource Management Plan
IRP	Installation Restoration Program
ISCP	Installation Spill Contingency Plan
JCOG	Joint Cyber Operations Group
LBP	Lead-based Paint
LEED	Leadership in Energy and Environmental Design
LID	Low-Impact Development
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MD	Maryland
MDE	Maryland Department of the Environment
MDNR	Maryland Department of Natural Resources
MGD	million gallons per day
MHT	Maryland Historic Trust
MMRP	Military Munitions Response Program
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
N <sub>2</sub> O	nitrous oxide
NAA	nonattainment area
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves and Repatriation Act of 1979
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO <sub>x</sub>	Nitrogen Oxide
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places

Acronym	Definition
NWI	National Wetlands Inventory
O <sub>3</sub>	ozone
OSHA	Occupational Safety and Health Administration
OTR	Ozone Transport Region
Pb	lead
PFCs	perfluorocarbons
PM	Particulate Matter
PM <sub>2.5</sub>	particulate matter less than 2.5 microns
PM <sub>10</sub>	particulate matter less than 10 microns
POW	Prisoner of War
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
RTE	Rare, Threatened, or Endangered
SF	Square Foot/Feet
SF <sub>6</sub>	sulfur hexafluoride
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
SPCCP	Spill Prevention Control and Countermeasures Plan
SWPPP	Stormwater Pollution Prevention Plan
TSCA	Toxic Substances Control Act
UFC	Unified Facilities Criteria
USACE	United States Army Corps of Engineers
USC	United States Code
USCB	United States Census Bureau
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UST	underground storage tank
VOC	Volatile Organic Compound
WWII	World War II
WWTP	Wastewater Treatment Plant

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