Draft Finding of No Significant Impact

Environmental Assessment: Implementation of the Integrated Natural Resources Management Plan and Integrated Cultural Resources Management Plan at Fort Walker, Virginia

The Army is aware of the 12 November 2024 decision in Marin Audubon Society v. Federal Aviation Administration, No. 23-1067 (D.C. Cir. Nov. 12, 2024). To the extent that a court may conclude that the Council on Environmental Quality (CEQ) regulations implementing NEPA are not judicially enforceable or binding on this agency action, the Army has nonetheless elected to follow those regulations at 40 Code of Federal Regulations (CFR) §§ 1500–1508, in addition to the Army's procedures/regulations implementing NEPA at 32 CFR 651, to meet the agency's obligations under NEPA, 42 U.S.C. §§ 4321 et seq.

Pursuant to the Council on Environmental Quality Regulations (CEQ) (40 CFR §§ 1500-1508) for implementing the procedural provisions of the National Environmental Policy Act (NEPA) and 32 CFR § 651 (Environmental Analysis of Army Actions), United States (U.S.) Army Garrison Fort Walker, Virginia (FWVA) has prepared an Environmental Assessment (EA) to assess the potential effects of the proposed action to implement the 2024–2029 Integrated Natural Resources Management Plan (INRMP) and 2023–2028 Integrated Cultural Resources Management Plan (ICRMP). The EA is incorporated into this finding.

PROPOSED ACTION

The Army proposes to implement the 2024–2029 INRMP and 2023–2028 ICRMP. These plans reflect FWVA's commitment to conserve, protect, and enhance the installation's natural and cultural resources in a manner that supports realistic military training. The primary objective of these plans is to provide proactive natural and cultural resources management tools that allow FWVA to achieve resource management goals, mission requirements, and compliance with environmental regulations and policies. Each plan has elements specific to the management of the resources it is designed to support. A complete description of the proposed action is included in Section 2.0 of the attached EA.

ALTERNATIVES CONSIDERED

As part of the NEPA process, 2 alternatives, including the No Action Alternative, were considered by FWVA for the proposed implementation of the INRMP and ICRMP. An alternative was considered if it met the purpose and need of FWVA and minimized impact to the natural and human environment. Alternatives that did not meet the purpose and need, the screening criteria, or had too great of an environmental impact were not considered for further analysis in the EA. A complete description of the alternatives considered for the proposed project is included in Section 3.0 of the attached EA.

FACTORS CONSIDERED IN DETERMINING THAT THE PROJECT WOULD NOT CAUSE SIGNIFICANT ADVERSE IMPACTS

The analysis included in the attached EA concluded that there would be no significant impacts as a result of implementing the proposed action. The CEQ significance criteria are listed below along with a brief explanation of how the project would adhere to these standards. References to the attached EA are provided where appropriate.

1) **Impacts that may be both beneficial and adverse. A significant effect may exist even if the federal agency believes that, on balance, the effect will be beneficial.**

The proposed action would result in adverse impacts to soils, floodplains, water resources, air quality, noise, hazardous materials, aesthetic resources, vegetation, fish and wildlife, threatened and endangered species, wetlands, transportation, and safety. The proposed action also would result in long-term, beneficial impacts to these resources. These impacts are described in greater detail in Section 4.0 and summarized in Section 4.5 of the attached EA. The adverse impacts would primarily be minor in nature. Some moderate impacts from larger-scale projects, such as timber harvesting, site rehabilitation, stand improvement, and prescribed burns, would be expected. The adverse impacts would not outweigh the benefits that the Army would gain through the implementation of the INRMP and ICRMP.

2) **The degree to which the proposed action affects public health or safety.**

Section 4.2.7 and Section 4.4.3 of the attached EA address hazardous materials and safety, respectively. The findings of these sections indicate that safety would be adversely impacted by the site-specific use of hazardous materials (e.g., pesticides, gasoline, diesel, petroleum products, oils, and lubricants) and the health and safety risks to workers conducting certain project activities. These adverse impacts would be site-specific or local to each project area and would not impact public health and safety outside of the project areas or the installation. Additionally, various projects outlined in the INRMP would beneficially impact health and safety (e.g., removal of underground storage tanks, surface and groundwater monitoring, installation of solar panels as heat protection, and safety training). Operation of the proposed action would comply with all Army safety regulations, avoiding any potential impact to public health or safety.

3) **Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.**

The proposed project areas are expected to contain or be adjacent to cultural resources, threatened and endangered species habitat, and wetlands. The ICRMP is designed to preserve and protect known cultural resources on the installation and provide guidance on the installation's efforts to identify unknown resources. In the event a proposed project was found to present an adverse impact to cultural resources, the FWVA Cultural Resources Program Manager would coordinate with the applicable state and federal agencies (Section 4.2.6 of the attached EA).

The proposed action would result in no net loss of wetlands or 100-year floodplains at FWVA. Some projects, such as culvert maintenance, repair, and replacement and invasive species removal, may result in minor, short-term, adverse impacts to wetlands and floodplains. FWVA has established 100-foot-wide Resource Protection Areas (RPAs) around all intermittent and perennial streams that preclude or limit most forms of land disturbance. The construction of new facilities, roads, trails, and mechanically created firebreaks (i.e., plow lines) are prohibited within an RPA. The sole exception to the latter is in the event of wildfire suppression, which may require subsequent remediation. FWVA also applies land disturbance restrictions within the 100-foot-wide RPA to include

forestry and other non-silvicultural vegetation management activities. (Section 4.3.4 of the attached EA).

4) **The degree to which the effects on the quality of the human environment are likely to be highly controversial.**

The Army will hold a 30-day public review period for the public to review the draft EA and Finding of No Significant Impact (FNSI) and provide comment. Any comments that are received will be addressed as necessary within the final EA and FNSI.

5) **The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.**

The proposed action has been thoroughly reviewed by Army specialists to ensure that it conforms to all Army regulations. There are no uncertain, unknown, or unique risks associated with the proposed action.

6) **The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.**

The proposed action is similar to many other existing and future actions at Fort Walker and other Department of Defense installations. It does not establish a precedent or represent a decision in principle about future considerations.

7) **Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts**.

The proposed action, in combination with any other action(s) on FWVA or the surrounding region, would not result in any cumulatively significant impact to the environment (Section 4.6 of the attached EA).

8) **The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.**

As of 1 July 2022, archaeological surveys had been conducted on approximately 8,422 acres of the installation. Those surveys have identified 651 archaeological sites, of which 43 represent Native American sites, 574 are historic period sites, and 34 have both prehistoric and historic components. Architectural surveys on the installation have identified 242 architectural resources on FWVA, which includes 2 historic resources that predate the establishment of the installation. These 2 historic resources have been determined eligible for the National Register of Historic Places and are listed in the Virginia Landmarks Register. No adverse impacts to cultural resources are anticipated to

occur as a result of implementing the proposed action; therefore, there would be no significant impact to cultural resources (Section 4.2.6 of the attached EA).

9) **The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.**

There are 17 federally threatened and endangered species known to exist on FWVA. Minor, short-term, adverse impacts would be expected during certain site-specific natural resources management activities. These activities generally include vegetation and habitat management efforts that cause temporary disturbances to these resources. Minor to moderate, long-term, beneficial impacts to threatened and endangered species are anticipated to result from these efforts, as they are designed to ultimately increase the quality of habitat at FWVA.

Larger-scale projects, such as timber harvesting, site rehabilitation, stand improvement, and prescribed burns, would be expected to have moderate, short- and long-term, adverse impacts to threatened and endangered species. These projects would create temporary alterations to the natural habitat in the project areas. Although these activities create moderate, short- and long-term, adverse impacts, the moderate, long-term, beneficial impacts outweigh the adverse impacts. These management activities promote a healthy, sustainable forest ecosystem that benefits numerous species and provides ecologically valuable habitat (Section 4.3.3 of the attached EA).

10) **Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.**

The proposed action is in compliance with all federal, state, and local laws and regulations.

CONCLUSION

The EA concludes that the implementation of the proposed action would have no significant impacts on the quality of the physical and human environment at FWVA. In accordance with the requirements of NEPA, FWVA therefore issues a draft FNSI for this project, and an Environmental Impact Statement (EIS) will not be prepared. See 32 CFR § 651.21: “The draft FNSI will be made available to the public for review and comment for 30 days prior to the initiation of an action. If a FNSI is signed by the decision maker (after public review), the action can proceed immediately.”

This EA will be available for public review on the FWVA website at https://home.army.mil/walker/my-fort/all-services/environmental/national-environmental-policy-act. Interested parties are invited to submit written comments for consideration on or before 30 days after publication of this Draft EA and Draft FNSI to:

Fort Walker Directorate of Public Works

Environmental and Natural Resources Division

NEPA Coordinator

19952 North Range Road, Bldg. 1220

Fort Walker, VA 22427

Date:_____ _____

Matthew S. Bauer
Lieutenant Colonel, U.S. Army
Garrison Commander
Fort Walker, Virginia

ENVIRONMENTAL ASSESSMENT: IMPLEMENTATION OF THE INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN AND THE INTEGRATED CULTURAL RESOURCES MANAGEMENT PLAN AT FORT WALKER, VIRGINIA

Prepared by:
Colorado State University
Center for Environmental
Management of Military Lands
Fort Collins, Colorado

DRAFT
January 2025

Prepared for:
Directorate of Public Works,
Environmental & Natural
Resources Division,
U.S. Army Garrison
Fort Walker, Virginia

Center for Environmental Management
MILITARY LANDS
COLORADO STATE UNIVERSITY

Executive Summary

Environmental Assessment: Implementation of the Integrated Natural Resources Management Plan and Integrated Cultural Resources Management Plan at Fort Walker, Virginia

The Army is aware of the 12 November 2024 decision in Marin Audubon Society v. Federal Aviation Administration, No. 23-1067 (D.C. Cir. Nov. 12, 2024). To the extent that a court may conclude that the Council on Environmental Quality (CEQ) regulations implementing NEPA are not judicially enforceable or binding on this agency action, the Army has nonetheless elected to follow those regulations at 40 Code of Federal Regulations (CFR) §§ 1500–1508, in addition to the Army's procedures/regulations implementing NEPA at 32 CFR 651, to meet the agency's obligations under NEPA, 42 U.S.C. §§ 4321 et seq.

Pursuant to the Council on Environmental Quality Regulations (CEQ) (40 CFR §§ 1500-1508) for implementing the procedural provisions of the National Environmental Policy Act (NEPA) and 32 CFR § 651, *Environmental Analysis of Army Actions*, U.S. Army Garrison Fort Walker, Virginia (FWVA) has prepared an Environmental Assessment (EA) to assess the potential effects of the proposed action to implement the 2024–2029 Integrated Natural Resources Management Plan (INRMP) and 2023–2028 Integrated Cultural Resources Management Plan (ICRMP).

PURPOSE AND NEED FOR ACTION

FWVA is responsible for the stewardship of the natural and cultural resources within the installation's boundaries. Federal and Army regulations mandate the development and implementation of INRMPs and ICRMPs. The purpose of implementing the INRMP is to outline conservation and management efforts for FWVA natural resources, including threatened and endangered species, and to aid in ensuring compliance with applicable laws and regulations. The purpose of implementing the ICRMP is to provide FWVA with an internal compliance and management plan and provide information, guidance, and standard operating procedures to maintain FWVA's compliance with applicable cultural resources laws, regulations, and guidance issued by the federal government, the Commonwealth of Virginia, and the Army. The need for the proposed action is to ensure natural and cultural resources management compliance while achieving military training goals through implementation of the projects outlined in the INRMP and ICRMP.

PROPOSED ACTION

The Army proposes to implement the 2024–2029 INRMP and 2023–2028 ICRMP. These plans reflect FWVA's commitment to conserve, protect, and enhance the installation's natural and cultural resources in a manner that supports realistic military training. The primary objective of these plans is to provide proactive natural and cultural resources management tools that allow FWVA to achieve resource management goals, mission requirements, and compliance with environmental regulations and policies. Each plan has elements specific to the management of the resources it is designed to support. A complete description of the proposed action is included in Section 2.0 of the attached EA.

ALTERNATIVES CONSIDERED

As part of the NEPA process, 2 alternatives, including the No Action Alternative, were considered by FWVA for the proposed implementation of the INRMP and ICRMP. An alternative was considered if it met the purpose and need of FWVA and minimized impact to the natural and human environment. Alternatives that did not meet the purpose and need, the screening criteria, or had too great of an environmental impact were not considered for further analysis in the EA. A complete description of the alternatives considered for the proposed project is included in Section 3.0 of the attached EA.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

During the scoping process, the following issues and concerns were identified as requiring assessment when considering the potential environmental impacts of implementing the INRMP and ICRMP: soils, floodplains, water resources, air quality, noise, cultural resources, hazardous materials, aesthetic resources, vegetation, fish and wildlife, threatened and endangered species, wetlands, transportation, economics, and safety. The analysis included in the attached EA concluded that there would be no significant impacts as a result of implementing the proposed action. The impacts for each resource are summarized in the table below.

Table 1. Summary of potential impacts to resources for each action alternative.

Resource	No Action Alternative	Preferred Alternative (Proposed Action)
Soils	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from soil disturbance during natural resources management activities, Integrated Training Area Management Program activities, and resource identification projects in the ICRMP. Moderate, short-term adverse impacts from timber harvesting, land clearing, stand improvement, and prescribed burns. Long-term, moderate beneficial impacts from agricultural outleasing and Integrated Training Area Management Program activities.
Floodplains	No significant impacts.	No significant impacts. Minor, short-term, adverse impacts from land and soil disturbance within floodplains from natural resources management activities, Integrated Training Area Management Program activities, and cultural resource identification projects. Minor to moderate, long-term beneficial impacts from culvert and low-water crossing maintenance, repair, and replacement. Moderate, short-term adverse impacts and moderate, long-term beneficial impacts from timber harvesting, site rehabilitation, stand improvement, and prescribed burns.

Table 1. Summary of potential impacts to resources for each action alternative.

Resource	No Action Alternative	Preferred Alternative (Proposed Action)
Water Resources	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from natural resources management activities, Integrated Training Area Management Program activities, and cultural resource identification projects. Minor to moderate, long-term beneficial impacts from invasive species removal, water quality monitoring, fish stocking, undesired aquatic species removal, and maintenance/repair of culverts and low-water crossings. Moderate, short-term adverse impacts and moderate, long-term beneficial impacts from timber harvesting, site rehabilitation, stand improvement, and prescribed burns.
Air Quality	No significant impacts.	No significant impacts. Minor, short-term adverse impacts to local air quality from natural resources management activities and cultural resource identification projects in the form of fugitive dust and exhaust generated from vehicles, and chemical pesticide application. Moderate, short-term adverse impacts to post-wide and regional air quality from prescribed burns.
Noise	No significant impacts.	No significant impacts. Minor, short-term adverse impacts during natural resources management activities and cultural resource identification activities from regular use of vehicles and noise-generating equipment.
Cultural Resources	No significant impacts.	No significant impacts. Moderate, long-term beneficial impacts from identification and evaluation of cultural resources in ICRMP projects.
Hazardous Materials	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from natural resources management activities that use pesticides, gasoline, diesel fuel, other petroleum products, oils, and lubricants. Minor to moderate, long-term beneficial impacts from removal of underground storage tanks, water monitoring, and inspections.

Table 1. Summary of potential impacts to resources for each action alternative.

Resource	No Action Alternative	Preferred Alternative (Proposed Action)
Aesthetic Resources	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from natural resources management activities and Integrated Training Area Management Program activities. Moderate, long-term adverse impacts and from timber harvesting and prescribed burns. Moderate, long-term beneficial impacts from timber harvesting, prescribed burns, and Integrated Training Area Management Program activities. Minor to moderate, long-term beneficial impacts from natural resources management activities.
Vegetation	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from natural resources management activities, Integrated Training Area Management Program activities, and cultural resource identification activities. Moderate, short- and long-term adverse impacts from timber harvesting, site rehabilitation, stand improvement, and prescribed burns. Minor to moderate, long-term beneficial impacts from natural resources management activities including timber harvesting, site rehabilitation, stand improvement, and prescribed burns.
Fish and Wildlife	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from natural resources management activities, and hunting, fishing, and trapping programs. Moderate, short- and long-term adverse impacts from timber harvesting, site rehabilitation, stand improvement, and prescribed burns. Minor to moderate, long-term beneficial impacts from natural resources management activities, timber harvesting, site rehabilitation, stand improvement, prescribed burns, and hunting, fishing, and trapping programs.
Threatened and Endangered Species	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from natural resources management activities, and hunting, fishing, and trapping programs. Moderate, short- and long-term adverse impacts from timber harvesting, site rehabilitation, stand improvement, and prescribed burns. Minor to moderate, long-term beneficial impacts from natural resources management activities, timber harvesting, site rehabilitation, stand improvement, prescribed burns, and hunting, fishing, and trapping programs.

Table 1. Summary of potential impacts to resources for each action alternative.

Resource	No Action Alternative	Preferred Alternative (Proposed Action)
Wetlands	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from natural resources management activities. Moderate, short- and long-term adverse impacts from timber harvesting, site rehabilitation, stand improvement, and prescribed burns. Minor to moderate, long-term beneficial impacts from natural resources management activities.
Transportation	No significant impacts.	No significant impacts. Negligible, short-term adverse impacts from vehicle traffic during INRMP and ICRMP projects. Minor, short-term adverse impacts from prescribed burns, maintenance and replacement of culverts and low-water crossings, and cultural resource identification controls. Minor, long-term beneficial impacts from redirection and minimization of vehicle traffic on roads that traverse wet areas and improvement of roads associated with culverts and low-water crossings.
Economics	No significant impacts.	No significant impacts. Minor, short-term beneficial impacts from INRMP and ICRMP project personnel boosting the local economy. Minor, long-term beneficial impacts from recreational permit sales and forest product sales. Minor to moderate, long-term beneficial impacts from INRMP projects improving natural resources and recreational areas. Minor, short-term adverse impacts from archaeological resources protection strategies outlined in the ICRMP.
Safety	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from individuals conducting natural resources management activities and recreationists being exposed to health and safety risks. Minor, long-term, beneficial impacts from safety boundary mapping, solar panel installation, safety training, and the Wildlife Aircraft Strike Hazard Plan. Negligible, short-term adverse impacts from workers conducting ICRMP projects being exposed to health and safety risks.

CUMULATIVE IMPACTS

This section discusses the potential for cumulative impacts caused by implementation of the alternatives under consideration in this EA when combined with other past, present, and reasonably foreseeable actions occurring in the project area (FWVA) or greater region of influence. Seven future projects were identified as Army actions occurring on FWVA. The implementation of the Preferred Alternative and the No Action Alternative would not result in significant cumulative impacts to resources.

CONCLUSION

Based on the analysis contained herein, this EA concludes that neither the implementation of the Preferred Alternative (Proposed Action) nor the No Action Alternative will constitute a major federal action with significant impact to human health or the environment. It is recommended that a FNSI be signed to complete the process of analysis under NEPA.

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ACRONYMS AND ABBREVIATIONS

ACUB	Army Compatible Use Buffer
AR	Army Regulation
AW	American Water O&M, Inc.
BMP	Best Management Practice
CAA	Clean Air Act
CEMML	Center for Environmental Management of Military Lands
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon dioxide equivalent
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
CZM	Coastal Zone Management
DA	Department of the Army
dB	Decibel(s)
dBA	A-weighted decibel(s)
DoD	Department of Defense
DoDI	Department of Defense Instruction
DoD PIF	Department of Defense Partners in Flight
DPW-ENRD	Directorate of Public Works, Environmental and Natural Resources Department
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
°F	Degrees Fahrenheit

FAPH	Fort A.P. Hill
FNSI	Finding of No Significant Impact
FWVA	Fort Walker, Virginia
GHG	Greenhouse Gase(s)
ICRMP	Integrated Cultural Resources Management Plan
IWFMP	Integrated Wildland Fire Management Plan
INRMP	Integrated Natural Resources Management Plan
IPMP	Integrated Pest Management Plan
ITAM	Integrated Training Area Management
lbs	Pounds
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NH_3	Ammonia
NHPA	National Historic Preservation Act
NO_2	Nitrogen dioxide
NOA	Notice of Availability
NO_x	Nitrogen oxides
NRCS	Natural Resources Conservation Service
NRSA	Natural Resources Site Assessment
O_3	Ozone
Pb	Lead
$PM_{2.5}$	Very Fine Particulate Matter
PM_{10}	Fine Particulate Matter
RCRA	Resource Conservation and Recovery Act
REC	Record of Environmental Consideration
ROI	Region of influence
RPA	Resource Protection Area
RPMP	Real Property Master Plan
SHPO	State Historic Preservation Officer

SO_2	Sulfur Dioxide
U.S.	United States
USACE	United States Army Corps of Engineers
U.S.C.	United States Code
USFWS	United States Fish and Wildlife Service
UXO	Unexploded Ordnance
VA	Virginia
VDEQ	Virginia Department of Environmental Quality
VDF	Virginia Department of Forestry
VDWR	Virginia Department of Wildlife Resources
VOCs	Volatile organic compounds
VPA	Virginia Pollution Abatement
VPDES	Virginia Pollution Discharge Elimination System
WMP	Watershed Management Plan
WWTP	Wastewater Treatment Plant

1.0 PURPOSE AND NEED FOR THE ACTION

1.1 INTRODUCTION AND SCOPE OF THE DOCUMENT

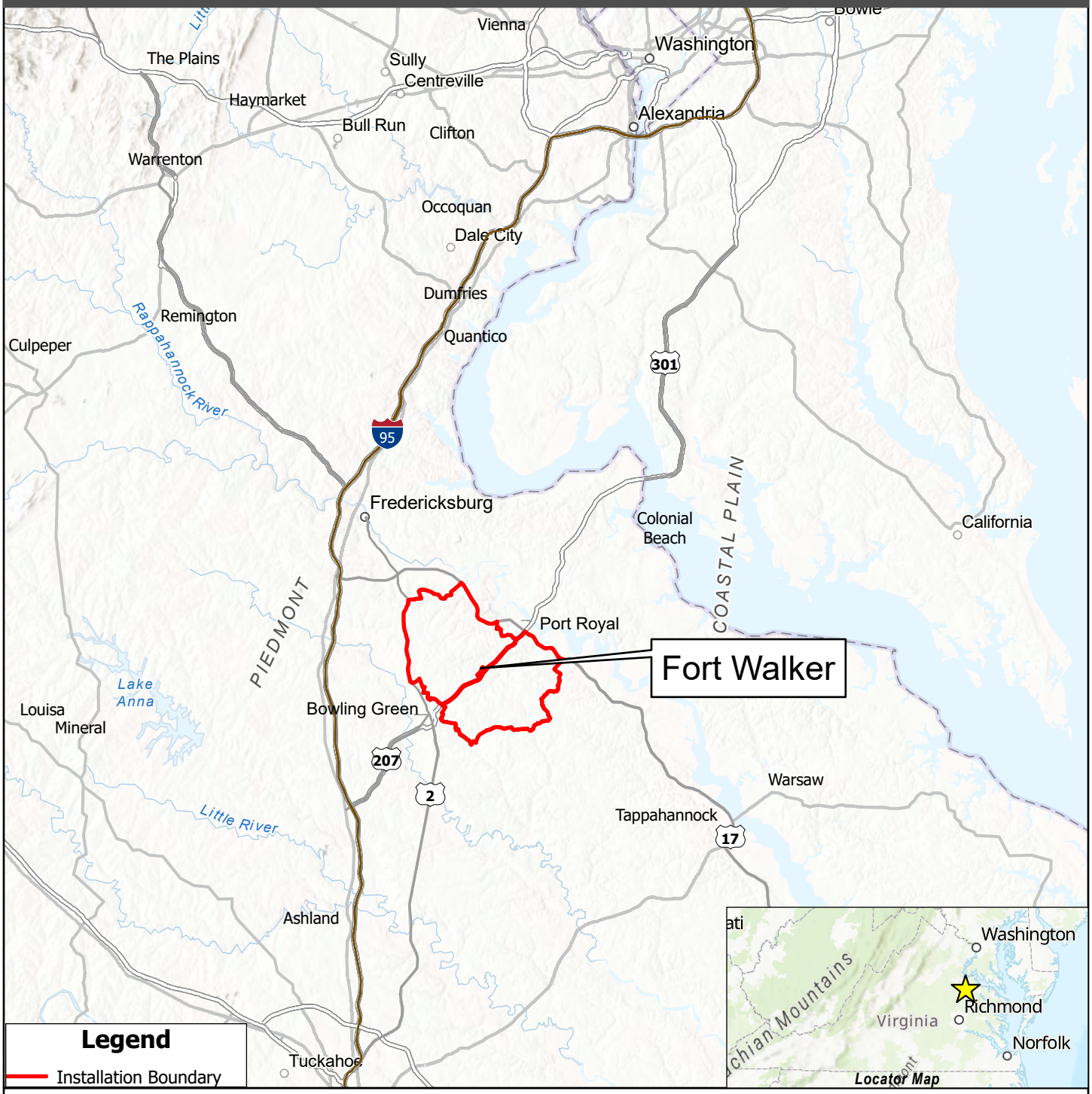
United States (U.S.) Army Garrison Fort Walker (FWVA) is a military installation encompassing approximately 76,000 acres of land between the towns of Bowling Green and Port Royal, Caroline County, Virginia (Figure 1-1). The installation is approximately 70 miles south of Washington D.C. and approximately 35 miles north of the state capital, Richmond, Virginia. U.S. Route 301 bisects the installation and provides the main thoroughfare between Bowling Green and Port Royal.

FWVA, formerly known as Fort A.P. Hill until 2023, was established as an Army training facility in 1941. The installation's mission, as a Regional Training Center, is to provide realistic joint and combined arms training in support of America's Defense Forces. FWVA serves as a training and maneuver center for active and reserve troops of the Army, Navy, Air Force, and Marines. Several government agencies such as the Departments of State and Interior; U.S. Customs; and federal, state, and local law enforcement and security agencies also train at FWVA. The installation has also hosted foreign ally training. FWVA is the largest military installation in Virginia and 6th largest military installation on the east coast and is used for training year-round (Vernadaro Group, Incorporated 2016).

The National Environmental Policy Act (NEPA) requires all federal agencies to appropriately consider potential environmental effects of proposed major actions in planning and decision making, as further explained in Section 1.3.3. In accordance with NEPA, FWVA is completing this Environmental Assessment (EA) to evaluate the potential environmental impacts of implementing the installation's 2024–2029 Integrated Natural Resources Management Plan (INRMP) and 2023–2028 Integrated Cultural Resources Management Plan (ICRMP). The INRMP and ICRMP evaluated in this EA replace FWVA's previous versions of the documents.

The INRMP and ICRMP were developed to guide management of the installation's natural and cultural resources, consistent with the installation's commitment to sustaining and conserving these resources, while ensuring the installation's continued ability to support its military mission**.**

Figure 1-1. Location of Fort Walker.



U.S. ARMY

Cooperative Agreement Number:
W9126G-22-2-0039

Map created for presentation purposes only. Although efforts have been made to verify data, accuracy cannot be guaranteed

Fort Walker, VA

Location Overview

Scale: 1:800,000

Coordinate System: NAD 1983 UTM Zone 18N

0 5 10

Miles

N

Prepared By:
Luke Worsham,
CSU-CEMML GIS Specialist

Last Save Date: 3/7/2024

Center for Environmental Management
MILITARY LANDS

CONTROLLED BY CENTER FOR ENVIRONMENTAL MANAGEMENT OF MILITARY LANDS & UNITED STATES ARMY

1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION

The Army strategy for the environment is designed to strengthen the Army today and into the future by establishing a long-range vision for a sustainable Army and the goals upon which the Army's vision is based. This strategy transitions the Army's compliance-based environmental program to a mission-oriented approach based on the principles of sustainability. A sustainable Army simultaneously meets current and future mission requirements worldwide, safeguards human health, improves quality of life, and enhances the natural environment (Department of the Army [DA] 2004). Multiple laws, regulations, Executive Orders (EOs), and presidential goals define environmental management requirements that the Army must meet.

The following sections describe the regulatory drivers behind the Army's natural and cultural resources management responsibilities.

1.2.1 PURPOSE

FWVA is responsible for the stewardship of the natural and cultural resources within the installation's boundaries. Federal and Army regulations mandate the development and implementation of INRMPs and ICRMPs. The INRMP and ICRMP are designed to provide FWVA staff with procedures and guidance to facilitate integration of natural and cultural resources management responsibilities into the installation's broader military mission.

1.2.1.1 INRMP

Preparation and implementation of the INRMP is required by the Sikes Act (16 United States Code [U.S.C.] § 670(a) et seq.), as amended; Department of Defense Instruction (DoDI) 4715.03, *Natural Resources Conservation Program*; and Army Regulation (AR) 200-1, *Environmental Protection and Enhancement*. Additionally, the INRMP must be consistent with various guidance memoranda and policies issued by the Department of Defense (DoD), including the *INRMP Implementation Manual* dated 31 August 2018 and all supporting guidance incorporated therein.

The purpose of implementing the INRMP is to outline conservation and management efforts for FWVA natural resources, including threatened and endangered species, and to aid in ensuring compliance with applicable laws and regulations. The INRMP addresses integration with existing Army and other federal management program initiatives, including the Sustainable Range Program and its Integrated Training Area Management (ITAM) component, and the Army Compatible Use Buffer (ACUB) Program. It provides a summary of the installation's history and current and future mission, identifies baseline conditions and current and future management activities, integrates management strategies with other installation processes and activities across a variety of program areas, describes roles and responsibilities of responsible and interested parties, and identifies staffing and funding requirements necessary to implement the projects identified and scheduled within the INRMP.

1.2.1.2 ICRMP

Preparation and implementation of the ICRMP is required by AR 200-1 and DoDI 4715.16, *Cultural Resources Management*. These regulations and instructions incorporate many resource-specific regulations, laws, and policies that pertain to cultural resources management, including the National Historic Preservation Act (NHPA) of 1966 (as amended and recodified at 54 U.S.C. §§ 300101-307108), which is of particular significance as it establishes stewardship

responsibilities of federal agencies for historic properties owned or controlled by the federal government.

The purpose of implementing the ICRMP is to provide FWVA with an internal compliance and management plan and provide information, guidance, and standard operating procedures to maintain FWVA's compliance with applicable cultural resources laws, regulations, and guidance issued by the federal government, the Commonwealth of Virginia, and the Army. The ICRMP allows FWVA staff to incorporate cultural resources management responsibilities into the installation's broader military mission. It provides a summary of the installation's mission and history, provides cultural resources context for the installation, provides inventory and evaluation of known archaeological and architectural resources on the installation, identifies future undertakings and the process for inventorying unsurveyed portions of the installation, and identifies standard operating procedures for internal installation coordination and external consultation for actions that may affect cultural resources.

1.2.2 NEED

The need for the proposed action is to ensure natural and cultural resources management compliance while achieving military training goals through implementation of the projects outlined in the INRMP and ICRMP. Implementation of these management actions would provide soldiers with updated facilities and realistic training areas, which are needed to ensure attainment and maintenance of a full readiness posture, and to meet Army mission essential requirements. Without proper management, natural and cultural resources may be negatively affected, which could subsequently impact the installation's military training mission.

1.3 SCOPE OF THE DOCUMENT

This EA analyzes the potential direct, indirect, and cumulative effects of implementing projects proposed in the INRMP and ICRMP at the installation-wide level. The EA describes the affected environment and evaluates potential impacts associated with the proposed action and the No Action Alternative (see Section 2.0 and Section 3.0).

1.3.1 ISSUES AND CONCERNS CONSIDERED

During the scoping process, the following issues and concerns were identified as requiring assessment when considering the potential environmental impacts of implementing the INRMP and ICRMP:

- Soils
- Floodplains
- Water Resources
- Air Quality
- Noise
- Cultural Resources
- Hazardous Materials
- Aesthetic Resources
- Vegetation
- Fish and Wildlife

- Threatened and Endangered Species
- Wetlands
- Transportation
- Economics
- Safety

1.3.2 Issues and Concerns Discussed but Not Considered Relevant for Further Analysis

In accordance with the Council on Environmental Quality (CEQ) guidance, FWVA initially considered a broad range of potential resource impacts associated with implementing the projects within the INRMP and ICRMP. After initial consideration, several resources were determined to be not applicable to the proposed projects. These resources, discussed below, were not carried forward for detailed analyses because potential effects to them were anticipated to be non-existent, negligible, and/or unsuitable for meaningful analysis. These resources are not addressed in Section 4.0.

1.3.2.1 Topography and Geology

None of the proposed project activities are expected to affect topography or geology at FWVA and would not result in meaningful or significant impacts. No landscape alterations or sub-surface activities (e.g., drilling) are included in the proposed INRMP or ICRMP projects.

1.3.2.2 Groundwater

None of the proposed project activities are expected to affect groundwater at FWVA and would not result in meaningful or significant impacts. Proposed project activities will not result in an increase in groundwater withdrawal at FWVA. None of the proposed natural resources management projects will substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

1.3.2.3 Land Use

None of the proposed project activities are expected to affect land use at FWVA and would not result in meaningful or significant impacts. Proposed project activities will not alter any existing land use or land status.

1.3.2.4 Utilities and Energy Conservation

None of the proposed project activities are expected to affect utilities and energy conservation at FWVA and would not result in meaningful or significant impacts. Some proposed project activities involve the use of installation utilities; however, the use would not be expected to differ from current use of utilities or energy. These projects would not meaningfully or significantly impact or alter existing utilities on FWVA.

1.3.2.5 Environmental Justice

None of the proposed project activities are expected to affect the population or environmental justice on FWVA or the surrounding region and would not result in meaningful or significant

impacts. FWVA is not in an area that has a disproportionately high concentration of minority or low-income populations.

1.3.3 Regulatory Framework

Congress enacted NEPA in 1969 with accompanying regulations requiring federal agencies to consider potential impacts before taking actions that may impact the environment. The process is designed to provide the decision maker with an overview of the major environmental resources that may be affected, the interrelationship of these resources, and potential impacts to the human environment. The NEPA process is not intended to fulfill the specific requirements of other environmental statutes and regulations. The NEPA process accomplishes the following:

- Helps to identify potential alternatives to the proposed action
- Integrates other environmental processes
- Summarizes technical information
- Documents impact analyses and decisions
- Interprets technical information for the decision maker and the public
- Assists the decision maker in selecting a preferred action

NEPA is incorporated into the early stages of the decision-making process to ensure that planning and decisions consider environmental values. The NEPA process enables the Army and stakeholders to gain a better appreciation of each other's needs and fosters a decision-making process that helps avoid unexpected confrontations in the future. In addition, NEPA compliance provides for ongoing evaluation of environmental effects for actions that will continue over time.

The CEQ, established by NEPA, coordinates federal environmental efforts and works closely with other White House offices in the development of environmental policies and initiatives. In 2012, the CEQ issued what is commonly referred to as the NEPA Efficiency Guidance. This guidance encourages federal agencies to provide the best use of agency resources in ensuring a timely, effective, and efficient NEPA review by creating concise documents, conducting early scoping, incorporating NEPA into the project planning process, and taking advantage of existing documents and studies through adoption, incorporation by reference, or tiering from programmatic documents. In 2023, the CEQ issued guidance to assist agencies in analyzing greenhouse gas (GHG) and climate change effects of their proposed actions under NEPA (CEQ 2023). As such, this EA incorporates by reference the draft INRMP, final ICRMP, and the EAs that were prepared for implementation of the installation’s previous INRMP and ICRMP.

In addition to NEPA, this EA has been prepared in compliance with two Army regulations that provide guidance for environmental analyses:

- 32 Code of Federal Regulations (CFR) § 651, *Environmental Analysis of Army Actions*, dated 29 March 2002 and
- AR 200-1, *Environmental Protection and Enhancement,* dated December 2007.

The Army is aware of the 12 November 2024 decision in Marin Audubon Society v. Federal Aviation Administration, No. 23-1067 (D.C. Cir. Nov. 12, 2024). To the extent that a court may conclude that the CEQ regulations implementing NEPA are not judicially enforceable or binding

on this agency action, the Army has nonetheless elected to follow those regulations at 40 CFR §§ 1500–1508, in addition to the Army's procedures/regulations implementing NEPA at 32 CFR § 651, to meet the agency's obligations under NEPA, 42 U.S.C. §§ 4321 et seq.

1.4 INTERAGENCY COORDINATION AND PUBLIC COMMENT PERIOD

Relevant federal and state agencies, local municipalities, and other stakeholders will be sent a correspondence package to notify them about this EA. These agencies include: Caroline County, Caroline County Historic Society, Chief, 9-1-1 and Geospatial Services Bureau Instrumentation and Methodologies Branch, Commonwealth of Virginia Chief, Essex County, King George County, Middle Peninsula Planning District Commission, Military Relations Liaison Office of Secretary Veterans and Defense Affairs, National Geodetic Survey Instrumentation & Methodologies Branch, Pamunkey Indian Tribe, Spotsylvania County, The George Washington Regional Commission, The Rappahannock Tribe, Town of Bowling Green, Town of Port Royal, Upper Mattaponi Tribe, U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), Virginia Department of Agriculture and Consumer Services, Virginia Department of Conservation and Recreation, Virginia Department of Environmental Quality (VDEQ), Virginia Department of Forestry (VDF), Virginia Department of Health, Virginia Department of Historic Resources, Virginia Department of Wildlife Resources (VDWR), and Virginia Marine Resources Commission

FWVA will formally consult with federally recognized tribes with cultural affiliations and interests in FWVA lands in accordance with (1) DoDI 4710.02, *DoD Interactions with Federally Recognized Tribes*; (2) Army Policy Memorandum dated 24 October 2012, *American Indian and Alaska Native Policy*; and (3) Army Policy Guidance dated June 2014, *Tribal Consultation*. These tribes will be invited to participate in the EA process as sovereign nations per EO 13175, *Consultation and Coordination with Indian Tribal Governments*. Tribal consultation will be initiated in conjunction with federal and state correspondence.

A Notice of Availability (NOA) of the Draft EA will be published in the newspapers of record (listed below). The NOA will announce the availability of the EA for review and invited the public to provide comments. The publication of the NOA will initiate the 30-day public review period. The Draft EA will be made available at local libraries and posted on the FWVA website (listed below). The NOA and comments received will be included in Appendix A of the Final EA.

Copies of the Draft EA will be made available for review at the following locations and websites:

- Caroline County Public Library, Bowling Green Branch, 17202 Richmond Turnpike, Milford, VA 22514
- Caroline County Public Library, Port Royal Branch, 419 King Street, Port Royal, VA 22535
- FWVA website at https://home.army.mil/walker/my-fort/all-services/environmental/national-environmental-policy-act

2.0 PROPOSED ACTION

2.1 DESIGN MITIGATION

Consistent with CEQ's Regulations for Implementing the Procedural Provisions of the NEPA (40 CFR §§ 1500-1508), the Army's NEPA regulations place significant emphasis on the planning and implementation of mitigation measures to avoid or minimize environmental harm throughout the environmental analysis process. Consistent with 32 CFR § 651.15, the Army first seeks to avoid impacts altogether by eliminating the action or parts of the action. When impacts cannot be avoided, the Army minimizes impacts by limiting the degree or magnitude of the action; rectifying the impact by repairing, rehabilitating, or restoring the adverse effect on the environment; reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and compensating for the impact by replacing or providing substitute resources or environments.

When the planning proceeds to an EA or EIS level of analysis, Army regulations require that practicable mitigation measures that can be reasonably accomplished as part of the proposed action be identified and assessed. Those selected for implementation are then identified in the Finding of No Significant Impact (FNSI) or Record of Decision. Regulations also require that the proponent ensure funding and implementation of the identified mitigations during the action because they are commitments made as part of the Army decision during the NEPA process.

2.2 BEST MANAGEMENT PRACTICES

Some minor impacts to the natural and human environment may occur during implementation of cultural and natural resources management actions under the No Action Alternative and the Preferred Alternative (Proposed Action) of this EA; however, these impacts would not be meaningful. To further reduce the potential for impacts, FWVA has developed a list of best management practices (BMPs) that are relevant to the cultural and natural resources management projects described in this EA (Table 2-1).

Individual projects initiated under this EA will undergo environmental analysis through Army review processes. The project-level analysis will include an assessment of all potentially impacted resources and reimplementation of agency, stakeholder, public, and Tribal consultation, as required. Army decisions will be documented in a Record of Environmental Consideration (REC). During that process, BMPs appropriate to the action associated with the project will also be identified. The BMPs will be implemented during project execution.

Table 2-1. Best Management Practices (BMPs).

Section	Resource	Best Management Practice (BMPs)
1	Soils	• Erosion and Sediment Control Plan and Stormwater Management Plan would be used for land disturbance greater than 2,500 square feet and less than 1 acre. • Site-specific Stormwater Pollution Prevention Plan and Virginia Stormwater Management Program permit would be used for land disturbance of more than 1 acre. • Appropriate BMPs from the VDF BMP Handbook would be selected and implemented for land disturbance less than 2,500 square feet.
2	Floodplains / Water Resources / Wetlands	• Resource Protection Areas would be established around wetlands, perennial and intermittent streams, and waterbodies, and 100-feet from the boundary of these resources. • Natural Resources Site Assessment review would be conducted prior to prescribed burn activities to ensure conservation of protected resources. • All activities occurring with the potential to impact water resources and floodplains would be assessed in the installation's Watershed Management Plan. • Compliance with Coastal Zone Management Act (16 U.S.C. § 1451 et seq.) would be ensured. • Appropriate U.S. Army Corps of Engineers permit would be obtained when applicable. • Compliance with EO 11988 to avoid impacts to floodplains to the greatest extent possible would be ensured. • All applicable VDF BMPs for water quality would be adhered to.
3	Air Quality	• Applicable BMPs in FWVA's Integrated Wildland Fire Management Plan would be used to minimize air quality impacts from prescribed burns. • Prescribed burns would be prohibited on high ozone days. • Integrated Pest Management Plan would outline BMPs for use of herbicides and pesticides to reduce air quality impacts. • Installation would ensure that it maintains attainment status for National Ambient Air Quality Standards criteria pollutants.
4	Noise	• Work would be conducted during daylight hours. • Buffers would be instituted around sensitive wildlife areas (e.g., nests, roost trees) to limit noise disturbance.

Table 2-1. Best Management Practices (BMPs).

Section	Resource	Best Management Practice (BMPs)
		• Projects would follow FWVA's Operational Noise Management Plan.
5	Cultural Resources	• Buffers would be maintained around all known cultural resources sites to avoid and minimize disturbance. • Projects would be evaluated for impacts prior to project start. • Coordination with State Historic Preservation Officer/tribal agency would be conducted as needed.
6	Hazardous Materials	• Operations would abide by regulations of Resource Conservation and Recovery Act as large quantity generator. • Resource Conservation and Recovery Act-permitted contractors would be used for transport and disposal of hazardous waste. • Management of hazardous materials would be guided by Installation Hazardous Materials Management/Waste Minimization Plan. • Installation Hazardous Substance Management database would be maintained to track all hazardous materials. • Spill Contingency Plan would be in place in the event of a spill.
7	Aesthetic Resources	• Development on the installation would be guided by Real Property Master Plan and Installation Design Guide to ensure compatibility with existing aesthetic resources.
8	Vegetation	• Pesticide and herbicide application would be conducted in accordance with the Integrated Pest Management Plan. • Spill Contingency Plan would be in place in the event of a spill. • Training would be provided to FWVA personnel and general public to prevent violations. • Natural Resources Site Assessment review would be conducted prior to prescribed burn activities to ensure conservation of protected resources. • Timber harvest areas would be replanted. • Integrated Wildland Fire Management Plan would be adhered to.

Table 2-1. Best Management Practices (BMPs).

Section	Resource	Best Management Practice (BMPs)
9	Fish and Wildlife	• Pesticide and herbicide application would be conducted in accordance with Integrated Pest Management Plan. • Spill Contingency Plan would be in place in the event of a spill. • Natural resources management activities would be preferentially performed during nonbreeding season for bird species. • Directorate of Public Works, Environmental and Natural Resources Department would manage all hunting, fishing, and trapping activities on Fort Walker Virginia. • FWVA Directorate of Emergency Services would support and ensure compliance with FWVA and Virginia Department Wildlife Resources regulations. • The majority of prescribed burns would be conducted during winter months when wildlife is less likely to be affected. • For eagles and eagle nests, guidance within National Bald Eagle Management Guidelines would be adhered to (U.S. Fish and Wildlife Services 2007).
10	Threatened and Endangered Species	Endangered Species Act (ESA)-Listed Species/General Measures • Permanent facility construction would be prohibited within buffers around Endangered Species Act-protected/listed species. • When replacing culverts or low-water crossings where swamp pink (*Helonias bullata*) is located upstream or downstream, impoundments would be drained slowly, and natural stream conditions would be re-established. • American beavers (*Castor canadensis*) would be managed to avoid hydrologic alteration and maintain natural stream conditions. • Daily on-site coordination by FWVA Erosion and Sediment Control Inspector and Natural Resource Specialist would be conducted to ensure compliance with Biological Assessment. • Construction project managers and equipment operators would be required to complete the Virginia Department of Conservation and Recreation's Responsible Land Disturber Certificate of Competence Program. • Timber harvest and thinning operations would be reviewed for impacts to Endangered Species Act-listed plants.

Table 2-1. Best Management Practices (BMPs).

Section	Resource	Best Management Practice (BMPs)
		• Commercial timber harvesting and thinning operations would be prohibited within Endangered Species Act -listed plant buffers. • Cut limbs, debris, competing under-/mid-story vegetation, and canopy trees near Endangered Species Act -listed plants would be managed. • Collection of plant materials from Endangered Species Act -listed species would be limited or prohibited. • RPAs and buffer zones around special status species habitat would be maintained. • Maps and signage would denote locations of Endangered Species Act-listed species and where disturbance is prohibited. Bats • Spatial buffers would be maintained around bat roost trees for new construction. • Temporal and spatial restrictions would be placed for tree harvest of bat roost trees. • Dark skies technology for all exterior building lighting for new construction would be implemented. • Glue traps would be prohibited in buildings with known history of bat habitation. • White-nose syndrome decontamination procedures would be used for handling bats. • Lethal control of bats would be prohibited. • Physical deterrence would be implemented to preclude bats from entering buildings. • Qualified individuals would be required to remove bats roosting in buildings. • Bridge and culvert construction would occur only during inactive season for bats. • Acoustic surveys for bats would occur prior to timber harvest operations. • Snags would be retained within timber harvest blocks. • Artificial roosts would be established for Indiana bats (*Myotis sodalis*). • Temporal and spatial buffers would be implemented around Indiana bat roosting and foraging habitat for the use of smoke/obscurants used in military training. Swamp pink/small whorled pogonia • Swamp pink and small whorled pogonia (*Isotria medeoloides*) in proximity to culverts and low-water crossings would be designated as “off limits”. • Monitoring and adaptive management of swamp pink and small whorled pogonia colonies around prescribed burn operations and management treatments would be implemented.

Table 2-1. Best Management Practices (BMPs).

Section	Resource	Best Management Practice (BMPs)
		• Flagging or metal cages would be placed to protect swamp pink and small whorled pogonia from damage.
11	Transportation	• Installation traffic regulations and road maintenance would be implemented.
12	Economics	• A conservation plan would accompany all outlease agreements to ensure that biodiversity, soil, and water conservation are included in on-site practices in accordance with all applicable federal and state laws, regulations, and directives; the INRMP; and FWVA's Integrated Pest Management Plan.
13	Safety	• Careful planning, appropriate levels of worker training, and regular maintenance of vehicles and equipment would be implemented. • Applicable safety and occupational health regulations would be complied with. • Unexploded ordnance would be mapped, identified by signage, and inaccessible. • Certain installation areas would be restricted. • Spill Contingency Plan would be in place in the event of a spill.

2.3 PROPOSED ACTION

The proposed action analyzed in this EA is the implementation of the FWVA INRMP and ICRMP. These plans reflect FWVA's commitment to conserve, protect, and enhance the installation's natural and cultural resources in a manner that supports and enhances realistic military training. The primary objective of these plans is to provide proactive natural and cultural resources management tools that allow FWVA to achieve resource management goals, mission requirements, and compliance with environmental regulations and policies. Each plan has elements specific to the management of the resources it is designed to support.

2.3.1 INRMP

The FWVA Natural Resources Branch of the Environmental and Natural Resources Division (ENRD) conserves and protects biodiversity using an ecosystem management approach. Baseline surveys of the installation's resource types have been completed to characterize and assess their status. The goal of the Natural Resources Branch of the ENRD is to support the military mission by (1) providing sustainable and viable lands for training, (2) protecting natural resources by implementing ecosystem-based management, (3) ensuring FWVA lands and resources accommodate multiple uses, and (4) maintaining compliance with federal, state, and local laws and regulations.

The ecosystem-based management approach supports the FWVA military mission and involves setting management goals and objectives that are consistent with established conservation initiatives. All proposed actions on the installation are evaluated for potential impacts, and management activities are integrated to promote consideration of ecosystem integrity. Each section of the INRMP that describes the day-to-day and long-term operational perspectives of a specific functional/program area (e.g., Forest Management, Fish and Wildlife Management, Endangered Species Management) relevant to natural resources management on FWVA constitutes a Component [management] Plan. Each Component Plan is implemented to meet overall INRMP goals and objectives. Component Plans within the INRMP include but are not limited to: Forest Management Plan (2021), Integrated Pest Management Plan (IPMP [2020]), Non-Native Invasive Species Management Plan (2011), Integrated Wildland Fire Management Plan (IWFMP [2023]), Watershed Management Plan (WMP [2008]), ITAM, Real Property Master Plan (RPMP [2018]), and ACUB (2024).

A full description of each of these categories can be found in the 2024 INRMP, which is hereby incorporated by reference.

2.3.2 ICRMP

FWVA maintains a proactive program for the research, documentation, and preservation of cultural resources ranging from 19th-century home sites to evidence of activity dating back to 8,000 B.C. The goal of the ICRMP for FWVA is to integrate and coordinate the effective stewardship of cultural resources with the ongoing demands of military training, testing, and infrastructure operations and maintenance. The ICRMP provides cultural resources management information and procedures for project coordination, planning, and compliance to meet FWVA's requirements for operations and training. Integrating the ICRMP with other installation-wide planning documents such as the RPMP, Range Complex Master Plan, and INRMP will ensure compliance with cultural resources laws and regulations early in project development, reduce the potential for delays, and provide for the greatest possible protection

and preservation of cultural and historic resources. The ICRMP also provides the basis for a Programmatic Agreement with the Virginia Department of Historic Resources and its State Historic Preservation Officer (SHPO).

3.0 ALTERNATIVES CONSIDERED

3.1 ALTERNATIVES DEVELOPMENT

The Army's Preferred Alternative includes the full implementation of the proposed action as described in Section 2.0. This alternative would implement the INRMP and ICRMP; meet regulatory requirements; and provide information, guidance, and standard operating procedures to FWVA staff to ensure the successful management and protection of the installation's natural and cultural resources while meeting the military mission of FWVA. Standard BMPs (Table 2-1) would be applied to the projects as necessary.

3.2 SCREENING CRITERIA

The goals within the INRMP and ICRMP express a vision for a desired condition for the installation's natural and cultural resources and are the primary focal points for INRMP and ICRMP implementation. For an alternative to be considered viable, it must adhere to the major goals of the INRMP and ICRMP. All the projects discussed in this EA were developed for the INRMP and ICRMP; therefore, any of the alternatives may be selected to fulfill the proposed action.

3.3 NO ACTION ALTERNATIVE

The No Action Alternative is required under CEQ regulations for implementing NEPA and serves as a baseline to compare against the proposed action and alternatives. Under the No Action Alternative, FWVA would not implement the INRMP and ICRMP. Management activities currently being conducted under previous versions of these plans would continue, but the revised management strategies and mitigation included in the updated plans would not be implemented.

3.4 ALTERNATIVES CONSIDERED BUT DISMISSED FROM FURTHER ANALYSIS

In addition to the Preferred Alternative (Proposed Action) and No Action Alternative, an EA should identify any alternatives eliminated from detailed analysis during the planning process. Because implementation of the INRMP and ICRMP are regulatory requirements, FWVA only considered the Preferred Alternative and the No Action Alternative during the NEPA process. No other alternatives are analyzed in this EA.

Table 3-1. Summary of potential impacts to resources for each action alternative.

Resource	No Action Alternative	Preferred Alternative (Proposed Action)
Soils	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from soil disturbance during natural resources management activities, Integrated Training Area Management Program activities, and resource identification projects in the ICRMP. Moderate, short-term adverse impacts from timber harvesting, land clearing, stand improvement, and prescribed burns. Long-term, moderate beneficial impacts from agricultural outleasing and ITAM Program activities.
Floodplains	No significant impacts.	No significant impacts. Minor, short-term, adverse impacts from land and soil disturbance within floodplains from natural resources management activities, ITAM Program activities, and cultural resource identification projects. Minor to moderate, long-term beneficial impacts from culvert and low-water crossing maintenance, repair, and replacement. Moderate, short-term adverse impacts and moderate, long-term beneficial impacts from timber harvesting, site rehabilitation, stand improvement, and prescribed burns.
Water Resources	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from natural resources management activities, ITAM Program activities, and cultural resource identification projects. Minor to moderate, long-term beneficial impacts from invasive species removal, water quality monitoring, fish stocking, undesired aquatic species removal, and maintenance/repair of culverts and low-water crossings. Moderate, short-term adverse impacts and moderate, long-term beneficial impacts from timber harvesting, site rehabilitation, stand improvement, and prescribed burns.

Table 3-1. Summary of potential impacts to resources for each action alternative.

Resource	No Action Alternative	Preferred Alternative (Proposed Action)
Air Quality	No significant impacts.	No significant impacts. Minor, short-term adverse impacts to local air quality from natural resources management activities and cultural resource identification projects in the form of fugitive dust and exhaust generated from vehicles and chemical pesticide application. Moderate, short-term adverse impacts to post-wide and regional air quality from prescribed burns.
Noise	No significant impacts.	No significant impacts. Minor, short-term adverse impacts during natural resources management activities and cultural resource identification activities from regular use of vehicles and equipment and noise-generating equipment.
Cultural Resources	No significant impacts.	No significant impacts. Moderate, long-term beneficial impacts from identification and evaluation of cultural resources in ICRMP projects.
Hazardous Materials	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from natural resources management activities that use pesticides, gasoline, diesel fuel, other petroleum products, oils, and lubricant. Minor to moderate, long-term beneficial impacts from removal of underground storage tanks, water monitoring, and inspections.

Table 3-1. Summary of potential impacts to resources for each action alternative.

Resource	No Action Alternative	Preferred Alternative (Proposed Action)
Aesthetic Resources	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from natural resources management activities and ITAM Program activities. Moderate, long-term adverse impacts and from timber harvesting and prescribed burns. Moderate, long-term beneficial impacts from timber harvesting, prescribed burns, and ITAM Program activities. Minor to moderate, long-term beneficial impacts from natural resources management activities.
Vegetation	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from natural resources management activities, ITAM Program activities, and cultural resource identification activities. Moderate, short- and long-term adverse impacts from timber harvesting, site rehabilitation, stand improvement, and prescribed burns. Minor to moderate, long-term beneficial impacts from natural resources management activities including timber harvesting, site rehabilitation, stand improvement, and prescribed burns.
Fish and Wildlife	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from natural resources management activities, and hunting, fishing, and trapping programs. Moderate, short- and long-term adverse impacts from timber harvesting, site rehabilitation, stand improvement, and prescribed burns. Minor to moderate, long-term beneficial impacts from natural resources management activities, timber harvesting, site rehabilitation, stand improvement, and prescribed burns, and hunting, fishing, and trapping programs.

Table 3-1. Summary of potential impacts to resources for each action alternative.

Resource	No Action Alternative	Preferred Alternative (Proposed Action)
Threatened and Endangered Species	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from natural resources management activities and hunting, fishing, and trapping programs. Moderate, short- and long-term adverse impacts from timber harvesting, site rehabilitation, stand improvement, and prescribed burns. Minor to moderate, long-term beneficial impacts from natural resources management activities, timber harvesting, site rehabilitation, stand improvement, prescribed burns, and hunting, fishing, and trapping programs.
Wetlands	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from natural resources management activities. Moderate, short- and long-term adverse impacts from timber harvesting, site rehabilitation, stand improvement, and prescribed burns. Minor to moderate, long-term beneficial impacts from natural resources management activities.
Transportation	No significant impacts.	No significant impacts. Negligible, short-term adverse impacts from vehicle traffic during INRMP and ICRMP projects. Minor, short-term adverse impacts from prescribed burns, maintenance and replacement of culverts and low-water crossings, and cultural resource identification controls. Minor, long-term beneficial impacts from redirection and minimization of vehicle traffic on roads that traverse wet areas and improvement of roads associated with culverts and low-water crossings.

Table 3-1. Summary of potential impacts to resources for each action alternative.

Resource	No Action Alternative	Preferred Alternative (Proposed Action)
Economics	No significant impacts.	No significant impacts. Minor, short-term beneficial impacts from INRMP and ICRMP project personnel boosting the local economy. Minor, long-term beneficial impacts from recreational permit sales and forest product sales. Minor to moderate, long-term beneficial impacts from INRMP projects improving natural resources and recreational areas. Minor, short-term adverse impacts from archaeological resources protection strategies outlined in the ICRMP.
Safety	No significant impacts.	No significant impacts. Minor, short-term adverse impacts from individuals conducting natural resources management activities and recreationists being exposed to health and safety risks. Minor, long-term, beneficial impacts from safety boundary mapping, solar panel installation, safety training, and Wildlife Aircraft Strike Hazard Plan. Negligible, short-term adverse impacts from workers conducting ICRMP projects being exposed to health and safety risks.

4.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter describes the relevant resources at FWVA that may impact, or may be impacted by, any of the action alternatives when implemented. It also establishes the baseline against which the decision maker and the public can compare the effects of all action alternatives.

Any aspect of an alternative that would exceed the criteria described in Section 4.1 would be considered as a potentially "significant impact" as defined by CEQ. Resources identified as possibly affected include soils, floodplains, water resources, air quality, noise, cultural resources, hazardous materials, aesthetic resources, vegetation, fish and wildlife, threatened and endangered species, wetlands, transportation, economics, and safety. Impacts would be minimized through the implementation of appropriate BMPs (Table 2-1). All individual projects under the INRMP and ICRMP would undergo the REC process, and implementation would be consistent with AR 200-1 and FWVA's Environmental Handbook.

4.1 METHODOLOGY FOR ASSESSING IMPACTS

The CEQ regulations that implement NEPA (i.e., 40 CFR §§ 1500-1508) require assessment of impacts to the human environment, including natural and cultural resources. As required by NEPA, potential impacts (beneficial or adverse) are described in terms of type (direct, indirect, cumulative), context (site-specific, local, or regional), duration, and level of intensity (negligible, minor, moderate, or major). Both direct and indirect impacts also are described; however, they may not be identified specifically as direct or indirect. These terms are defined below.

Overall, the impact analyses and conclusions herein were based on review of existing literature and studies, information provided by on-site experts and other government agencies, and professional judgments.

4.1.1 EFFECT

Impacts or effects from the proposed action or alternatives are changes to the human environment from the proposed action or alternatives that are reasonably foreseeable.

- **Beneficial:** A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.
- **Adverse:** A change that moves the resource away from a desired condition or detracts from its appearance or condition. The definition does not imply a significant impact, nor does it include the regulatory connotations it carries in the permitting process.

4.1.2 TYPE

Impacts associated with an action may be direct, indirect, and/or cumulative.

- **Direct:** An impact that is caused by an action and occurs at the same time and place.
- **Indirect:** An impact that is caused by an action but is later in time or farther removed in distance, but still reasonably foreseeable.
- **Cumulative:** An impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions

regardless of what agency (federal or non-federal) or person undertakes such other actions.

4.1.3 CONTEXT

Context is the setting within which an impact associated with an action occurs and can be site-specific, local, post-wide, or regional.

- **Site-specific:** The impact would occur within the project site.
- **Local:** The impact would occur within the general vicinity of the project area.
- **Post-wide:** The impact would affect a greater range outside the project area but still within the boundary of FWVA (i.e., the post).
- **Regional:** The impact would affect localities around FWVA.

4.1.4 DURATION

Impacts can vary in duration, and the type of impact may be influenced by time.

- **Short-term:** Impacts would be temporary in duration and would be associated with the project implementation process. Depending on the resource, impacts would last as long as the project was taking place or up to 1 year after the project is completed.
- **Long-term:** Impacts last beyond the project implementation period, and the resources may need more than 1 year after completion of the project to resume their previous condition.

4.1.5 INTENSITY

The general level of intensity used to describe the impact from the actions within this NEPA analysis are described below.

- **Negligible:** Impacts would not be detectable and would not have an impact on the given resource.
- **Minor:** Impacts would be detectable but would be of a magnitude that would not have an appreciable impact on the given resource.
- **Moderate:** Impacts would be readily apparent and would result in substantial changes to the given resource.
- **Major:** The impacts would be readily apparent, would result in substantial changes to the given resource, and would result in markedly different conditions from existing conditions.

4.1.6 SIGNIFICANT IMPACTS

The significance of impacts within NEPA requires consideration of both context and intensity.

- **Context:** This means that the significance of an action must be analyzed in several contexts such as society (e.g., human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For

instance, in the case of a site-specific action, significance would usually depend on the effects in the locale rather than worldwide. Both short- and long-term effects are relevant.

- **Intensity:** This refers to the severity of impact. Responsible officials must bear in mind that more than 1 agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:
    - Impacts that may be both beneficial and adverse. A significant effect may exist even if the federal agency believes that, on balance, the effect will be beneficial.
    - The degree to which the proposed action affects public health or safety.
    - Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
    - The degree to which the effects on the quality of the human environment are likely to be highly controversial.
    - The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
    - The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
    - Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
    - The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
    - The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (ESA).
    - Whether the action threatens to be a violation of federal, state, or local law or requirements imposed for the protection of the environment.

4.2 PHYSICAL ENVIRONMENT

4.2.1 SOILS

4.2.1.1 AFFECTED ENVIRONMENT

The physical and chemical properties of soils are largely dependent on the geologic parent material and have a significant effect on watershed conditions, including vegetation density and composition, and watershed hydrology. The sediments that compose the Coastal Plain Physiographic Province were deposited in non-marine, marginal marine, and marine environments. Modern topography dictates classification of FWVA into 4 groups: upland soils, valley slope soils, floodplain soils, and Rappahannock River terrace soils. These can be further classified into 7 different types based on soil taxonomy (Natural Resources Conservation Service [NRCS] 2024; Table 4-1; Figure 4-1).

Soil survey data for FWVA identifies numerous soil series at FWVA. Most soils are categorized as upland soils. These soils are well drained, sandy soils that occur on gently rolling uplands with slopes ranging from 2% to 5%. The depth to groundwater within these soils is greater than 6 feet at high water. These soils have high permeability and low shrink-swell potential and are subject to severe erosion when cleared of vegetation unless runoff is controlled. Representative soil types at the installation include Slagle-Kempsville and Kempsville-Emporia complexes. Upland soils comprise about 80% of the area included in the installation. The remaining 3 soil groups at FWVA are valley slope soils, floodplain soils, and Rappahannock River terrace soils (NRCS 2024).

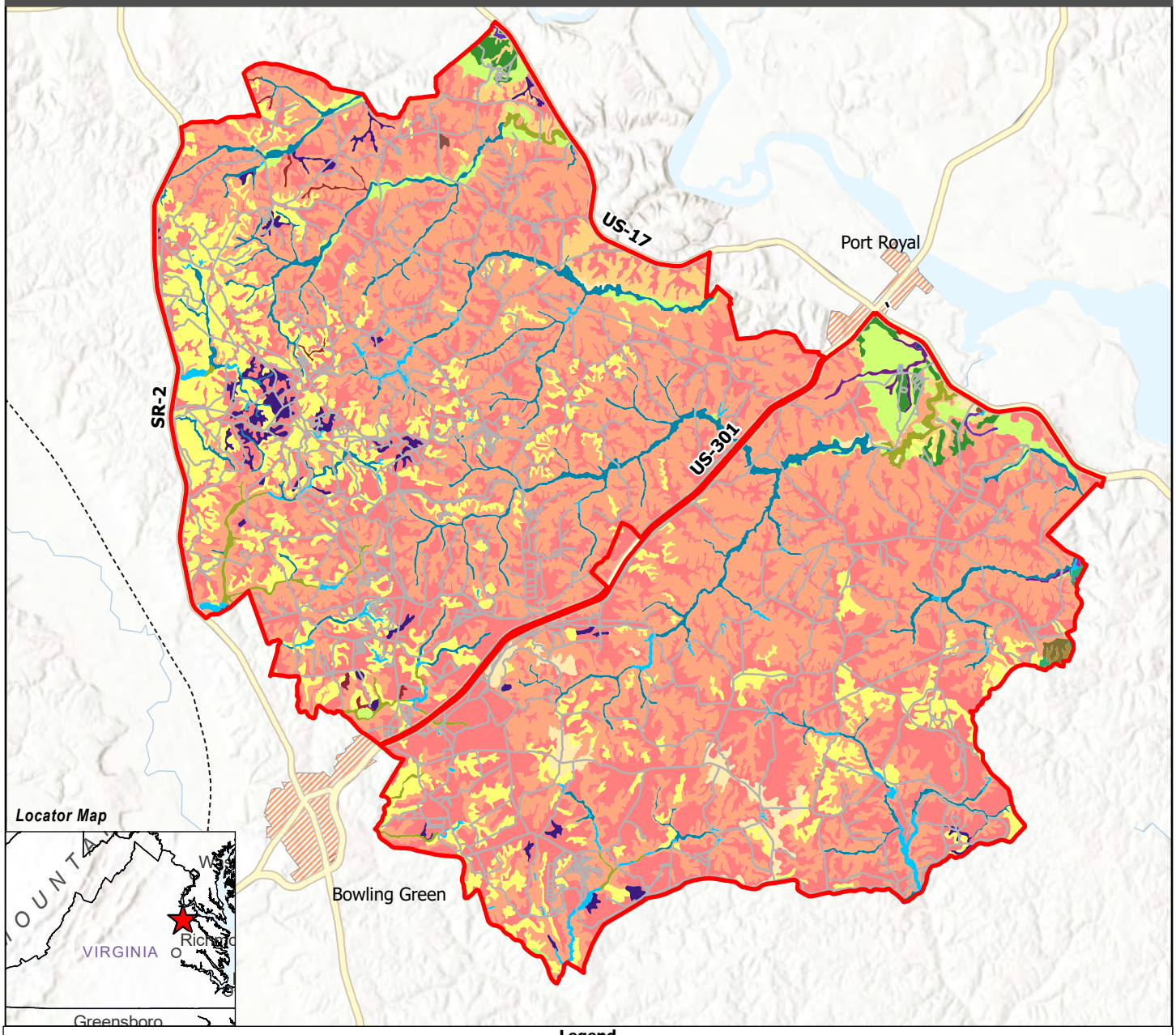
Table 4-1. Common soils of Fort Walker, Virginia (NRCS 2004).

Soil Map Unit	Name	Description	Area (acres)	Percent of FWVA
1B	Altavista sandy loam, 0–2% slopes, very rarely flooded	Very deep, nearly level, and moderately well drained. Sandy loam surface with sand or loam subsoil. Not highly erodible. Moderately well suited to crops, pasture, and hay.	1,187	1.6%
4A	Bibb-Chastain complex, 0–2% slopes, frequently flooded	Deep and poorly drained, nearly level broad upland flats and low depressions. Sandy loam surface with same, silty loam, or loamy sand subsoil. Hydric and non-highly erodible. Not suited for cultivated crops; moderately suited for pasture and hay.	2,491	3.3%
7A	Chastain loam, 0–2% slopes, ponded	Very deep, poorly drained, often ponded. Seasonal high water table surface to depth of 1 foot. Silty clay loam texture.	526	0.7%

Table 4-1. Common soils of Fort Walker, Virginia (NRCS 2004).

Soil Map Unit	Name	Description	Area (acres)	Percent of FWVA
10E	Kempsville-Emporia-Remlik complex, 15-50% slopes	Very deep, steeply sloping, and well drained. Surface layer of Emporia is loamy fine sand and fine sandy loam with a sandy clay loam or clay loam subsoil. Surface layer of a Rumford is loamy sand with a fine sandy loam subsoil. Very highly erodible. Not suited to cultivated crops and poorly suited to pasture and hay.	29,352	39.3%
11B	Kempsville-Emporia complex, 2-6% slopes	Very deep, gently sloping, and well drained. Surface layer is loam with a clay subsoil. Potentially highly erodible. Moderately well suited to crops, pasture, and hay, with limitations.	18,800	25.1%
11C	Kempsville-Emporia complex, 6-10% slopes	Well drained with a fine sandy loam surface layer. Subsoil is sandy clay. Highly erodible. Well suited for crops and pasture with severe limitations.	9,518	12.7%
21C	Slagle-Kempsville complex, 2-15% slopes	Very deep, sloping, and well drained. Surface layer is sandy loam with clay subsoil. Highly erodible.	8,377	11.2%

Figure 4-1. Soils at Fort Walker.



Legend

- Installation Boundary
- Secondary Roads
- Primary Highways
- Incorporated Towns

Soil Series

- Altavista fine sandy loam
- Bama sandy loam
- Bibb sandy loam
- Bibb-Chastain complex
- Bojac sandy loam
- Chastain silt loam
- Emporia sandy loam
- Kempsville-Emporia complex
- Kempsville-Emporia-Remlik complex
- Myatt-Slagle complex
- Nevarc sandy loam
- Pits
- Rumford and Emporia soils
- Rumford and Slagle soils
- Rumford loamy sand
- Slagle fine sandy loam
- Slagle-Kempsville complex
- State fine sandy loam
- Suffolk fine sandy loam
- Suffolk sandy loam
- Tomotley-Roanoke complex
- Water
- Wehadkee silt loam
- Wickham fine sandy loam

U.S. ARMY

Fort Walker, VA

Scale: 1:145,000

Coordinate System: NAD 1983 UTM Zone 18N

0 1 2 Miles

N

Prepared By:
Luke Worsham,
CSU-CEMML GIS Specialist

Last Save Date: 3/22/2024

Center for Environmental Management MILITARY LANDS

Cooperative Agreement Number:
W9126G-22-2-0039

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4.2.1.2 Environmental Consequences

Preferred Alternative (Proposed Action)
No significant impacts to soils are anticipated to occur as a result of implementing the proposed action. Potential impacts to soils would be associated with implementing activities associated with INRMP objectives and with resource identification projects proposed in the ICRMP. Impacts would be minimized through the implementation of BMPs listed in Section 1 of Table 2-1. More specifics on potential impacts to soils are described below.

Minor, short-term adverse impacts associated with soil disturbance would be expected during certain site-specific natural resources management activities. These activities include improvements to recreational areas (e.g., parking and boat ramp maintenance and trail and wildlife viewing platform construction), vegetation management, invasive species management, and removal of underground storage tanks.

Larger-scale projects, such as timber harvesting operations, land clearing, stand improvement, and prescribed burns, would be expected to have moderate, short-term adverse impacts to soils locally. Many of these activities would result in moderate, long-term benefits to soils because they help maintain ecosystem vitality and health.

Agricultural outleasing and vegetation management activities would be expected to result in minor, short-term adverse impacts and long-term, moderate beneficial impacts to soils and would be site-specific to each project area. These activities promote vegetative cover and reduce soil erosion, which can indirectly improve soil quality.

Activities associated with the ITAM Program, such as maintaining/restoring open maneuver space, would result in minor, short-term adverse impacts to soils that would be site-specific to each project. Long-term, these activities would have moderate beneficial impacts on soil conservation. The overall responsibility of the ITAM Program includes integrating mission requirements with environmental management practices.

Minor, short-term adverse impacts to soils would also result from resource identification projects proposed in the ICRMP. Ground-disturbing activities associated with archaeological surveys, such as excavation of burial sites, would be expected to be minor, short-term, and site-specific to each project.

No Action Alternative
The No Action Alternative would result in no significant impacts to soils. FWVA would continue to manage natural and cultural resources under the previous versions of the INRMP and ICRMP. Impacts would be minimized through the implementation of the REC process.

4.2.2 Floodplains

4.2.2.1 Affected Environment

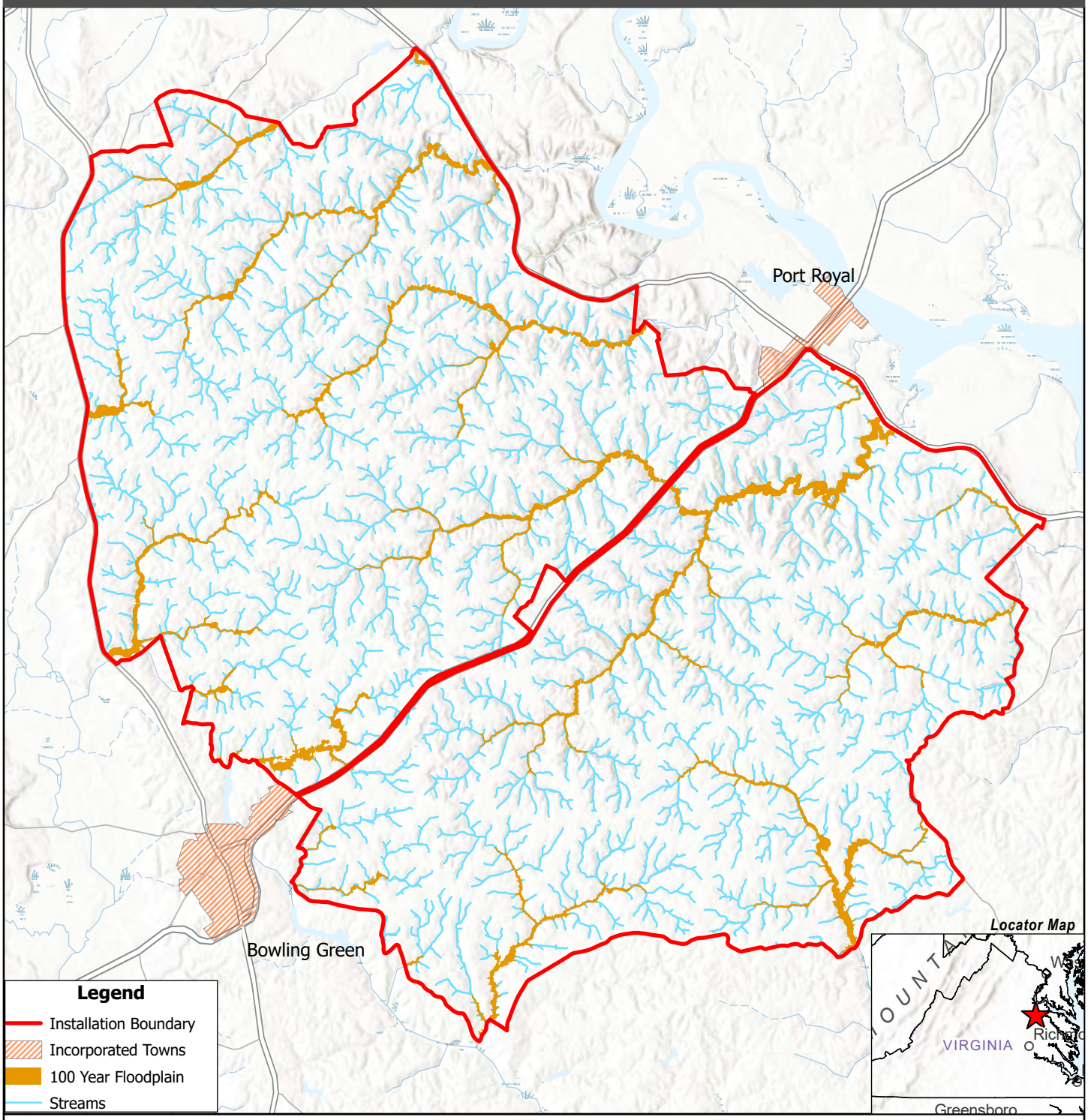
The designated frequency for floodplain identification used by the Federal Emergency Management Agency is the 100-year flood. The 100-year floodplain is an area that has a 1% chance of flooding every year. 100-year floodplains occur throughout FWVA and comprise approximately 2,848 acres. The floodplains generally follow narrow, linear waterway corridors (Figure 4-2).

EO 11988, *Floodplain Management*, requires federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. To accomplish this objective, “each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities” for the following actions:

- Acquiring, managing, and disposing of federal lands and facilities.
- Providing federally undertaken, financed, or assisted construction and improvements.
- Conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities.

All 100-year floodplains are subject to federal jurisdiction under the Clean Water Act (CWA), 33 U.S.C. §§ 1251–1387). FWVA designates a Floodplain/Wetland Point of Contact who assists in the completion of applications for Section 404 of the CWA permits for any projects that would occur in a 100-year floodplain.

Figure 4-2. Floodplains at Fort Walker.



U.S. ARMY

FORT WALKER

Cooperative Agreement Number:
W9126G-22-2-0039

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Fort Walker, VA

Scale: 1:130,000

Coordinate System: NAD 1983 UTM Zone 18N

0 1 2 Miles

N

Prepared By:
Luke Worsham,
CSU-CEMML GIS Specialist

Last Save Date: 3/22/2024

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4.2.2.2 Environmental Consequences

Preferred Alternative (Proposed Action)
The Preferred Alternative would not result in any significant impacts to floodplains on FWVA. No changes in floodplain volume or storage capacity are proposed as part of the proposed action. Potential impacts would be associated with implementing activities associated with INRMP objectives and with resource identification projects proposed in the ICRMP. Impacts would be minimized through the implementation of BMPs listed under Section 2 of Table 2-1. More specifics on potential floodplain impacts are described below.

Minor, short-term adverse impacts associated with floodplain disturbance would be expected during certain site-specific natural resources management activities. These activities include impoundment management (e.g., repair of water control structures), vegetation management (e.g., mechanical control of woody vegetation encroachment), invasive or nuisance species removal (e.g., removal of such plants from small whorled pogonia and spotted turtle habitat), and improvements to recreational areas (e.g., boat ramp maintenance).

Minor to moderate, long-term beneficial impacts to floodplains would be expected from activities including culvert and low-water crossing maintenance, repair, and replacement; river clean-ups; and invasive or nuisance species (e.g., American beaver [*Castor canadensis*]) removal.

Larger-scale projects, such as timber harvesting, site rehabilitation, stand improvement, and prescribed burns, would be expected to have moderate, short-term adverse impacts to floodplains. Many of these activities would result in moderate, long-term benefits to floodplains through the enhancement of forest health and structure.

Activities associated with the ITAM Program, such as maintaining/restoring line of sight, would result in minor, short-term adverse impacts to floodplains that would be site-specific to each project. Long-term, these activities would have moderate beneficial impacts on floodplains because they maintain ecosystem vitality and health.

Minor, short-term adverse impacts to floodplains would also result from resource identification projects proposed in the ICRMP. Ground-disturbing activities would be expected to be minor, short-term, and site-specific to each project. Floodplains at archaeological project sites are, to the greatest extent possible, returned to their pre-survey state at the conclusion of the survey.

No Action Alternative
The No Action Alternative would result in no significant impacts to floodplains. No change in floodplain volume or storage capacity is anticipated. FWVA would continue to manage natural and cultural resources under the previous versions of the INRMP and ICRMP. Impacts would be minimized through the implementation of the REC process.

4.2.3 Water Resources

4.2.3.1 Affected Environment

Surface Water
FWVA is located within the Chesapeake Bay watershed. The Chesapeake Bay watershed spans 6 states and covers more than 64,000 square miles. The northern two-thirds of FWVA are located within the Lower Rappahannock River watershed. The southern 1/3 is within the

Mattaponi River watershed. Both rivers ultimately drain into the Chesapeake Bay (Fort A.P. Hill [FAPH] 2021).

There are approximately 130 impoundments and ponds totaling approximately 800 acres at FWVA (Center for Environmental Management of Military Lands [CEMML] 2024*b*). The largest surface water features at FWVA include Travis Lake, Bowies Pond, Buzzards Roost Pond, Beaverdam Pond, Maple Pond, Delos Lake, Smoots Pond, and White's Lake. Water quality within the lakes and ponds is typical of shallow lakes and ponds within the Atlantic Coastal Plain. They exhibit slightly acidic, tannin-stained water with low buffering capacity (FAPH 2021).

Several watercourses are located on FWVA, totaling approximately 560 miles. The headwaters of the watercourses are formed by groundwater discharges, which commonly create wetland areas that are locally referred to as "seepage swamps" (FAPH 2021). Surface water features (i.e., watercourses and ponds) on FWVA are depicted below (Figure 4-3). Wetlands are discussed in Section 4.3.4.

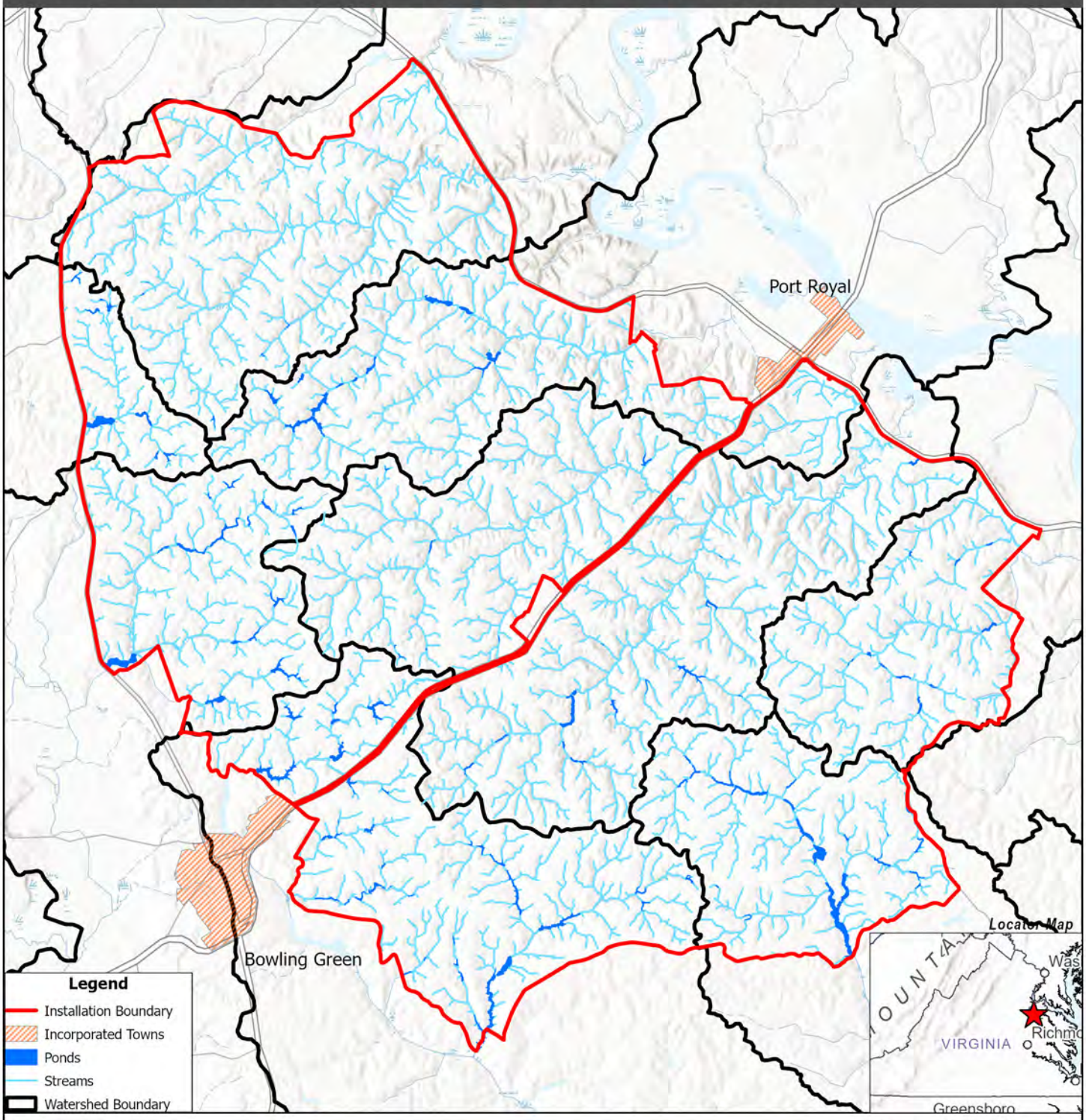
FWVA waters are used for both recreation and military training. FWVA manages 15 impoundments to provide a quality, sustainable recreational fishery while supporting military training utilization of the ponds. In accordance with FWVA fishing regulations, privately owned boats may be used for fishing on FWVA waters. The military uses its local and regional water resources for amphibious training, water purification training, recreation, and drinking water. Additionally, an approximately 25-acre river-front parcel in Caroline County known as "Hicks Landing" is leased from a private citizen in support of amphibious training operations (CEMML 2024*b*).

Coastal Zone

The Coastal Zone Management Act ([CZMA]; 16 U.S.C. § 1451 et seq.) provides for management of the nation's coastal resources and balances economic development with environmental conservation by preserving, protecting, developing, and where possible restoring or enhancing the nation's coastal zone. CZMA provisions facilitated the development of the federally approved Virginia Coastal Zone Management (CZM) Program in 1986. The Virginia CZM Program is administered and enforced by a network of Virginia state agencies (Virginia Department of Environmental Quality [VDEQ] 2024*a*).

Virginia's coastal zone encompasses 29% of the Commonwealth's land, including 29 counties, 17 cities, and 42 incorporated towns (VDEQ 2014). All of Caroline County, including FWVA, is within Virginia's coastal zone and is subject to Virginia CZM Program regulations. Per 15 CFR § 930, federal actions that affect a state's coastal resources or uses must be consistent with the enforceable policies of that state's approved CZM Program. A Coastal Zone Consistency Determination for the proposed action is therefore provided in Appendix B.

Figure 4-3. Surface Water and Watersheds of Fort Walker.



U.S. ARMY

Fort Walker, VA

N

Scale: 1:130,000

Coordinate System: NAD 1983 UTM Zone 18N

0 1 2 Miles

Prepared By:
Matthew Fountain,
CSU-CEMML GIS Specialist

Last Save Date: 7/23/2024

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Cooperative Agreement Number:
W9126G-22-2-0039

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Chesapeake Bay
DoD installations comprise approximately 400,000 acres, or 1% of the land area and 20% of the federal footprint, within the Chesapeake Bay Watershed. As one of the first federal departments to be involved in the Chesapeake Bay Watershed restoration effort, the DoD has invested significant resources to maintain its ability to conduct testing, training, and operations in the watershed (Chesapeake Bay Program 2022).

Two documents guide management of the DoD Chesapeake Bay Program. EO 13508, *Chesapeake Bay Protection and Restoration*, established a Federal Leadership Committee to "prepare and publish a strategy for coordinated implementation of existing programs and projects to guide efforts to protect and restore the Chesapeake Bay." The Chesapeake Executive Council signed the *Chesapeake Bay Watershed Agreement* that establishes adaptive management as the methodology to restore Chesapeake Bay and the surrounding natural environment.

The Chesapeake Bay Preservation Act (Bay Act) was enacted by the Virginia General Assembly in 1988 as a critical element of Virginia's nonpoint pollution source management program. The purpose of the Bay Act is to protect and improve water quality in the Chesapeake Bay by requiring the implementation of effective land use management practices. The Bay Act is one of the enforceable programs in Virginia's CZM Program and is administered by VDEQ (2024*b*).

In accordance with the Bay Act *Chesapeake Bay Preservation Area Designation and Management Regulations*, FWVA has established 100-foot-wide buffers around all intermittent and perennial streams as Resource Protection Areas (RPAs) that preclude or limit most forms of land disturbance. The construction of new facilities, roads, trails, and mechanically created firebreaks (i.e., plow lines) are prohibited within an RPA. The sole exception to the latter is in the event of wildfire suppression, which may require subsequent remediation. FWVA also applies land disturbance restrictions within an RPA to include forestry and other non-silvicultural vegetation management activities.

Exceptions to the RPA policy may be required to meet military mission objectives and shall be validated and documented by the proponent and approved by the Department of Public Works, Environmental and Natural Resources Division (DPW-ENRD) Chief. Examples of such exceptions may include, but are not limited to, establishing desired terrain conditions for military mission support, thinning of overstocked forest stands for forest health improvement, forest insect and disease control, site-specific habitat management practices, and ecological restoration. When an exception has been approved, a 50-foot "no disturbance" buffer shall be established around all wetlands, perennial streams, and intermittent streams to minimize any impacts from management actions unless that buffer conflicts with military mission requirements (e.g., line of sight).

4.2.3.2 Environmental Consequences

Preferred Alternative (Proposed Action)
The Preferred Alternative would not result in significant impacts to surface water, coastal zone, or Chesapeake Bay resources. Potential impacts to water resources would be associated with implementing activities associated with INRMP objectives and with resource identification projects proposed in the ICRMP. Impacts would be minimized through the implementation of

BMPs listed under Section 2 of Table 2-1. More specifics on potential water resource impacts are described below.

Minor, short-term adverse impacts to surface water would be expected during certain site-specific natural resources management activities. These activities include impoundment management (e.g., installation of habitat structures); threatened and endangered plant species habitat management (e.g., mid-story vegetation treatments, invasive species control); culvert and low-water crossing maintenance, repair, and replacement; and invasive or nuisance species removal (e.g., manual, chemical, mechanical, and biological control). These activities may result in temporary increases in water turbidity, increased erosion from vegetative cover loss, and potential leaching from pesticide application. These disturbances would be site-specific to each project and would not occur within RPAs, unless necessary for military mission requirements.

Minor to moderate, long-term beneficial impacts would result from certain site-specific activities. These include invasive species removal, water quality monitoring, fish stocking, undesired aquatic species removal, and projects involving culvert and low-water crossings.

Larger-scale projects, such as timber harvesting, site rehabilitation, stand improvement, and prescribed burns, would be expected to have moderate, short- and long-term adverse impacts to water resources. The IWFMP states a goal of 32,217 acres be burned annually, but the installation averages approximately 10,000 acres of annual burning (FWVA 2023*a*). These impacts would be site-specific and local to each project. Many of these activities would result in moderate, long-term benefits to water resources through the reduction of wildfire risk.

Activities associated with the ITAM Program, such as maintaining/restoring line of sight, would result in minor, short-term adverse impacts to water quality that would be site-specific to each project. Such projects are only conducted within RPAs when necessary for the military mission.

Minor, short-term adverse impacts to water quality from soil erosion and disturbance would also result from resource identification projects proposed in the ICRMP. Activities affecting water resources would be expected to be minor, short-term, and site-specific to each project. Soils at archaeological project sites are, to the greatest extent possible, returned to their pre-survey state at the conclusion of the survey.

No Action Alternative
The No Action Alternative would result in no significant impacts to water resources. FWVA would continue to manage natural and cultural resources under the previous versions of the INRMP and ICRMP. Impacts would be minimized through the implementation of the REC process.

4.2.4 Air Quality

4.2.4.1 Affected Environment

The Clean Air Act (CAA) (42 U.S.C §7401 et seq.) allows the U.S. Environmental Protection Agency (EPA) to set limits on certain air pollutants. The CAA requires that the EPA establish primary and secondary National Ambient Air Quality Standards (NAAQS) for pollutants that may be harmful to public health and the environment. Primary standards protect public health, including the health of sensitive populations, such as asthmatics, children, and the elderly; and secondary standards protect public welfare, including protections against decreased visibility and damage to animals, crops, vegetation, and buildings (EPA 2024*a*).

The NAAQS (40 CFR § 50) set acceptable threshold standards for 6 criteria pollutants consisting of carbon monoxide (CO); nitrogen oxides (NO_x), particularly nitrogen dioxide (NO_2); ozone (O_3); sulfur dioxide (SO_2); lead (Pb); and particulate matter, including very fine particulate matter ($PM_{2.5}$) and fine particulate matter (PM_{10}). Areas where criteria pollutants are below NAAQS are designated as attainment areas, and areas where criteria pollutants meet or exceed NAAQS are designated as nonattainment areas.

Caroline County, including all of FWVA, is within Northeast Virginia Air Quality Control Region 4, which is monitored by the VDEQ-maintained Virginia Northern Region Air Monitoring Network, consisting of 10 air monitoring stations across the northern region. The closest station to FWVA is in Corbin, Caroline County, just north of the installation, which exclusively monitors O_3. Caroline County is in attainment for all criteria pollutants (EPA 2024*b*). The CAA General Conformity Rule requires federal agencies to determine whether their action would increase emissions of criteria pollutants above preset threshold levels. These *de minimis* levels vary, depending on the severity of nonattainment status and geographic location. Since the air quality at FWVA and the surrounding area is compliant with federal standards and the installation is in a designated attainment area, a general conformity analysis is not required.

VDEQ regulates stationary air emissions within the Commonwealth of Virginia. Mobile sources, such as motor vehicles and aircraft, are regulated by the EPA; therefore, only stationary air emissions sources at FWVA are subject to VDEQ permitting. Existing stationary sources of air emissions at FWVA include boilers, generators, degreasers, and gasoline dispensers. The installation is considered a minor source of criteria pollutants and operates under VDEQ Synthetic Minor Permit No. 40306. Table 4-2 summarizes the 2022 FWVA emissions reported to the VDEQ, the most recent available for the installation (VDEQ 2022*a*). The VDEQ point source criteria pollutant emissions do not monitor O_3.

Table 4-2. Fort Walker Virginia 2022 annual point source criteria pollutant emissions (tons per year).

CO[1]	NO_X[2]	NH_3[3]	SO_2[4]	Pb[5]	$PM_{2.5}$[6]	PM_{10}[7]	VOCs[8]
1.000411	2.041928	0.000000	0.001121	0.0000022	0.089715	0.117156	2.067357

[1]CO= carbon monoxide; [2] NO_X=nitrogen oxides; [3] NH_3=Ammonia; [4] SO_2=sulfur dioxide; [5] Pb= lead; [6] $PM_{2.5}$= very fine particulate matter; [7] PM_{10}=fine particulate matter; [8]VOCs = volatile organic compounds

Climate Change and Greenhouse Gases

In 2009, the EPA published 40 CFR § 98, *Mandatory Reporting Rule*. This rule required reporting of well-mixed GHGs (carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) emissions from identified stationary sources that emit 25,000 metric tons of carbon dioxide equivalent (CO_2e) or more per year. In 2010, the EPA revised its regulation on emissions as 40 CFR §§ 51, 52, 70, 71, *Prevention of Significant Deterioration and Title V GHG Tailoring Rule*. This rule sets a major source emission threshold of either 75,000 or 100,000 tons per year of CO_2e, depending upon circumstances (EPA 2010).

In 2023, the CEQ published 88 CFR § 1196 et seq., *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change*. This guidance explains how agencies should apply NEPA principles and existing best practices to their climate change analyses.

Air quality and GHGs are managed in accordance with various federal and state regulations and requirements including:

- CAA (42 U.S.C. § 7401 et seq.)
- EO 13990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*
- EO 14008, *Tackling the Climate Crisis at Home and Abroad*
- DoD Directive 4715.21, *Climate Change Adaptation and Resilience*
- U.S. Army Climate Strategy (DA 2022)
- Army Directive 2020-08, *U.S. Army Installation Policy to Address Threats Caused by Changing Climate and Extreme Weather*
- 9 Virginia Administrative Code Ch. 30 § 10 et seq., *Ambient Air Quality Standards*
- 9 Virginia Administrative Code Ch. 145 § 100 et seq., *Regulations for Control of Greenhouse Gases*

In 2024, CEMML developed climate projections for 2 future carbon-emission scenarios, a moderate-emission scenario and a high-emission scenario, for 2 different decadal periods, 2020–2050 (near-term) and 2050–2080 (far-term), resulting in a total of 4 emission-timeframe scenarios. CEMML used tools and models to assess impacts of future climate on natural resources at FWVA. Climate projections for FWVA indicate that minimum temperatures, maximum temperatures, average temperatures, and precipitation will increase over time under both moderate and high carbon emission scenarios (Representative Concentration Pathway 4.5 and Representative Concentration Pathway 8.5, respectively [CEMML 2024*a*]).

Maximum temperatures are projected to rise considerably in the high-emission/far-term scenario, with increases greater than 4 degrees Fahrenheit (°F) in all but 1 month, but projections for the near-term scenarios are much more modest, rarely exceeding 3 °F. The largest and most consistent increases across scenarios are from December to February, including increases of 6.7 to 8.8 °F in the high-emission/far-term scenario. Under the moderate-emission scenario, an annual average temperature increase of over 2.4 °F is expected in the near-term, and 3.6 °F in the far-term. Under the high-emission scenario, projections for annual average warming are higher, with a 2.2 °F increase in the near-term, and a 5.5 °F increase in the far-term. Annual precipitation is projected to increase modestly in all scenarios, with the high-emission/far-term scenario representing the greatest increase of 10%. Large and consistent increases in precipitation are projected in May and July in all scenarios, while smaller but notable increases are consistently projected in December. Conversely, small decreases in precipitation are consistently projected in November, January, and February (CEMML 2024*a*).

Where FWVA is located, the climate is characterized by consistent year-round precipitation; hot, humid summers; and mild, wet winters with average low temperatures at or just below freezing. The projected increases in temperature will have effects across all seasons. In winter, increases in temperature will reduce the already relatively low snowfall amounts to negligible levels under

both warming scenarios. Increased temperatures will also effectively shorten the winter season, hastening the melt of snowpack in nearby mountain ranges and moving forward the peak streamflow pulse. As a result, the effective onset of the spring season will come progressively earlier, leading to increases in growing degree days in March and April. Summers will seem to be longer and have higher peak heat intensity, as well as a higher number of days with extreme heat. Autumn temperatures will also be higher and extend later into the year, widening the frost-free season. Precipitation will likely continue to follow the year-round wet pattern that has occurred historically. However, increases in precipitation are projected under both emissions scenarios. This will mean wetter wet years, and fewer of what would have historically been termed “dry years”, although increased temperatures will likely heighten the intensity of drought periods when they do occur. Further, the maximum intensity of extreme rainfall events is likely to increase, although the frequency with which they would occur remains uncertain (CEMML 2024*a*).

4.2.4.2 Environmental Consequences

Preferred Alternative (Proposed Action)
No significant impacts to air quality are anticipated to occur as a result of implementing the proposed action. Potential impacts to air quality would be associated with implementing almost all activities associated with the INRMP and ICRMP. Impacts would be minimized through the implementation of BMPs listed under Section 3 of Table 2-1. More specifics on potential air quality impacts are described below.

Minor, short-term adverse impacts to local air quality would be expected during site-specific natural and cultural resources management activities. Many of the natural resources management activities would generate negligible amounts of criteria air pollutants. Most activities’ emissions would be limited to fugitive dust, in the form of particulate matter, from site disturbance and exhaust generated from vehicles on individual project sites for short durations. Dust emissions would consist primarily of large particles that generally settle on nearby surfaces rather than traveling airborne for any great distance. No impact on post-wide or regional air quality conditions is anticipated as a result of these project activities. FWVA is well below the threshold for emissions requiring a major source permit (Table 4-2), and none of the proposed activities would be expected to generate enough emissions to exceed those thresholds or exceed the EPA’s GHG thresholds for stationary sources requiring additional permits. Air emissions are not expected to exceed *de minimis* threshold levels or contribute emissions in violation of any federal, state, or local air quality regulations.

Larger-scale projects, such as timber harvesting, site rehabilitation, stand improvement, and prescribed burns, would be expected to have moderate, short-term adverse impacts to post-wide and regional air quality. The IWFMP states a goal of 32,217 acres be burned annually, but the installation actually averages approximately 10,000 acres of annual burning (FWVA 2023a). Prescribed burning activities would contribute the greatest amount of criteria pollutants. These activities would produce large quantities of smoke containing particulate matter, volatile organic compounds, carbon monoxide, and some nitrogen oxides. The estimated emissions for criteria pollutants and GHGs are featured below (Table 4-3 and Table 4-4, respectively). The amount of pollutant emissions varies and is dependent on many factors, including the size of the burn, the heat at which the fire burns, and the fuel (i.e., vegetation type that is being burned). These impacts would be moderate and affect post-wide and regional air quality. However, given the

short-term and seasonally limited nature of these burns, no significant impacts to air quality would be anticipated.

Table 4-3. Criteria pollutant emissions from annual prescribed fires.

Fuel	Species Fuel Loading (ton/acre)	Criteria Pollutant Emission (ton)						
		NOx[1]	CO[2]	SO_2[3]	Pb[4]	VOCs[5]	PM_{10}[6]	$PM_{2.5}$[7]
Slash	21.00	1623.74	51756.61	710.38	0.00	2706.23	4194.65	3653.41
Conifer–Long Needle	3.00	231.96	8601.94	101.48	0.00	309.28	1208.14	1063.16
Conifer–Short Needle	14.50	1121.15	72874.85	490.50	0.00	1681.73	5395.54	5091.90
Conifer–Mixed	9.50	734.55	30759.18	321.36	0.00	1499.70	3137.13	2876.98
Grassland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sagebrush	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chaparral	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinyon/Juniper	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hardwood	2.00	64.43	8247.55	67.66	0.00	347.94	805.43	721.66
Palmetto/Gallberry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Emissions	—	3,775.80	172,240.10	1,691.40	0.00	6,544.90	14,740.90	13,407.10

[1]NO_x= nitrogen oxides; [2]CO= carbon monoxide; [3]SO_2= sulfur dioxide; [4]Pb= lead; [5]VOCs= volatile organic compounds; [6]PM_{10}= fine particulate matter; [7]$PM_{2.5}$= very fine particulate matter

Table 4-4. Greenhouse gas emissions from annual prescribed fires.

Fuel	Fuel Loading (tons/acre)	Greenhouse Gas Emission (lbs[1]/ton)			
		CO_2[2]	N_2O[3]	CH_4[4]	CO_2e[5]
Slash	21.00	1,132,895	155.61	3179.82	1,258,734
Conifer–Long Needle	3.00	154,738	22.23	396.27	171,266
Conifer–Short Needle	14.50	719,873	107.44	2569.31	816,105
Conifer–Mixed	9.50	484,342	70.39	1958.79	554,277
Grassland	0.00	0	0.00	0.00	0
Sagebrush	0.00	0	0.00	0.00	0
Chaparral	0.00	0	0.00	0.00	0
Pinyon/Juniper	0.00	0	0.00	0.00	0
Hardwood	2.00	98,971	14.82	425.26	114,016
Palmetto/Gallberry	0.00	0	0.00	0.00	0
Other (average of all)	0.00	0	0.00	0.00	0
Total Emissions	—	2,590,819	370.50	8,529.50	2,914,398

[1]lbs = pounds; [2]CO_2= carbon dioxide; [3]N_2O= nitrous oxide; [4]CH_4= methane; [5]CO_2e= carbon dioxide equivalent

No Action Alternative
The No Action Alternative would result in no significant impacts to air quality. FWVA would continue to manage natural and cultural resources under the previous versions of the INRMP and ICRMP. Impacts would be minimized through the implementation of the REC process.

4.2.5 NOISE

4.2.5.1 AFFECTED ENVIRONMENT

For the purpose of analysis, noise is considered to be sound that is loud or unpleasant and is disturbing or unwanted. When sound interrupts daily activities, such as sleeping, conversation, or disrupts or diminishes one's quality of life, it becomes noise. The degree to which noise becomes disruptive depends on the way it is perceived by the receptors living or working in the affected area (EPA 2024*b*).

Noise is measured in decibels (dB). Zero dB is the least perceptible sound. Because the human ear is more sensitive to certain ranges of the sound spectrum, a weighted scale has been developed to reflect more accurately what the human ear perceives. These measurements are adjusted into units known as A-weighted decibels (dBA). Noise levels more than 130 dBA are an instant health hazard, and noise levels over 85 dBA are considered a long-term hazard for hearing damage or loss. According to AR 200-1, *Environmental Protection and Enhancement*, sensitivity to noise varies by the time of day, with receptors being more sensitive at night. To reflect this sensitivity, ambient noise measurements are normally adjusted by adding 10 dB to actual measurements between the hours of 2200 and 0700. Decibel levels adjusted in this way are known as day-night decibel measurements (DNL; DA 2007).

Sources of noise at FWVA result from construction activities, facility maintenance activities, military and private vehicle use, aircraft operations, weapons discharge and testing, training activities, and natural and cultural resources management activities. Noise from natural and cultural resources management activities is considered in the 2024–2029 INRMP component plans, including the RPMP. Noise related to airfield operations is addressed by the Air Installation Compatible Use Zone Program. FWVA also maintains an Operational Noise Management Plan, which provides guidance for noise management on the installation, including education, complaint management, and mitigation and noise abatement procedures.

4.2.5.2 ENVIRONMENTAL CONSEQUENCES

Preferred Alternative (Proposed Action)
No significant impacts to noise are anticipated to occur as a result of implementing the proposed action. Potential impacts to noise would be associated with implementing almost all activities associated with the INRMP and ICRMP. Impacts would be minimized through the implementation of BMPs listed under Section 4 of Table 2-1. More specifics on potential noise impacts are described below.

Minor, short-term adverse noise impacts would be expected during site-specific natural and cultural resources management activities. Most activities proposed in the INRMP and ICRMP would involve minimal amounts of noise. Most vehicles and equipment that would be used to accomplish these projects are already used on a regular basis on the installation and are of similar or lower dB range than baseline noise levels at FWVA.

Noise-generating equipment that would be utilized to accomplish the proposed action include field trucks, mowers, brush hogs, shredders, chain saws, tractors, loaders, and back hoes. Effects from operating this equipment would be site-specific to the project. Given the short-term nature of these events and limited amount of development surrounding the installation, these impacts would not be expected to be significant. Furthermore, most noise-generating projects would only be conducted during normal business hours.

No Action Alternative
The No Action Alternative would result in no significant impacts to noise. FWVA would continue to manage natural and cultural resources under the previous versions of the INRMP and ICRMP. Impacts would be minimized through the implementation of the REC process.

4.2.6 CULTURAL RESOURCES

4.2.6.1 AFFECTED ENVIRONMENT

Cultural resources is a broad term that includes all aspects of human activities, including material remains of the past and the beliefs, traditions, rituals and cultures of the present. As mandated by law, all federal installations and personnel must participate in the preservation and stewardship of archaeological and cultural resources and must consider potential impacts to these resources prior to undertaking an action. Cultural resources include the following:

- Historic properties as defined by the NHPA
- Cultural items as defined by the Native American Graves Protection and Repatriation Act
- Archaeological resources as defined by the Archaeological Resources Protection Act
- Sacred sites as defined by EO 13007, *Indian Sacred Sites*, to which access is provided under the American Indian Religious Freedom Act (42 U.S.C. § 1996)
- Significant paleontological items as described by 16 U.S.C. §§ 431-433, *American Antiquities Act of 1906*
- Collections as defined in 36 CFR § 79, *Curation of Federally Owned or Administrated Archaeological Collections*

The NHPA and AR 200-1 constrain land use and development where cultural resources would be affected. Section 106 of the NHPA (now at 54 U.S.C. § 306108) directs federal agencies, when planning activities under their jurisdiction or control, to consider the effects to historic resources that are listed on or eligible for listing on the National Register of Historic Places (NRHP). If any projects have the potential to negatively impact cultural resources, further consultation with the SHPO, Tribal organizations, and other stakeholders shall be conducted in accordance with Section 106 of the NHPA. The FWVA ICRMP guides the installation's Cultural Resources Management Program. Specific guidance and procedures for managing and maintaining historic buildings is provided in U.S. Army Technical Manual 5-801-1, *Historic Preservation Administrative Procedures,* and U.S. Army Technical Manual 5-801-2, *Historic Preservation Maintenance Procedures.*

FWVA is a steward to an abundance of cultural and archaeological resources. As of 1 July 2022, archaeological surveys had been conducted on approximately 8,422 acres of the installation. Those surveys have identified 651 archaeological sites, of which 43 represent Native American sites, 574 are historic period sites, and 34 have both prehistoric and historic components.

Architectural surveys on the installation have identified 242 architectural resources on FWVA, which includes 2 historic resources that predate the establishment of the installation. These 2 historic resources have been determined eligible for the NRHP and are listed in the Virginia Landmarks Register (FWVA 2023*b*).

4.2.6.2 Environmental Consequences

Preferred Alternative (Proposed Action)
No significant impacts to cultural resources are anticipated to occur as a result of implementing the proposed action. Potential impacts to cultural resources would be associated with implementing resource identification projects proposed in the ICRMP. Impacts would be minimized through the implementation of BMPs listed under Section 5 of Table 2-1. More specifics on potential cultural resources impacts are described below.

Timbering operations can disturb architectural resources and surrounding sites. Fire from prescribed burns can get out of control and damage structures. Although these activities may have the potential to affect surficial cultural resources, properly conducted burns will not result in ground disturbance beyond the removal of surface combustibles. These activities are submitted for cultural survey and review and are anticipated to result in minor, short-term negative impacts to cultural resources.

Post-wide, moderate, long-term beneficial impacts would be expected from implementing the INRMP and ICRMP. The purpose of the ICRMP is to provide guidance to installation staff on the management and maintenance of cultural resources and to ensure mission-related actions are carried out in compliance with statutory and regulatory requirements (FWVA 2023*b*). In the event a proposed project was found to present an adverse impact to cultural resources, the FWVA Cultural Resources Program Manager would coordinate with the applicable state and federal agencies. Many requirements (e.g., Section 106 of the NHPA) include consultation with affected parties before a planned action is implemented and allow maximum time for treatment efforts, alternative plans, or avoidance actions to be implemented. Determination of effects and decisions regarding appropriate treatment are specific to individual actions. No activities that would negatively affect the NRHP-eligible cultural resources at Fort Walker are proposed.

No Action Alternative
The No Action Alternative would result in no significant impacts to cultural resources. FWVA would continue to manage natural and cultural resources under the previous versions of the INRMP and ICRMP. Impacts would be minimized through the implementation of the REC process.

4.2.7 Hazardous Materials

4.2.7.1 Affected Environment

A “hazardous material” refers to any item or agent (biological, chemical, or physical) that has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors. Across the Army, the Hazardous Material Management Program is used to integrate the accountability for hazardous materials into day-to-day decision-making, planning, operations, and compliance across all Army missions, activities, and functions. The program’s policies, including its objectives and goals, are set forth in AR 200-1. A complete list of federally recognized hazardous substances, as well as their reportable quantities, is provided

in 40 CFR § 302.4. Many substances not on this list may be considered hazardous according to their ignitability, corrosivity, reactivity, or toxicity as defined by 40 CFR §§ 261.20-24.

Herbicide and pesticide application, either exclusively or in tandem with manual or mechanical control, is often the appropriate control strategy used on FWVA to manage noxious weeds, invasive species, and pests. Any chemical application for the control of invasive species is conducted in accordance with FWVA's IPMP and the INRMP. Chemical control may be applied using various treatments (e.g., foliar, stem injection, cut surface, basal bark, pre-emergence). All pesticide applications must be conducted by the DPW-ENRD Pest Controller or under that office's direct supervision if applied by a contractor. Once invasive species have been controlled, fertilizer is often applied to promote native vegetation. Dry chemicals (e.g., bags of fertilizer) are kept in storage to prevent exposure to the weather (CEMML 2024*b*).

FWVA follows the Virginia Pollution Discharge Elimination System (VPDES) regulations for point source and non-point source pollution abatement and compliance. FWVA has 4 permits, as follow:

- Stormwater Industrial Permit #VAR051092−for discharges associated with industrial activities
- Pesticides, General Permit #VAG87−for discharges resulting from the application of pesticides to surface waters of Virginia
- Central Vehicle Wash Facility, General Permit #VAG750219−for vehicle wash and laundry facilities for the central vehicle wash facility
- Emergency Vehicle Washing, General Permit #VAG750241−for vehicle wash and laundry facilities for emergency vehicle washing

American Water O&M, Inc. (AW) is the current contract utility provider that owns and operates FWVA's wastewater collection and treatment systems. AW operates and maintains the wastewater collection and treatment systems in accordance with federal, state, and local laws and regulations. AW has 3 VPDES permits (2 for the Warrior Wastewater Treatment Plant [WWTP] and 1 Virginia Pollution Abatement Permit [VPA] for the Sage Tactical Training Base spray irrigation system): Warrior WWTP Permit #VA0032034, Warrior WWTP General Permit #VAN020035, Sage Tactical Training Base VPA Permit #VPA00008

FWVA is a Resource Conservation and Recovery Act (RCRA) large quantity generator of hazardous wastes and a former transportation, storage, and disposal facility. The installation's Comprehensive Environmental Response, Compensation, and Liability Information System identification number is VA2210020416. The installation cannot store hazardous waste for more than 90 days and uses a RCRA-permitted contractor to transport and dispose of the waste offsite. The FWVA DPW-ENRD's management of hazardous wastes is guided by the installation's Hazardous Waste Management/Waste Minimization Plan. The Hazardous Materials Management Program guides the management of hazardous materials for all installation, tenant, and contractor activities at FWVA. The installation also maintains the Hazardous Substance Management database, which tracks all hazardous materials procured, stored, or used on the installation.

4.2.7.2 Environmental Consequences

Preferred Alternative (Proposed Action)
No significant impacts to hazardous materials are anticipated to occur as a result of the proposed action. Potential impacts to hazardous materials would be associated with implementing activities associated with INRMP objectives and the ICRMP. Impacts would be minimized through the implementation of BMPs listed in Section 6 of Table 2-1. More specifics on potential hazardous materials impacts are described below.

Hazardous materials that would be used during proposed activities include pesticides, herbicides, gasoline, diesel fuel, other petroleum products, oils, and lubricants typical in maintaining and operating vehicles and equipment. The materials used would vary depending on the individual projects. The use of these materials would be minor and short-term and is not anticipated to result in a significant increase in the amount of hazardous waste generated by the installation.

Some proposed activities would result in minor to moderate, long-term beneficial impacts associated with hazardous materials. These activities would be site-specific. Examples include removal of underground storage tanks and the maintenance and compliance inspections of discharge prevention measures.

No Action Alternative
The No Action Alternative would result in no significant impacts to hazardous materials. FWVA would continue to manage natural and cultural resources under the previous versions of the INRMP and ICRMP. Impacts would be minimized through the implementation of the REC process.

4.2.8 Aesthetic Resources

4.2.8.1 Affected Environment

Approximately 74,278 acres, or 98 percent, of FWVA consists of undeveloped land. The natural habitat provides an aesthetically pleasing landscape from both inside and outside the installation boundary. FWVA recognizes the importance of maintaining the natural beauty and unique landscape of the installation. The FWVA INRMP ensures the natural resources on the installation are maintained and protected, which subsequently preserves the beauty of the natural environment at FWVA. The FWVA ICRMP ensures that the cultural resources are also preserved and protected. Additionally, development on the installation is guided by several management programs and documents, such as the RPMP and Installation Design Guide. These programs and documents ensure that new development is consistent with existing development on the installation.

4.2.8.2 Environmental Consequences

Preferred Alternative (Proposed Action)
No significant impacts to aesthetic resources are anticipated to occur as a result of implementing the proposed action. Potential impacts to aesthetic resources would be associated with implementing activities associated with some INRMP objectives and with resource identification projects proposed in the ICRMP. Impacts would be minimized through the

implementation of BMPs listed in in Section 7 of Table 2-1. More specifics on potential aesthetic resources impacts are described below.

Minor, short-term adverse impacts to aesthetic resources would be expected during certain site-specific activities. These activities include vegetation management (e.g., pre-commercial thinning, crop tree release, understory treatments), invasive or nuisance species removal (e.g., manual, chemical, mechanical, biological control), maintenance of open areas and habitat, and archeological site excavation. Impacts would be associated with activities like vegetation removal, soil disturbance, and construction. Vehicles, equipment, and materials would be present on site and would temporarily disrupt or disturb the aesthetics of the existing landscape. Long-term, these activities would have moderate beneficial impacts on aesthetic resources.

Larger-scale projects, such as timber harvesting and prescribed burns, would be expected to have moderate, long-term adverse impacts to aesthetic resources. Impacts would be local to each project site. The harvested tree stand or charred forest that remains after a timber harvest or prescribed burn may generate adverse or beneficial responses from different individuals. The affected areas of the forest take years to visually recover to an aesthetically pleasing state; however, the moderate, long-term beneficial impact of these types of management activities improves the health and resilience of the forest ecosystem. The overall benefit to the forest flora and fauna outweighs the long-term adverse impact on the natural environment. Timber harvesting and prescribed burns have been conducted at the installation for many years, and there is no significant increase of either under the INRMP.

Activities associated with the ITAM Program, such as maneuver corridor repair and timber shredding, would result in minor, short-term adverse impacts to aesthetic resources that would be site-specific to each project. Long-term, these activities would have moderate beneficial impacts on aesthetic resources, as 1 objective of ITAM is to repair and maintain disturbed training lands.

No Action Alternative
The No Action Alternative would result in no significant impacts to aesthetic resources. FWVA would continue to manage natural and cultural resources under the previous versions of the INRMP and ICRMP. Impacts would be minimized through the implementation of the REC process.

4.3 NATURAL RESOURCES

4.3.1 VEGETATION

4.3.1.1 AFFECTED ENVIRONMENT

Current terrestrial vegetation conditions on FWVA are diverse, representing 25 vegetation communities and encompassing approximately 64,277 acres (84.8%) of FWVA. Forest communities are the dominant vegetation type (21 communities, 78.0% of the installation area, 59,134 acres) and can be generically grouped as evergreen, deciduous, and mixed evergreen-deciduous forest types. Each forest type represents approximately 1/3 of the total forest cover on FWVA. Oaks (*Quercus* spp.), pines (*Pinus* spp.), and tulip poplar (*Liriodendron tulipifera*) are the most dominant species across these forest types. Their degree of dominance varies by forest type and individual stand.

Table 4-5. Fort Walker terrestrial vegetation communities.

Vegetation Community Code—Label	Acres	Percent of Fort Walker Area
CEGL006075—Mesic Mixed Hardwood Forest	13,869.9	18.3
COMP_SPHW—Successional Pine–Hardwood Forest	9,454.0	12.5
CEGL006269—Coastal Plain Mixed Oak/Heath Forest	6,873.7	9.1
CEGL002591—Successional Virginia Pine Forest	6,176.8	8.2
CEGL007179—Loblolly Pine Planted Forest	5,403.1	7.1
CEGL004766—Loblolly Pine–Mixed Oak Successional Forest	4,717.8	6.2
CEGL008462—Loblolly Pine–Sweetgum Successional Forest	3,750.2	5.0
COMP_SUME—Successional Meadow/Grassland	3,671.4	4.8
CEGL007221—Successional Acidic Tuliptree Forest	2,429.0	3.2
CEGL006599—Successional Mixed Deciduous Vine–Forest	1,251.2	1.7
COMP_VISH—Successional Vine–Shrubland	1,202.4	1.6
CEGL003620—Loblolly Pine Savanna	1,195.2	1.5
CEGL003722—Oak/Hickory Woodland/Savanna	1,047.4	1.3
COMP_SLWP—Shelterwood Stand (Pine Canopy)	989.1	1.3
CEGL006919—Oak–Beech/Heath Forest	625.5	0.8
CEGL008475—Acidic Oak–Hickory Forest	445.2	0.6
COMP_SLWO—Shelterwood Stand (Oak Canopy)	401.2	0.5
NLCD82—Cultivated Crops	198.8	0.3
CEGL007879—Successional Black Walnut Forest	149.2	0.2
SF_FORS—Forested Open Space	128.7	0.2
CEGL007220—Successional Basic/Circumneutral Tuliptree Forest	82.9	0.1
CEGL007216—Successional Sweetgum Forest	78.5	0.1
COMP_AUOL—Autumn Olive Shrubland	70.0	0.1

Table 4-5. Fort Walker terrestrial vegetation communities.

Vegetation Community Code—Label	Acres	Percent of Fort Walker Area
CEGL006055—Basic Mesic Hardwood Forest (Coastal Plain/Piedmont Type)	65.7	0.1
CEGL006299—Chestnut Oak/Mountain Laurel Forest	0.3	0.0
Total	64,277.2	84.8

Understory species vary considerably, but dogwood (*Cornus florida*), American holly (*Ilex opaca*), mountain laurel (*Kalmia latifolia*), and blueberry (*Vaccinium* spp.) are most common. Forest management is a significant aspect of FWVA's land management strategy to support military training, conserve biodiversity, and fund ongoing forest management operations. FWVA has approximately 5,000 acres of improved (turf and landscaped areas) and semi-improved open areas under varying management strategies (CEMML 2024*b*).

Within these communities, FWVA has documented 565 native and non-native plant species within its jurisdiction. The Virginia Botanical Association reports 1,129 vascular plant species within Caroline County, which may be a closer representation of the botanical diversity of FWVA. Periodic vegetation classification surveys that adhere to the U.S. National Vegetation Classification standards can ensure that changes to vegetation communities at FWVA are documented and inform management strategies and procedures (CEMML 2024*b*).

Aquatic vegetation on the installation is highly diverse and highly valuable to wildlife on the installation. The wetlands of the Atlantic coastal plain are extensive and have fared somewhat better than the province's upland forests, supporting a great variety of natural communities. The diversity of wetlands in this region spans a range of freshwater to saline, lunar-tidal estuaries; tidal and palustrine swamps; non-riverine, groundwater-saturated flats; seasonally flooded ponds and depressions; seepage slope wetlands; and various tidal and non-tidal aquatic habitats (Table 4-6; CEMML 2024*b*).

Table 4-6. Aquatic vegetation communities present on Fort Walker.[1]

Vegetation Community Code—Label	Acres	Percent of Fort Walker Area
CEGL006976—Successional Red Maple Floodplain Forest	1,644.1	2.2
COMP_HEWE—Successional Herbaceous Wetland	1,208.5	1.6
CEGL004418—Small Stream Sweetgum/Tulip Tree Forest	1,162.3	1.6
COMP_WOWE—Successional Woody Wetland	689.6	0.9
CEGL006238—Acidic Seepage Swamp	561.6	0.8
NLCD11—Open Water	526.2	0.7
COMP_SEIM—Semi-permanent Impoundment Aquatic Vegetation	380.4	0.5
COMP_PIWE—Successional Pine Wetland	251.7	0.3
CEGL006499—Seepage Bog	3.8	0.0
CEGL006110—Red Maple/Sweetgum Swamp	1.4	0.0
Total	6,429.6	8.6

[1] Total acreage does not reflect the distribution or extent of jurisdictional wetlands

4.3.1.2 Environmental Consequences

Preferred Alternative (Proposed Action)
No significant impacts to vegetation are anticipated to occur as a result of implementing the proposed action. Potential impacts to vegetation would be associated with implementing activities associated with the INRMP objectives and with resource identification projects proposed in the ICRMP. Impacts would be minimized through the implementation of BMPs listed in Section 8 of Table 2-1. More specifics on potential vegetation impacts are described below.

Vegetation management activities are a large component of the INRMP. The ICRMP utilizes the INRMP to govern vegetation management projects, including removal of overgrown vegetation that is damaging cultural resources. Invasive species control, maintenance of road shoulders and trails, application of herbicide to control vegetation within the impact area, ITAM projects to maintain desired terrain conditions to support military training, and management of recreation areas are a few examples of INRMP activities that would result in minor, short-term adverse impacts to vegetation. Long-term, these activities may result in minor to moderate benefits to the vegetative cover at FWVA.

Larger-scale projects, such as timber harvesting, site rehabilitation, stand improvement, and prescribed burns, would be expected to have moderate, short- and long-term adverse impacts to vegetative resources. The FMP 5-year plan designates a maximum annual timber harvest of

1,500 acres, but the actual annual timber harvest averages approximately 750 acres (CEMML 2024*b*). The IWFMP states a goal of 32,217 acres to be burned annually, but the installation actually burns an average of approximately 10,000 acres annually (FWVA 2023*a*). These activities would cause vegetation cover loss that would take years to recover. Although these activities create adverse impacts, the moderate, long-term beneficial impacts significantly outweigh the adverse impacts. These vegetation management activities promote a healthy, sustainable forest ecosystem that benefits numerous species. Vegetation clearing supports the installation's training mission, and timber harvests benefit the local economy.

No Action Alternative

The No Action Alternative would result in no significant impacts to vegetation. FWVA would continue to manage natural and cultural resources under the previous versions of the INRMP and ICRMP. Impacts would be minimized through the implementation of the REC process.

4.3.2 Fish and Wildlife

4.3.2.1 Affected Environment

FWVA supports a wide variety of fish and wildlife species. Many forest-interior breeding birds, including neotropical migrants, are present due to the broad variety and amount of forested habitat. Diverse wetlands on the installation provide ideal habitat for a variety of amphibians, many of which are declining worldwide. Various inventories have confirmed the occurrence of more than 40 mammals, 145 birds, 40 fish, 60 reptile and amphibians, and numerous invertebrate species on the installation. Fish and wildlife management is conducted by DPW-ENRD to benefit game and non-game species in a manner that supports the military mission. Species frequently observed and considered common to the installation are found below (Table 4-7; CEMML 2024*b*).

Table 4-7. Common fish and wildlife species at Fort Walker, Virginia.

Common Name	Scientific Name
Mammals	
White-tailed deer	*Odocoileus virginianus*
Eastern cottontail	*Sylvilagus floridanus*
Eastern groundhog	*Marmota monex*
Striped skunk	*Mephitis mephitis*
Raccoon	*Procyon lotor*
American opossum	*Didelphis virginiana*
Red fox	*Vulpes vulpes*
Grey fox	*Urocyon cinereoargenteus*
Little brown myotis	*Myotis lucifugus*
Eastern coyote	*Canis latrans*
Gray squirrel	*Sciurus carolinensis*
Birds	
Great blue heron	*Ardea herodias*
Canada goose	*Branta candensis*

Table 4-7. Common fish and wildlife species at Fort Walker, Virginia.

Common Name	Scientific Name
Wild turkey	*Meleagris gallopavo*
Northern bobwhite	*Colinus virginianus*
Black vulture	*Coragyps atratus*
Turkey vulture	*Cathartes aura*
Red-tailed hawk	*Buteo jamaicensis*
Mourning dove	*Zenaida macroura*
Northern cardinal	*Cardinalis cardinalis*
Field sparrow	*Spizella pusilla*
Red-headed woodpecker	*Melanerpes erythrocephalus*
Pileated woodpecker	*Dryocpous pileatus*
Eastern phoebe	*Sayornis phoebe*
Blue jay	*Cyanocitta cristata*
Carolina chickadee	*Poecile carolinensis*
White-breasted nuthatch	*Sitta caroliniensis*
Fish	
Largemouth bass	*Micropterus salmoides*
Black crappie	*Pomoxis nigromaculatus*
Blue gill	*Lepomis macrochirus*
Redear sunfish	*Lepomis microlophus*
Flier	*Centrarchus macropterus*
Warmouth	*Lepomis gulosus*
Chain pickerel	*Esox niger*
Brown bullhead	*Ameiurus nebulosus*
Yellow bullhead	*Ameiurus natalis*
Channel catfish	*Ictalurus punctatus*
Bowfin	*Amia calva*
Golden shiner	*Notemigonus crysoleucas*
Creek chubsucker	*Erimyzon oblongus*
Yellow perch	*Perca flavescens*
Reptiles and Amphibians	
Eastern painted turtle	*Chrysemys picta*
Snapping turtle	*Cheldra serpentina*
Eastern box turtle	*Terrapene carolina*
Northern fence lizard	*Sceloporus undulatus*
Five-lined skink	*Eumeves fasciatus*
Northern red salamander	*Pseudotriton ruber*
Spotted salamander	*Ambystoma maculatum*
Eastern American toad	*Bufo americanus*

Table 4-7. Common fish and wildlife species at Fort Walker, Virginia.

Common Name	Scientific Name
Bullfrog	*Rana catesbeiana*
Northern copperhead	*Agkistrodon contortrix*
Black rat snake	*Elaphe obsoleta*

Migratory Birds

The DoD, in cooperation with Partners-in-Flight (DoD PIF), prepared a Strategic Plan for the conservation and management of migratory and resident landbirds and their habitats on DoD lands (DoD PIF 2002). Initially, the focus on bird species of conservation concern was on species that breed in temperate North America and winter in the tropics (neotropical migrants) that were declining. Habitat loss, degradation, and fragmentation of the temperate breeding and tropical wintering grounds are likely the major reasons for these declines (Flather and Sauer 1996, Sherry and Holmes 1996), as well as the loss of important stopover habitat used during migration (Moore et al. 1993).

In response to declines in bird populations, EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, was issued on 10 January 2001. This EO requires federal agencies to evaluate the effects of their actions and plans on migratory bird species of concern. Species of concern are (1) those identified in *Migratory Nongame Birds of Management Concern in the United States* (U.S. Fish and Wildlife Service [USFWS] 1995), (2) priority species identified by established plans such as those prepared by DoD PIF, and (3) listed species in 50 CFR § 17.11.

The focus on these species of concern was expanded to include all landbirds breeding in the continental United States (DoD PIF 2005), as well as some aquatic bird species. In addition to the DoD PIF Strategic Plan, lists of bird species of conservation concern were prepared by conservation region. FWVA is in DoD PIF Conservation Region 30 (DoD PIF 2014).

Bald and Golden Eagles

The Bald and Golden Eagle Protection Act provides federal protection to bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*), including their parts, nests, or eggs. Bald eagles do occur on FWVA, and a historic high of 11 active bald eagle nests was documented on the installation in 2017 (CEMML 2024*b*).

Pollinators

The conservation and habitat management of pollinators has garnered much attention in recent years due to their population declines. The FWVA Fish and Wildlife Management Program has incorporated pollinator conservation into its habitat management practices by increasing the extent of areas managed for pollinators and diversifying its seed mixtures and planting schedule to provide growing season-long benefits. Pollinator-friendly plant species are selected for landscaping application where feasible. Mowing is kept to a minimum and is timed to reduce impacts on flowering plants. Additionally, portions of fields that are managed specifically for wildlife purposes are left fallow to allow native plant species to germinate and flower to provide a nectar source for pollinators. Additional management for sensitive pollinator species is described below in Section 4.3.3 (CEMML 2024*b*).

Hunting, Fishing, and Trapping

The public hunting program on FWVA has been in place since at least 1954 and has broad support and enthusiastic participation by the local community. FWVA offers approximately 59,000 acres for hunting (46,000 acres in the training areas and 13,000 acres in the Controlled Access Areas) and, on average, hosts more than 9,500 hunt trips and 96,000 hours of hunting annually.

Annual hunting seasons occur for white-tailed deer, turkey, small game, black bear, furbearers, waterfowl, and squirrel. White-tailed deer and eastern wild turkey are by far the most popular species hunted at FWVA. FWVA hunting policies are set forth in FWVA Regulation 200-10 and are consistent with Commonwealth of Virginia hunting regulations. Individuals that wish to hunt on FWVA must purchase an installation hunting permit and hold a valid hunting license issued by Virginia Department of Wildlife Resources (VDWR). In addition to processing game harvests that occur on the installation, FWVA is also an official VDWR Game Checking Station for deer, bear, and turkey (CEMML 2024*b*).

FWVA manages 15 impoundments to provide a quality, sustainable recreational fishery while supporting military training utilization of the ponds. The primary game species that are managed for recreational fishing include largemouth bass (*Micropterus salmoides*), chain pickerel (*Exox niger*), bluegill (*Lepomis macrochirus*), channel catfish (*Icalurus punctatus*), and black crappie (*Pomoxis nigromaculatus*). Since 2003, FWVA has implemented a put-and-take cold-weather trout fishing program. Rainbow trout (*Oncorhynchus mykiss*) were stocked to provide an additional recreation opportunity during cold weather months. Due to cold temperature requirements, trout cannot live year-round in the waters of FWVA and cannot establish a reproducing population. This program is not currently active but is reviewed annually for future consideration. Anglers are required to fill out Angler Use Cards each time they fish to provide information to resource managers on angler effort, biological loss, and fishing pressure. On average, more than 1,200 FWVA fishing permits are sold annually (excluding additional permits required for stocked trout fishing), resulting in an estimated 1,600 fishing trips (CEMML 2024*b*).

FWVA offers 9 trapping areas spanning more than 40,000 acres. The American beaver (*Castor canadensis*), raccoon (*Procyon lotor*), muskrat (*Ondatra zibethicus*), river otter (*Lutra canadensis*), mink (*Mustela vison*), red fox (*Vulpes vulpes*), gray fox (*Urocyon cinereoargenteus*), striped skunk (*Mephitis mephitis*), coyote (*Canis latrans*), and opossum (*Didelphis marsupialis*) are the primary furbearing species at FWVA. The coyote is a recent arrival, becoming common in the early 2010s. The goals of furbearer management are to sustain predators at levels that do not imperil other declining species, minimize the risk of disease outbreaks, and reduce damage complaints. FWVA trapping policies are set forth in FWVA Regulation 200-11 and are consistent with the Commonwealth of Virginia trapping regulations. Individuals that wish to trap on FWVA must purchase an installation trapping permit and hold a valid trapping license issued by VDWR. Unlike hunting and fishing, trapping permits are limited and are allocated through a lottery (CEMML 2024*b*).

Hunting, fishing, and trapping activities are strictly managed and monitored by the DPW-ENRD. The FWVA Directorate of Emergency Services, with support from the VDWR, administers and implements conservation law enforcement at FWVA. This specialized law enforcement ensures adherence to federal and state laws and regulations pertaining to natural and cultural resources occurring on FWVA. In addition to enforcing these protective laws and regulations, they also

provide training to FWVA personnel and the general public to help prevent inadvertent violations (FAPH 2021).

4.3.2.2 Environmental Consequences

Preferred Alternative (Proposed Action)
No significant impacts to fish and wildlife are anticipated to occur as a result of implementing the proposed action. Potential impacts to fish and wildlife would be related to implementing activities associated with the INRMP. Impacts would be minimized through the implementation of BMPs listed in Section 9 of Table 2-1. More specifics on potential fish and wildlife impacts are described below.

Minor, short-term adverse impacts to fish and wildlife would be expected during certain site-specific natural resources management activities. These activities include improvements to recreational areas (e.g., boat ramp maintenance, establishment of wildlife viewing platforms), wild turkey hen drop net studies, nuisance aquatic vegetation monitoring and control, fish monitoring, RPA maintenance, river open area management (e.g., mowing), habitat management, and invasive species control and removal. Many of these projects would have minor to moderate, long-term positive impacts because they promote the prolonged existence of the habitats and populations of fish and wildlife species.

Larger-scale timber harvesting, site rehabilitation, stand improvement, and prescribed burn projects would be expected to have moderate, short- and long-term adverse impacts to fish and wildlife. These projects would create temporary alterations to the natural habitat in the project areas. The loss of habitat that would result from these activities would temporarily displace wildlife and potentially result in the loss of some wildlife. Most wildlife would be expected to leave project areas without being harmed. Although these activities create moderate, short- and long-term adverse impacts, the moderate, long-term beneficial impacts outweigh the adverse impacts. These management activities promote a healthy, sustainable forest ecosystem that benefits numerous species and provides ecologically valuable habitat.

The Migratory Bird Treaty Act of 1918 (16 U.S.C. §§ 703-712), as amended, makes it illegal to take or possess any migratory bird and any parts, nests, or eggs of any such bird except under the terms of a valid permit from the USFWS. Migratory birds protected by this act occur on and around FWVA. The proposed action is expected to have minor, short-term adverse impacts to these species and their habitat. Loss of foraging and nesting habitat is expected to result from some of the proposed natural resources management activities, such as prescribed burning and timber harvesting, but the impact would not be significant since the acreage of habitat loss would be negligible within the entire breeding range of these species. Sites harvested for timber would be replanted, and prescribed burns promote natural regrowth, which would provide foraging opportunities after activities are complete.

Hunting, fishing, and trapping programs would be expected to have minor, short-term adverse impacts to fish and wildlife. Through these programs, a certain amount of “take” is permitted and managed, resulting in the loss of fish and wildlife individuals. However, the hunting, fishing, and trapping programs would be anticipated to have moderate, long-term beneficial impacts on fish and wildlife. These programs provide recreational opportunities, revenue from permitting fees, and manage fish and wildlife populations.

Implementation of the ICRMP is not anticipated to result in any significant impacts to fish and wildlife resources.

No Action Alternative
The No Action Alternative would result in no significant impacts to fish and wildlife. FWVA would continue to manage natural and cultural resources under the previous versions of the INRMP and ICRMP. Impacts would be minimized through the implementation of the REC process.

4.3.3 Threatened and Endangered Species

4.3.3.1 Affected Environment

Special Status Species
The ESA protects federally listed plant and animal species and their critical habitats. The USFWS maintains a listing of species that are considered threatened, endangered, proposed, or candidates under the ESA. Although federal agencies are not required by the ESA to consider candidate species, AR 200-1 requires the Army to consider candidate species in all actions that may affect them.

The INRMP for FWVA lists 17 special status species known to occur on the installation. For purposes of this EA, special status species include federally or state threatened species. Special status species known to occur on FWVA are listed below (Table 4-8).

Table 4-8. Special status species at Fort Walker, Virginia.

Species		Federal Status	State Status
Common Name	**Scientific Name**		
Swamp pink	*Helonias bullata*	FT	SE
Small whorled pogonia	*Isotria medeoloides*	FT	SE
New Jersey rush	*Juncus caesariensis*	SOC	ST
American ginseng	*Panax quinquefolius*	—	ST
Green pitcher plant[1]	*Sarracenia oreophila*	FE	—
Mountain sweet pitcher plant[1]	*Sarracenia rubra* ssp. *jonseii*	FE	—
Alabama canebrake pitcher plant[1]	*Sarracenia rubra* spp. *alabamensis*	FE	—
Indiana bat	*Myotis sodalis*	FE	SE
Northern long-eared bat	*Myotis septentrionalis*	FE	ST
Little brown bat	*Myotis lucifugus*	FC	SE
Tricolored bat	*Perimyotis subflavus*	PE	SE
Bachman's sparrow[2]	*Peucaea aestivalis*	BCC	ST

Table 4-8. Special status species at Fort Walker, Virginia.

Species		Federal Status	State Status
Common Name	**Scientific Name**		
Peregrine falcon	*Falco peregrinus*	—	ST
Kenk's amphipod	*Stygobromus kenki*	—	—
Rappahannock spring amphipod	*Stygobromus foliatus*	—	—
Frosted elfin	*Callophrys irus*	SOC	—
Monarch butterfly	*Danaus plexippus*	FC	—

[1] Non-native to Virginia; [2] Historic occurrence; no recent occurrences from current surveys

FE = federally endangered, FT = federally threatened, FC = federal candidate, FP = federally proposed, SE = state endangered, ST = state threatened, SOC = species of concern, BCC = birds of conservation concern, PE = proposed endangered

Swamp Pink

FWVA supports 14 swamp pink element occurrences, which constitute 58 spatially distinct colonies (i.e., locations), 53 of which are extant. Swamp pink habitats on FWVA are typically classified as acidic seepage swamps. A characteristic description of swamp pink habitat at FWVA is a braided stream system where water is flowing at slow velocities across a large forested swampy expanse that is devoid of a central, channelized stream (CEMML 2024*c*).

Small Whorled Pogonia

FWVA currently harbors 5 small whorled pogonia element occurrences, which constitute 25 spatially distinct small whorled pogonia colonies, all of which are extant (CEMML 2024*c*). On FWVA, small whorled pogonia habitat is characterized as mid-successional mixed hardwood stands (pine may or may not be present in the dominant canopy) on slopes less than 40%, with low to moderate understory stem density, and in proximity to permanent canopy gaps (e.g., streams, improved/unimproved trails, and old homestead sites [CEMML 2024*c*]).

New Jersey Rush

There are 17 New Jersey Rush colonies known to exist on FWVA (FWVA ENRD 2023). The species occurs primarily in sunny, sphagnous seepages and the margins of old beaver ponds (CEMML 2024*b*).

American Ginseng

American ginseng grows within cove forests, mesic hardwood forests, and nutrient-rich forests (CEMML 2024*b*). Harvesting of the species on FWVA is strictly prohibited.

Pitcher Plants

FWVA harbors multiple species, varieties, and hybrids of pitcher plants in the *Sarracenia* genus. Three of the species are non-native to Virginia and federally listed under the ESA: mountain sweet pitcher plant (*Sarracenia rubra* ssp. *jonesii*), green pitcher plant (*Sarracenia oreophila*),

and Alabama canebrake pitcher plant (*Sarracenia rubra* ssp. *alabamensis*). The 3 species were introduced to FWVA by a private citizen in 1986 (a carnivorous plant enthusiast and cultivator) without the knowledge or consent of FWVA. All occurrences of these 3 species are anthropogenically introduced and spatially discrete (CEMML 2024*c*).

Indiana Bat

There are 65,000 acres of forested habitat on FWVA, all of which may serve as potential roosting and foraging habitat for the Indiana bat. Forested habitats, and edges of forest habitat near riparian areas, may be the most important foraging areas for Indiana bats on FWVA and adjacent land areas. The overwintering location of the Indiana bats that use FWVA for summer roosting is currently unknown. There are no known hibernacula on FWVA, and the nearest known suitable hibernaculum is in the karst topography of Shenandoah County, approximately 85 miles west of FWVA. The spring seasonal appearance of Indiana bats on FWVA is also unknown; however, mist-netting on the installation has documented the Indiana bat as early as 7 May (CEMML 2024*c*).

There has been an observed decline in the number of acoustic detections on FWVA over the past several years, even though the survey level of effort has remained consistent. This, coupled with the lack of Indiana bat captures since 2018 (when 1 Indiana bat was captured), suggests an overall decline in the relative abundance of Indiana bats on FWVA (CEMML 2024*c*).

Northern Long-Eared Bat

Like the Indiana bat, all 65,000 acres of forested habitat on FWVA may serve as potential roosting and foraging habitat for the northern long-eared bat. The species was historically present on FWVA during the summer roosting period; however, the last visual observation of the species on FWVA was in 2001. There are no hibernacula for this species on FWVA (CEMML 2024*c*)

Like the Indiana bat, there has been an observed decline in the number of acoustic detections for the northern long-eared bat over the past several years. This, coupled with the lack of northern long-eared bat captures since 2001, suggests an overall decline in the relative abundance of northern long-eared bats on FWVA (CEMML 2024*c*).

Little Brown Bat

The little brown bat is common in urban, suburban, and forested habitats, where it occupies a wide variety of roosts, including caves, buildings, rocks, trees, and under bridges. Large maternity colonies can be found in old buildings and bridges. The little brown bat is currently under review for potential ESA listing by the USFWS, as populations have experienced declines of over 90% due to white nose syndrome. On FWVA, the little brown bat has been commonly detected through acoustic surveys; however, the similar vocalizations of the northern long-eared bat, little brown bat, and Indiana bat make acoustic identification unreliable (CEMML 2024*c*).

Tricolored Bat

The tricolored bat is distributed across much of the United States, east of the Rocky Mountains. White nose syndrome is the primary threat to the species, with declines of 90 to 100% in affected populations. These bats overwinter in caves, abandoned mines, and tunnels. In

summer, they roost in forests, typically in leaf clusters or epiphytes high up in trees (CEMML 2024*c*).

Bachman's Sparrow

The Bachman's sparrow was observed and heard during the first Natural Heritage inventory of FWVA in 1992. Subsequent surveys conducted by the Virginia Department of Conservation and Recreation, Division of Natural Heritage biologists and installation fish and wildlife biologists have not detected this species. Consequently, this species occurrence is considered historic by the Virginia Department of Conservation and Recreation, Division of Natural Heritage. FWVA continues to periodically survey for this species to determine its presence/absence (CEMML 2024*b*).

Peregrine Falcon

In Virginia, peregrines are state-threatened, and they nest on artificial structures in the east and on cliff sites in the west. Their diet consists mostly of birds. They frequently consume ducks, pigeons, and shorebirds, but will consume a large variety of birds and bats (CEMML 2024*b*).

Kenk's Amphipod

Kenk's amphipod (*Stygobromus kenki*) was previously proposed for ESA listing as an endangered species, but the proposed rule was withdrawn, largely due to FWVA's proactive approach to managing the known surficial habitats of this species. Kenk's amphipod is currently only known from 3 spring seeps in Washington, D.C. (Rock Creek Park), 2 spring seeps in Montgomery County, Maryland, 6 spring seeps on FWVA, and 1 spring seep on the Vorhees Nature Preserve owned by The Nature Conservancy. The Kenk's amphipod sites at FWVA and Voorhees Nature Preserve occur in undeveloped lands surrounded by extensive natural habitats (CEMML 2024*b*).

Frosted Elfin Butterfly

Since this species was detected on the installation in 2022, management has been focused on supporting species habitat. The host plants for this butterfly are sundial lupine (*Lupinus perennis*) and yellow wild indigo (*Baptisia tinctoria*; CEMML 2024*b*).

Monarch Butterfly

Monarch butterfly conservation has become a concern in recent years due to observed population declines associated with habitat loss across North America, and it is now federally listed as a candidate species. Eastern monarch butterflies are seasonal (late summer) migrants to FWVA and may be casually observed during that season. Several species of milkweed (*Asclepias*), the primary staple forage for monarchs, are abundant within open areas and along road shoulders on FWVA (CEMML 2024*b*).

Habitat for Protected Species

Critical habitat is defined by the ESA as a specific geographic area that is essential for the conservation of a federally threatened or endangered species and that may require special management and protection. Critical habitat may include areas that are not occupied by the species but are necessary for its recovery. No critical habitat has been designated on FWVA.

4.3.3.2 Environmental Consequences

Preferred Alternative (Proposed Action)
No significant impacts to threatened and endangered species are anticipated to occur as a result of implementing the proposed action. Potential impacts to threatened and endangered species would be from implementing activities associated with the INRMP and the ICRMP. Impacts would be minimized through the implementation of BMPs listed in Section 10 of Table 2-1. More specifics on potential threatened and endangered species impacts are described below.

Implementation of the ICRMP is not anticipated to result in any significant impacts to threatened and endangered species.

Swamp Pink

No significant impacts to swamp pink are anticipated to occur as a result of implementing the proposed action. Minor, short-term adverse and minor-to-moderate, long-term beneficial impacts to swamp pink would be expected during certain site-specific natural resources management activities.

FWVA implements a base 150-foot "limited disturbance" management buffer around swamp pink colonies and associated habitat to ensure that land management and other activities do not negatively impact this species or its habitat. Management buffers are site-specific, determined by the spatial distribution of the habitat, the surrounding vegetation physiognomy, recurring land management activities required to maintain the training and range lands (e.g., trail maintenance, grass cutting, infrastructure maintenance), and condition of the upslope drainage area. Consequently, management buffers often exceed 150 feet and, in rare instances, are less than 150 feet if a permanent feature is nearby (e.g., a road). Activities with the potential to expose soils (e.g., land clearing) or significantly alter the forest canopy (e.g., timber harvesting) are precluded from the management buffers. Low-impact silvicultural activities (e.g., mid-story vegetation treatments, invasive species control) and early detection/rapid response to forest insects and disease (e.g., control treatments) may be conducted in swamp pink management buffers on an as-needed basis, provided no direct impacts to swamp pink are expected. ENRD reviews all Work Orders, military training requests, and land management plans to ensure that only the above stipulated activities occur within swamp pink colonies, management buffers, and upslope drainage areas.

Implementation of the ICRMP is not anticipated to result in any significant impacts to swamp pink.

Small Whorled Pogonia

No significant impacts to small whorled pogonia are anticipated to occur as a result of implementing the proposed action. Minor, short-term adverse and minor-to-moderate, long-term beneficial impacts to the species would be expected during certain site-specific natural resources management activities.

FWVA currently deploys metal cages seasonally (May to October) on all small whorled pogonia plants at all known small whorled pogonia sites to prevent white-tailed deer herbivory and provide some measure of plant protection. Observations of both vertebrate and invertebrate herbivory have been documented by FWVA over the past several years, indicating that plant

protections would be beneficial to maintaining the populations of small whorled pogonia on FWVA.

FWVA implements a 500-foot “limited disturbance” management buffer around small whorled pogonia colonies (including habitat) to ensure that land management and other activities do not negatively impact this species or its habitat. Management buffers are site-specific, as determined by the spatial distribution of the habitat, the surrounding vegetation physiognomy, recurring land management activities required to maintain the training and range lands (e.g., trail maintenance, grass cutting, infrastructure repairs/maintenance), and condition of the upslope drainage area. Consequently, buffers often exceed 500 feet, but in rare instances, they can be less than 500 feet if a permanent land feature (e.g., a road) is nearby.

Implementation of the ICRMP is not anticipated to result in any significant impacts to small whorled pogonia.

New Jersey Rush

No significant impacts to New Jersey rush are anticipated to occur as a result of implementing the proposed action. Minor, short-term adverse and minor-to-moderate, long-term beneficial impacts to the species would be expected during certain site-specific natural resources management activities.

FWVA implements a 150-foot “limited disturbance” management buffer around New Jersey rush colonies (including habitat) to ensure that land management and other activities do not negatively impact this species or its habitat. Management buffers may extend outwards a maximum of 150 feet but are site-specific, as determined by the spatial distribution of the habitat, the surrounding vegetation physiognomy, and recurring land management activities required to maintain the training and range lands (e.g., trail maintenance, grass cutting, infrastructure maintenance). Activities with the potential to expose soils (e.g., land clearing) or significantly alter the forest canopy (e.g., timber harvesting) are precluded from occurring within the management buffers. Low-impact silvicultural activities (e.g., mid-story vegetation treatments, invasive species control) and early detection/rapid response to forest insects and disease (e.g., control treatments) may be conducted in New Jersey rush management buffers on an as-needed basis. Military training within New Jersey rush colonies and their buffers is unrestricted except for the requirement that tactical vehicles remain on established trails.

Implementation of the ICRMP is not anticipated to result in any significant impacts to New Jersey rush.

American Ginseng

No significant impacts to American ginseng are anticipated to occur as a result of implementing the proposed action. Minor, short-term adverse and minor-to-moderate, long-term beneficial impacts to the species would be expected during certain site-specific natural resources management activities.

All harvesting of American ginseng on FWVA property is strictly prohibited.

FWVA implements a 150-foot “limited disturbance” management buffer around ginseng colonies to ensure land management and other activities do not negatively impact this species or its habitat. Management buffers may extend outwards a maximum of 150 feet but are site-specific, as determined by the spatial distribution of the habitat, the surrounding vegetation physiognomy,

and recurring land management activities required to maintain the training and range lands (e.g., trail maintenance, grass cutting, infrastructure maintenance). Activities with the potential to expose soils (e.g., land clearing) or significantly alter the forest canopy (e.g., timber harvesting) are precluded from occurring within the management buffers. Military training in American ginseng colonies and their management buffers is unrestricted except for the requirement that tactical vehicles remain on established roads/trails and that the removal of plants is prohibited.

FWVA does not actively manage American ginseng habitat; however, habitat with identified populations of American ginseng is not typically timbered for commercial purposes and is precluded from land development to the greatest extent practicable. At FWVA, American ginseng is often a characteristic plant within late seral old-growth forests, which are considered unique vegetation communities and managed as Special Natural Areas in accordance with DoD and Army policy.

Implementation of the ICRMP is not anticipated to result in any significant impacts to American ginseng.

Pitcher Plants

No significant impacts to pitcher plants are anticipated to occur as a result of implementing the proposed action. Minor, short-term adverse and minor-to-moderate, long-term beneficial impacts to the species would be expected during certain site-specific natural resources management activities.

Documented locations of these 3 species on Fort Walker are located within RPAs. As such, the plants and their habitat are protected from most forms of disturbance. More information on areas designated as RPAs on FWVA can be found in Section 4.2.3.1.

Implementation of the ICRMP is not anticipated to result in any significant impacts to pitcher plants.

Bats

No significant impacts to Indiana bat, northern long-eared bat, little brown bat, or tricolored bat are anticipated to occur as a result of implementing the proposed action. Minor, short-term adverse impacts would be expected during certain site-specific natural resources management activities. These activities include conversion of woody forested areas into open tactical vehicle maneuvering corridors and invasive plant species controls. Many of these activities are expected to result in minor-to-moderate, long-term beneficial impacts to threatened and endangered bat species as the projects are designed to benefit the species and their habitats.

Larger-scale projects, such as timber harvesting, site rehabilitation, stand improvement, and prescribed burns, would be expected to have negligible impacts to threatened and endangered bats. These projects would create temporary alterations to the natural habitat in the project areas. The loss of habitat that would result from these activities would temporarily displace wildlife and potentially result in the loss of some wildlife. Although these activities create moderate, short- and long-term adverse impacts, the moderate, long-term beneficial impacts outweigh the adverse impacts. These management activities promote a healthy, sustainable forest ecosystem that benefits numerous species and provides ecologically valuable habitat.

FWVA initiates consultation with the USFWS prior to conducting actions which may impact protected bat species. All applicable permits and incidental take coverage are procured as necessary.

Implementation of the ICRMP is not anticipated to result in any significant impacts to threatened and endangered bats.

Bachman's Sparrow

No significant impacts to Bachman's sparrow are anticipated to occur as a result of implementing the proposed action.

Bachman's sparrow has not been observed on FWVA since 1992 and is thus not present on the installation. The INRMP includes periodical surveys for Bachman's sparrow to detect its presence or absence.

Peregrine Falcon

No significant impacts to the peregrine falcon are anticipated to occur as a result of implementing the proposed action. Minor, short-term adverse and minor-to-moderate, long-term beneficial impacts to the species would be expected during certain site-specific natural resources management activities.

Larger-scale projects, such as timber harvesting, site rehabilitation, stand improvement, and prescribed burns, would be expected to have negligible impacts to peregrine falcon; however, incidental adverse impacts to peregrine falcon might occur. These projects would create temporary alterations to the natural habitat in the project areas. The loss of habitat that would result from these activities would temporarily displace wildlife and potentially result in the loss of some wildlife. Although these activities create moderate, short- and long-term adverse impacts, the moderate, long-term beneficial impacts outweigh the adverse impacts. These management activities promote a healthy, sustainable forest ecosystem that benefits numerous species and provides ecologically valuable habitat.

Implementation of the ICRMP is not anticipated to result in any significant impacts to peregrine falcon.

Amphipods

No significant impacts to the Kenk's amphipod are anticipated to occur as a result of implementing the proposed action. Minor, short-term adverse and minor-to-moderate, long-term beneficial impacts to the species would be expected during certain site-specific natural resources management activities.

Management buffers are established around Kenk's amphipod seeps to protect the integrity of surficial habitats and water quality from potential impacts associated with land disturbance activities. Buffers are site-specific and are determined based on the size of the seep area, surrounding terrain (as determined from LiDAR), hydrology, and contiguity of surrounding habitats; the buffer areas for each seep generally exceed 200 feet all around, and they range in size from 1 to 6 acres (average buffer area is approximately 2.3 acres). These buffers are also afforded protection from disturbance activities by adjacent wetlands and the undulating terrain of the surrounding landscape. Within the buffers, land-disturbing activities (e.g., construction, land

management, pesticide application) are prohibited unless there is a significant impact to the military mission of FWVA, in which case coordination with USFWS would be conducted.

Implementation of the ICRMP is not anticipated to result in any significant impacts to threatened and endangered amphipods.

Butterflies

No significant impacts to the frosted elfin butterfly or monarch butterfly are anticipated to occur as a result of implementing the proposed action. Minor, short-term adverse and minor-to-moderate, long-term beneficial impacts to the species would be expected during certain site-specific natural resources management activities.

Management for frosted elfin butterfly includes avoiding activities that would damage their floral hosts, especially during periods when the butterfly is active. Management for monarch butterfly includes mapping of milkweed occurrences and use of pollinator habitats on the installation. Prescribed fires that support the grassland habitats of these flowers can help the installation support this butterfly. Finally, ongoing survey work is essential to monitor populations and determine habitat use.

Implementation of the ICRMP is not anticipated to result in any significant impacts to threatened and endangered butterflies**.**

No Action Alternative
The No Action Alternative would result in no significant impacts to threatened and endangered species. FWVA would continue to manage natural and cultural resources under the previous versions of the INRMP and ICRMP. Impacts would be minimized through the implementation of the REC process.

4.3.4 WETLANDS

4.3.4.1 AFFECTED ENVIRONMENT

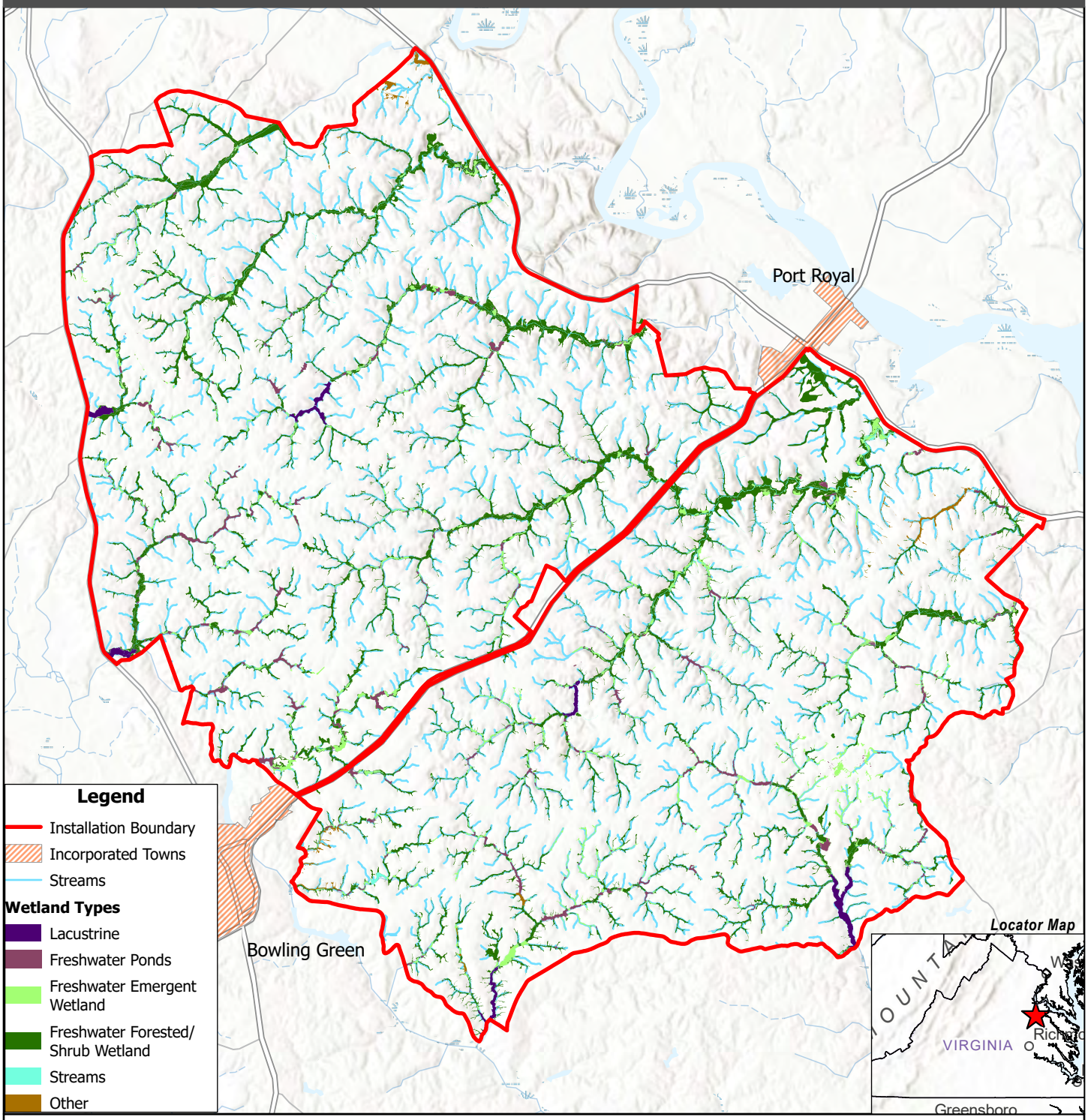
The U.S. Congress enacted the CWA in 1972 to restore and maintain the chemical, physical, and biological integrity of the nation's waters (33 U.S.C. § 1251 et seq.). Section 404 of the CWA delegates jurisdictional authority over wetlands to the U.S. Army Corps of Engineers (USACE) and the EPA. Waters of the U.S. protected by the CWA include rivers, streams, estuaries, and most ponds, lakes, and wetlands. Section 404 defines wetlands as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

FWVA maintains digital wetland delineations in its GIS data layer. Currently, there are 6,291 acres of palustrine emergent wetlands, palustrine scrub-shrub wetlands, and palustrine forested wetlands, which represent 8% of the installation's total land area. The majority (> 90%) of wetlands data within the GIS data layer were delineated from methodologies developed by the USFWS to create the National Wetlands Inventory. Although there are accuracy limitations with the National Wetlands Inventory delineations, it is utilized as the preliminary planning level analysis tool. The remaining wetlands data (< 10%) were delineated by environmental consulting companies that completed wetland field surveys using methods approved by the

USACE. The wetlands GIS data layer is updated annually to better facilitate current and future land use activities and to provide long-term sustainability of wetland resources (CEMML 2024*b*). Wetlands located on FWVA are depicted below (Figure 4-4).

Outside the natural hydrogeomorphic characteristics that have formed FWVA's wetlands, there are 2 additional influences that are primarily responsible for the creation and distribution of wetlands. The first influence, the American beaver (*Castor canadensis*), is responsible for hydrologic modifications that have influenced the establishment of numerous wetlands. The exact acreage of wetlands created by beavers is constantly changing and has not been quantified. The second influence, human activity, has resulted in the establishment of additional wetlands and is primarily due to historical improvements and modifications to the road networks (CEMML 2024*b*).

Figure 4-4. Wetlands at Fort Walker.



U.S. ARMY

Fort Walker, VA

Scale: 1:130,000

Coordinate System: NAD 1983 UTM Zone 18N

0 1 2 Miles

N

Prepared By:
Luke Worsham,
CSU-CEMML GIS Specialist

Last Save Date: 3/22/2024

Center for Environmental Management MILITARY LANDS

Cooperative Agreement Number:
W9126G-22-2-0039

Map created for presentation purposes only. Although efforts have been made to verify data, accuracy cannot be guaranteed

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4.3.4.2 Environmental Consequences

Preferred Alternative (Proposed Action)
No significant impacts to wetlands are anticipated to occur as a result of implementing the proposed action. Potential impacts to wetlands would be associated with implementing activities associated with the ICRMP and INRMP. Impacts would be minimized through the implementation of BMPs located in Section 2 of Table 2-1. More specifics on potential wetlands impacts are described below.

Minor, short-term adverse impacts would be expected during certain site-specific natural resources management activities. These activities include RPA maintenance, vegetation management (e.g., pre-commercial thinning, crop tree release, understory treatments), invasive or nuisance species removal (e.g., manual, chemical, mechanical, biological controls), habitat management (e.g., small whorled pogonia habitat management, spotted turtle habitat management, fisheries habitat improvement), and impoundment management (e.g., waterfowl pond habitat management, pond repair, biological evaluation). Minor to moderate, long-term beneficial impacts to wetlands would be expected from these activities.

Larger-scale projects, such as timber harvesting, site rehabilitation, stand improvement, and prescribed burns, would be expected to have moderate, short- and long-term adverse impacts to wetlands. These projects would create temporary alterations to the natural habitat and vegetative cover loss in the project areas. Although these activities create moderate, short- and long-term adverse impacts, the moderate, long-term beneficial impacts outweigh the adverse impacts. These management activities promote a healthy, sustainable forest ecosystem that benefits numerous species and provides ecologically valuable habitat.

Implementation of the ICRMP is not anticipated to result in any significant impacts to wetlands.

No Action Alternative
The No Action Alternative would result in no significant impacts to wetlands. FWVA would continue to manage natural and cultural resources under the previous versions of the INRMP and ICRMP. Impacts would be minimized through the implementation of the REC process.

4.4 SOCIOECONOMIC CHARACTERISTICS

4.4.1 Transportation

4.4.1.1 Affected Environment

Access to FWVA is primarily limited to highway access via I-95, and Routes 1, 2, 17 and 301. Route 301, a 4-lane, north-south route that bisects FWVA, provides access to the installation's main entrance gate. The main gate (i.e., the north gate) is the installation's only access point that is open 24 hours a day, 7 days a week, and it is a controlled-access, 100% identification checkpoint. All visitors to FWVA must enter through the north gate. The south gate, located across Route 301 from the north gate, is open during peak hours throughout the week. This gate eliminates traffic congestion during peak hours. Other entrances along the installation's boundary may be opened for limited periods of time to accommodate unit training and avoid congestion at the north and/or south gates (FAPH 2013).

The section of Route 301 that bisects FWVA has an average annual daily traffic of 7,900 vehicles. The average annual daily traffic is 94,000 to 107,000 vehicles for I-95; 5,100 to 5,300

vehicles for Route 1; 5,400 to 6,100 vehicles for Route 2; and 5,500 to 5,600 vehicles for Route 17 (Virginia Department of Transportation 2024).

The primary transportation network within the installation consists of roads and streets that act as main distribution arteries and provide access to all functional areas. The road network at FWVA consists of approximately 500 miles of roads, 160 miles of which are paved roads. There is also a vast network of unpaved roads and tank trails used for military training. Secondary and tertiary light-duty roadways provide access between and within various functional areas. Wide, clear trails for the use of heavy tactical vehicles are adjacent to some roads. Unless otherwise posted, the maximum speed limit on the installation is 40 miles per hour for most vehicles, 25 miles per hour for tactical vehicles, and 10 miles per hour for all vehicles when passing troops.

No rail access or service is available at FWVA. The closest city to FWVA served by rail transportation, via Amtrak, is Fredericksburg, Virginia, which is 20 miles north of the main entrance of the installation. Ground transportation between Fredericksburg and the installation (approximately 30 minutes driving time) is available via privately owned vehicle, bus, limousine, taxi, or rental car. The city of Richmond is approximately 35 miles south of the installation and is also served by rail transportation via Amtrak.

No public transit access or bus service is available on FWVA or in Bowling Green. General aviation services are available to the north of the installation at Shannon Airport in Fredericksburg and to the south at Hanover County Municipal Airport. The closest commercial airport is Richmond International Airport, located approximately 45 miles south of FWVA. FWVA does not support private access to the installation via aircraft.

4.4.1.2 Environmental Consequences

Preferred Alternative (Proposed Action)
No significant impacts to transportation are anticipated to occur as a result of implementing the proposed action. Potential impacts to transportation would be associated with implementing activities associated with INRMP objectives and with resource identification projects proposed in the ICRMP. Impacts would be minimized through the implementation of BMPs located in Section 11 of Table 2-1. More specifics on potential transportation impacts are described below.

Negligible, short-term adverse impacts would be expected from passenger vehicles traveling to and from the project sites during the individual INRMP and ICRMP projects. On-post roads are designed to handle the traffic created by military vehicles and convoys and can support the vehicles and equipment that would be traveling to and from the project sites during proposed activities. There is no significant increase in the amount of traffic anticipated above the current amount of traffic generated during projects being conducted under the current INRMP and ICRMP.

Minor, short-term adverse impacts would result from prescribed burns. Smoke has the potential to reduce visibility on roadways post-wide and on a regional level.

Minor, short-term adverse impacts would result from the repair, maintenance, and replacement of culverts and low-water crossings, as the associated roadways would be closed during construction activities. Minor to moderate, long-term beneficial impacts would be expected from the improvement and maintenance of these roads. In addition, FWVA actively inventories roads and firebreaks that traverse wet areas and uses this data to redirect and minimize vehicle use

on these roads. Minor, long-term beneficial impacts would be expected from the redirection and minimization of vehicle traffic on these roads.

Minor, short-term adverse impacts would result from cultural resources identification controls during roadway, culvert, and low-water crossing projects. If the project work involves widening, relocating, or new drainage alterations onto previously undisturbed ground, a survey to identify cultural resources must be conducted prior to enlarging the area. This may result in an extended construction period and subsequently longer roadway closures that will adversely impact transportation.

No Action Alternative
The No Action Alternative would result in no significant impacts to transportation. FWVA would continue to manage natural and cultural resources under the previous versions of the INRMP and ICRMP. Impacts would be minimized through the implementation of the REC process.

4.4.2 Economics

4.4.2.1 Affected Environment

Economic activity refers to employment distribution, business growth, and individual income. The region of influence (ROI) subject to this analysis is the city of Fredericksburg and Caroline, Essex, King George, Spotsylvania, and Stafford counties. The ROI covers an area of 1,653 square miles in northeastern Virginia (Vernadero Group Incorporated 2016).

Caroline County's unemployment rate from November 2022 to December 2023 averaged 3.5%, which is higher than the Commonwealth's rate of 3.0%, but lower than the national rate of 3.6% (Bureau of Labor Statistics 2024). FWVA is 1 of Caroline County's largest employers. Other major employers include M.C. Dean, McKesson Corporation, State Fair of Virginia, Union Bankshares Headquarters, and VSE (Caroline County Virginia 2024).

Approximately 550 personnel are assigned to the garrison, including federal civilians, onsite contractors, and 2 military positions. More than 100 additional military and civilian employees work for tenant organizations (CEMML 2024*b*). The average number of personnel training at FWVA per day is 2,000. The majority of personnel commute from within 20 to 30 miles outside the installation.

4.4.2.2 Environmental Consequences

Preferred Alternative (Proposed Action)
No significant impacts to economics are anticipated to occur as a result of implementing the proposed action. Potential impacts to population and economics would be related to implementing activities associated with INRMP objectives and with resource identification projects proposed in the ICRMP. Impacts would be minimized through the implementation of BMPs located in Section 12 of Table 2-1. More specifics on potential population and economics impacts are described below.

Activities proposed in the INRMP and ICRMP would be expected to create minor, short- and long-term beneficial impacts to the regional economy. These impacts may result from supporting local business employment, materials sales, increasing local sales revenue from outside contractors staying in the region for the duration of proposed projects, and an increase in

recreational use of the installation. The sale of recreational permits goes to the FWVA ENRD in support of natural resources management.

Minor, long-term beneficial impacts would result from the sale of forest products on a post-wide and regional level. The sale of forest products at FWVA funds a portion of the FWVA Forestry Program's operating expenses. Additionally, as per 10 U.S.C. § 2665, the Commonwealth receives 40% of the total profits (timber revenue less program expenses) generated by the FWVA Forestry Program as a state entitlement to be used to improve public schools and public roads. In Virginia, this entitlement is distributed to Caroline County (CEMML 2024*b*).

Minor to moderate, long-term beneficial impacts would result from INRMP projects due to improvement of natural resources and recreational areas.

Minor, short-term adverse impacts would be expected from archaeological resources protection strategies outlined in the ICRMP. These protection strategies include surveys prior to vegetation management activities (e.g., timber harvesting and prescribed burns) or construction and the stoppage of work if cultural resources are encountered. The strategies would potentially slow down natural resources management and construction projects and add to the total cost of projects through an extension of the project schedule and additional cultural resources identification activities.

No Action Alternative
The No Action Alternative would result in no significant impacts to population and economics. FWVA would continue to manage natural and cultural resources under the previous versions of the INRMP and ICRMP. Impacts would be minimized through the implementation of the REC process.

4.4.3 Safety

4.4.3.1 Affected Environment

Health and safety services, including police and fire and rescue protection, are available on FWVA and within surrounding communities throughout Caroline County and Virginia.

The FWVA Directorate of Emergency Services, Law Enforcement Division has the primary responsibility of enforcing the rules, regulations, and security of the installation. The FWVA Fire Department provides fire prevention and protection services, including inspections and tests of fire protection equipment and systems at FWVA. The Fire Department also provides hazardous materials, first responder, and emergency medical services to the installation. There are 3 fire departments on FWVA.

The FWVA Lois E. Wells Health Clinic provides basic medical care to military personnel; however, it does not offer X-ray services or medical care for military family members. Basic sick calls and clinic services are offered from 0700 to 1430 Monday through Friday.

Paramedic services are offered 24 hours a day, 7 days a week. Major hospitals located offsite in the area include Mary Washington Hospital and Spotsylvania Memorial Regional Hospital in Fredericksburg; and Henrico Doctors Hospital, Medical College of Virginia, St. Mary's Hospital, and the Richmond Community Hospital in Richmond. Additional facilities and emergency services are located in Richmond and Fredericksburg.

The Caroline County Department of Fire-Rescue and Emergency Management provides fire and medical services to Caroline County residents. They are also available to assist surrounding communities and the FWVA Fire Department if needed. The Caroline County Sheriff's Office and Virginia State Police Department provide law enforcement protection throughout Caroline County and the state, respectively. They are also available to assist FWVA law enforcement if needed.

All FWVA pest control personnel that handle herbicides and pesticides must follow health and safety procedures outlined in the FWVA IPMP. Personnel must undergo medical surveillance, be provided with all appropriate health and safety information (e.g., FWVA IPMP, FWVA Hazard Communication Program, labels of pesticides, and pesticide safety data sheets), be provided respiratory protection, and be provided applicable personal protective equipment. FWVA conducts workplace monitoring for occupational health hazards, provides laundering facilities for pest control protective clothing, provides emergency decontamination facilities, and maintains fire protection for pesticide storage. The FWVA IPMP was prepared in accordance with the following regulations (FAPH 2020):

- 7 U.S.C. §136 et seq., *Federal Insecticide, Fungicide and Rodenticide Act*, as amended
- DoDI 4150.07, *DoD Pest Management Program*
- DoDI 4715.03, *Natural Resource Conservation Program*
- DoD Manual 4150.07, *Volume 2, DoD Pest Management Program Elements and Implementation: Pesticide Applicator Training and Certification Program*
- AR 200-1, Chapter 5, *Pest Management*
- 9 Virginia Administrative Code 25-800, VPDES General Permit for Discharges Resulting from the Application of Pesticides to Surface Waters Permit No. VAG87

FWVA personnel conducting prescribed burns will be exposed to health and safety risks. The FWVA IWFMP guides prescribed burning activities and affirms that firefighter and public safety are the priority of the Wildland Fire Management Program and all associated activities. The FWVA IWFMP outlines the following safety considerations and associated protocols: unexploded ordnance (UXO) safety, public safety, military safety, and firefighter safety. In respect to health and safety, the IWFMP was prepared in accordance with the following regulations (FWVA 2023*a*):

- Army Installation Wildland Fire Program Implementation Guidance
- U.S. Army Installation Management Command Policy Memorandum, *Execution of IMCOM Wildland Fire Programs*
- 10 U.S.C. §2465, *Gonzolas Amendment*
- 15 U.S.C. § 49.2201, *Fire Control and Prevention Act*

Given the historical use at FWVA, UXO is expected to occur in certain areas of the installation. Areas known to contain UXO have been mapped, are clearly identified by signage on the installation, and are inaccessible.

4.4.3.2 Environmental Consequences

Preferred Alternative (Proposed Action)
No significant impacts to safety are anticipated to occur as a result of implementing the proposed action. Potential impacts to safety would be associated with implementing activities associated with the INRMP and with resource identification projects proposed in the ICRMP. Impacts would be minimized through the implementation of BMPs located in Section 13 of Table 2-1. More specifics on potential safety impacts are described below.

Minor, short-term adverse impacts to safety would be expected during certain site-specific natural resources management activities. These activities include implementation of ITAM projects, forestry activities (e.g., timber harvesting, prescribed burns, timber stand improvement), improvements to recreational areas (e.g., parking and boat ramp maintenance, construction of trails and viewing platforms), vegetation management (e.g., pre-commercial thinning, crop tree release, understory treatments), invasive or nuisance species removal (e.g., manual, chemical, mechanical, biological controls), habitat management, fish and wildlife management, and impoundment management. Individuals conducting certain project activities would be exposed to health and safety risks such as weather exposure, exposure to pesticides or smoke, and mechanical injury. Visitors engaging in outdoor recreation activities would be exposed to health and safety risks similar to the individuals conducting project activities.

Minor, long-term beneficial impacts to safety would be expected from certain natural resources management activities that would be post-wide or site-specific. These activities include safety boundary mapping, installation of solar panels as heat protection, safety training (e.g., production of a hunter safety video, wildland fire training), and finalizing a Wildlife Aircraft Strike Hazard Plan.

Negligible, short-term adverse impacts to safety are anticipated as a result of the implementation of the ICRMP due to workers being exposed to health and safety risks.

The Preferred Alternative will not result in any impacts that disproportionately affect children.

No Action Alternative
The No Action Alternative would result in no significant impacts to safety. FWVA would continue to manage natural and cultural resources under the previous versions of the INRMP and ICRMP. Impacts would be minimized through the implementation of the REC process.

4.5 SUMMARY OF ENVIRONMENTAL CONSEQUENCES

Based on the analysis contained herein, this EA concludes that neither the implementation of the Preferred Alternative (Proposed Action) nor the No Action Alternative will constitute a major federal action with significant impact to human health or the environment. It is recommended that a FNSI be signed to complete the process of analysis under NEPA.

4.6 CUMULATIVE IMPACTS

The CEQ regulations that implement NEPA require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as impacts which result when the impact of the proposed action is added to the impacts of other present and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR § 1508.7). This type of interaction is expected to be rare for activities/projects under analysis in this EA and within the INRMP and ICRMP because an INRMP and ICRMP by design incorporate existing installation planning documents and management plans.

To determine the potential cumulative impacts, past, existing, and anticipated future projects at FWVA and the surrounding area were identified. Potential projects identified as cumulative actions included any planning or development activity currently being implemented or expected to be implemented in the reasonably near future. The projects identified as contributing to cumulative impacts on the resources addressed by this EA include previous and future development within the boundary of FWVA and those taking place in the surrounding community.

4.6.1 PAST, CURRENT, REASONABLY FORESEEABLE ACTIONS

This section discusses the potential for cumulative impacts caused by implementation of the alternatives under consideration in this EA when combined with other past, present, and reasonably foreseeable actions occurring in the project area (FWVA) or greater region of influence. Actions were considered if they were slated to occur within the next 10 years (i.e., beginning before 2035) and well developed in both space and time during EA development. Impacts to resources from past and present actions are incorporated into the environmental baseline described under the Affected Environment sections found in Sections 4.2, 4.3, and 4.4.

Projects incorporated into the cumulative effects analysis are listed in Table 4-9, along with brief descriptions of the projects, estimated start dates, and estimated acreages of disturbance.

Table 4-9. Past, present, and reasonably foreseeable future actions occurring on Fort Walker, Virginia and within the surrounding region.

Project No.	Project Name	Brief Description	Estimated Start Date	Acreage of Disturbance	Status	NEPA[1] Document (if applicable)
Army Actions Occurring on Fort Walker Virginia						
1	29th ID Infantry Division Headquarters	Construction of 29th ID Infantry Division Headquarters which would consist of a 2-story administrative-style building with paving for supporting parking areas	Unknown	Unknown	Future	Environmental Assessment
2	99th Regional Support Command's, 88th Equipment Concentration Site expansion	Construction of an expansion to the 99th Regional Support Command's, 88th Equipment Concentration Site and paving for its associated parking area	Unknown	Unknown	Future	Amended Environmental Assessment to previous Environmental Assessment
3	Dam Program	Repairs, replacement, and maintenance to existing water control structures associated with the regulated dam inventory	Unknown	Unknown	Future	Work Order and Record of Environmental Consideration for each individual dam project
4	Culvert/Low-Water Crossing Program	Repairs, replacements, and maintenance to existing culverts and low-water crossings	Ongoing	Up to 4.83 acres	Present, Future	Work Order and Record of Environmental Consideration for each individual culvert or low-water crossing project
5	Bridge Program	Repairs, replacement, and maintenance to existing bridges	Unknown	Unknown	Future	Work Order and Record of Environmental Consideration for each individual bridge project

Table 4-9. Past, present, and reasonably foreseeable future actions occurring on Fort Walker, Virginia and within the surrounding region.

Project No.	Project Name	Brief Description	Estimated Start Date	Acreage of Disturbance	Status	NEPA[1] Document (if applicable)
6	Solar Microgrid	Construction of a solar microgrid	Unknown	50 acres	Future	Environmental Assessment
7	Family, Morale, Welfare, & Recreation facility improvement projects	Projects could include expanding the current recreational vehicle park, expanding current recreational vehicle parking, and adding additional recreational/camping style cabins	Unknown	Unknown	Future	Work Order and Record of Environmental Consideration for each individual project
Non-Army Actions Occurring on Fort Walker Virginia						
N/A	N/A	N/A	N/A	N/A	N/A	N/A
Non-Army Actions Occurring off Fort Walker Virginia within the Region						
N/A	N/A	N/A	N/A	N/A	N/A	N/A

[1] NEPA= National Environmental Policy Act

4.6.2 Cumulative Impact Analysis

The contribution of the 2 alternatives analyzed in this EA, the Preferred Alternative (proposed action) and the No Action Alternative, to the cumulative impacts of the actions described above is different for each resource. Unless otherwise noted below, the No Action Alternative does not contribute to cumulative impacts. There is no contribution because the No Action Alternative has no impact on resources. In addition, the proposed action does not contribute to cumulative impacts related to topography and geology, floodplains, noise, hazardous materials, land use, transportation, utilities and energy conservation, population and economics, and safety because the alternative has no long-term impact on these resources. By not contributing to these cumulative impacts, the proposed action and the No Action Alternative are not leading to increasing impacts to resources within the post or throughout the region.

4.6.2.1 Soils

Proposed projects in the INRMP and resource identification projects in the ICRMP would be expected to have minor to moderate, short- and long-term adverse impacts to soils that would be site-specific or local to the project area. Adverse impacts would be minimized through the implementation of the REC process and BMPs under Section 4 of Table 2-1. The purpose of the INRMP is to conserve and manage natural resources and to ensure compliance with applicable laws and regulations. Therefore, the implementation of the INRMP projects would have moderate, long-term beneficial impacts to soils. Given that the projects in the INRMP and ICRMP are very similar to the past versions of the documents, no change in the trend of soil quantity or quality would be expected. Impacts would not be expected to contribute to cumulative impacts on the post-wide or regional level.

All actions in Table 4-9, with the exception of Project 6, will occur in areas of preexisting development and will result in minor, short-term, adverse impacts to soils within each project area. Project 6 would result in moderate, long-term, adverse impacts to soils, as the project would presumably convert approximately 50 acres to a solar microgrid with permanently compacted soils. If these projects are implemented at the same time and in the same or similar locations to the projects detailed in the Preferred Alternative, there is the potential for cumulative, short-term, adverse impacts to soils within each project area. Despite this, the long-term, beneficial impacts of the Preferred Alternative would offset its contributing, adverse impacts. Therefore, the implementation of the Preferred Alternative would not result in significant cumulative impacts to soils.

4.6.2.2 Floodplains

Proposed projects in the INRMP and resource identification projects in the ICRMP would be expected to have minor to moderate, short- and long-term adverse impacts to floodplains that would be site-specific or local to the project area. Adverse impacts would be minimized through the implementation of the REC process and BMPs under Section 4 of Table 2-1. All activities occurring on FWVA with the potential to impact floodplains have been assessed in the installation's WMP. FWVA evaluates all proposed activities on the installation to identify potential stressors and ensure implementation of adequate land use controls and BMPs to minimize or mitigate impacts to the watershed. The purpose of the INRMP is to conserve and manage natural resources and to ensure compliance with applicable laws and regulations. Therefore, the implementation of the INRMP projects would have moderate, long-term beneficial impacts to

floodplains. Impacts would not be expected to contribute to cumulative impacts on the post-wide or regional level. Given that the projects in the INRMP and ICRMP are very similar to the past versions of the documents, no change in the trend of floodplains would be expected.

All actions in Table 4-9, with the exception of Project 6, will occur in areas of preexisting development. Projects 3, 4, and 5 would have the potential to occur within floodplains and would result in minor, short-term, adverse impacts to floodplains within each project area; however, these projects are designed to maintain hydrological function and transportation, which would beneficially impact floodplains in the long-term. The remaining projects would presumably not be located within floodplains. If Projects 3, 4, and 5 are implemented at the same time and in the same or similar locations to the projects detailed in the Preferred Alternative, there is the potential for cumulative, short-term, adverse impacts to floodplains within each project area. Despite this, the long-term, beneficial impacts of the Preferred Alternative would offset its contributing, adverse impacts. Therefore, the implementation of the Preferred Alternative would not result in significant cumulative impacts to floodplains.

4.6.2.3 Water Resources

No significant cumulative impacts to water resources would be expected due to implementing the Preferred Alternative. Proposed projects in the INRMP and resource identification projects in the ICRMP would be expected to have minor, short-term adverse impacts to water resources that would be site-specific or local to the project area. The potential exists for short-term surface water quality changes during natural and cultural resources management activities, and this could combine with other impacts to surface water quality on or around the installation. All activities occurring on FWVA with the potential to impact water quality and other watershed resources have been assessed in the WMP. FWVA evaluates all proposed activities on the installation to identify potential stressors and ensure implementation of adequate land use controls and BMPs to minimize or mitigate impacts to the watershed. Adverse impacts would be minimized through the implementation of the REC process and BMPs under Section 4 of Table 2-1. The purpose of the INRMP is to conserve and manage natural resources and to ensure compliance with applicable laws and regulations. Therefore, the implementation of the INRMP projects would have moderate, long-term beneficial impacts to water resources. Impacts would not be expected to contribute to cumulative impacts on the post-wide or regional level. Given that the projects in the INRMP and ICRMP are very similar to the past versions of the documents, no change in the trend of water resource quantity or quality would be expected.

All actions in Table 4-9, except for Project 6, will occur in areas of preexisting development. Projects 3, 4, and 5 would have the potential to occur near or within water resources and would result in minor, short-term, adverse impacts to water resources within each project area; however, these projects are designed to maintain hydrological function and transportation, which would beneficially impact water resources in the long-term. The remaining projects would presumably not be located near or within water resources. If Projects 3, 4, and 5 are implemented at the same time and in the same or similar locations to the projects detailed in the Preferred Alternative, there is the potential for cumulative, short-term, adverse impacts to water resources within each project area. Despite this, the long-term, beneficial impacts of the Preferred Alternative would offset its contributing, adverse impacts. Therefore, the implementation of the Preferred Alternative would not result in significant cumulative impacts to water resources.

4.6.2.4 Air Quality

The long-term air quality impacts expected to result from implementation of the INRMP and ICRMP are negligible and would not contribute to any significant cumulative impacts to regional air quality or violate federal, state, or local air regulations. The air emissions associated with proposed projects within the INRMP and ICRMP would be *de minimis* and, when combined with proposed development on and off the installation, are not expected to affect the attainment status of the region nor substantially increase GHG emissions.

All actions in Table 4-9 would involve construction projects that would result in minor, short-term, adverse impacts to air quality and GHG emissions from vehicle and heavy equipment usage. Projects 1 and 2 would create new, permanent buildings or building expansions that would increase energy usage and emissions, which would result in minor, long-term, adverse impacts to air quality. Project 6 would result in minor, long-term, beneficial impacts to air quality, as the construction of an approximately 50-acre solar microgrid would permanently increase renewable energy generation on FWVA and thus reduce GHG emissions. If these projects are implemented at the same time and in the same or similar locations to the projects detailed in the Preferred Alternative, there is the potential for cumulative, short-term, adverse impacts to air quality. Despite this, the adverse impacts to air quality would remain at negligible levels on a post-wide and regional level. Therefore, the implementation of the Preferred Alternative would not result in significant cumulative impacts to air quality.

4.6.2.5 Noise

Proposed projects in the INRMP and resource identification projects in the ICRMP would be expected to have minor, short-term adverse impacts to noise that would be site-specific or local to the project area. These impacts would result from the use of heavy equipment or tools that could result in increased noise levels. Any increase in noise levels from project activities would not increase the everyday average sound level on FWVA that occurs from mission-related operations. There are no activities/projects proposed in this EA that would result in permanent increased noise levels. Impacts would not be expected to contribute to cumulative impacts on the post-wide or regional level. Adverse impacts would be minimized through the implementation of the REC process and BMPs under Section 4 of Table 2-1. Given that the projects in the INRMP and ICRMP are very similar to the past versions of the documents, no change in the trend of noise levels would be expected.

All actions in Table 4-9 would involve construction projects that would result in minor, short-term, adverse impacts to noise from vehicle and heavy equipment usage within the project areas. Projects 1, 2, and 6 would create new, permanent buildings or building expansions that may increase permanent noise levels at each new facility, which would result in minor, long-term, adverse impacts to noise. If these projects are implemented at the same time and in the same or similar locations to the projects detailed in the Preferred Alternative, there is the potential for cumulative, short-term, adverse impacts to noise that would be site-specific. Despite this, the adverse impacts to noise would not surpass the site-specific level. Therefore, the implementation of the Preferred Alternative would not result in significant cumulative impacts to noise.

4.6.2.6 Cultural Resources

The cultural resources located at FWVA are well preserved and located within installation boundaries, making them inaccessible to the general public and therefore better protected. The installation's ICRMP is required to be updated at least every 5 years. The ICRMP anticipates projects that may affect historic properties, based on the installation's mission and proposed activities. The ICRMP also guides the installation in ensuring that historic properties are treated in compliance with applicable laws and regulations. All projects, including all actions in Table 4-9, occurring on the installation are evaluated for their potential to affect cultural resources. Projects are guided by the installation's ICRMP and comply with all applicable laws and regulations, including the NHPA, Native American Graves Protection and Repatriation Act, Archaeological Resources Protection Act, and American Indian Religious Freedom Act. Therefore, the implementation of the Preferred Alternative would not result in any cumulative impacts to cultural resources.

4.6.2.7 Hazardous Materials

The installation's Spill Contingency Plan describes the procedures to be implemented in the event of a spill of hazardous materials or petroleum, oil, and lubricants. Due to the extensive policies and procedures in place to prevent and mitigate potential spills and mishandling of hazardous and toxic substances, it is expected that the proposed action will not result in a cumulative impact from the use of hazardous and toxic substances. Any hazardous waste generated during proposed activities would be turned in to the installation's Hazardous Waste Accumulation Center for proper transfer and disposal.

All actions in Table 4-9 would involve construction projects that would potentially generate hazardous materials (e.g., oil, lubricants, petroleum products, etc.). Projects 1, 2, and 6 would create new, permanent buildings or building expansions, but the nature of the new facilities would not be expected to generate permanent sources of hazardous materials. If these projects are implemented at the same time and in the same or similar locations to the projects detailed in the Preferred Alternative, there is the potential for cumulative, short-term, adverse impacts from hazardous materials that would be site-specific. Despite this, FWVA's implementation of the installation's Spill Contingency Plan and use of policies and procedures to prevent and mitigate spills would minimize any impacts to a negligible level. Adverse impacts would be minimized through the implementation of the REC process and BMPs under Section 4 of Table 2-1. Therefore, the implementation of the Preferred Alternative would not result in significant cumulative impacts from hazardous materials.

4.6.2.8 Aesthetic Resources

The installation Design Guide ensures that buildings and structures are uniform in construction and conform to the overall aesthetics of the area. Development outside the installation is not anticipated to result in any combined, cumulative impacts to visual resources on or surrounding FWVA. Additionally, FWVA's ACUB Program preserves approximately 30,000 acres of undeveloped land surrounding the installation, protecting viewsheds off post, including some within historic districts. The continued success of the ACUB Program limits encroachment and further minimizes the potential for any cumulative impacts to visual resources.

All actions in Table 4-9, except for Project 6, will occur in areas of preexisting development and will result in minor, short-term, adverse impacts to aesthetic resources within each project area.

Project 6 would result in minor to moderate, long-term, adverse impacts to aesthetic resources, as the project would presumably convert approximately 50 acres of undeveloped land to a solar microgrid. If these projects are implemented at the same time and in the same or similar locations to the projects detailed in the Preferred Alternative, there is the potential for cumulative, short- to long-term, adverse impacts to aesthetic resources within each project area. Despite this, the long-term, beneficial impacts of the Preferred Alternative would offset its contributing, adverse impacts. Therefore, the implementation of the Preferred Alternative would not result in significant cumulative impacts to aesthetic resources.

4.6.2.9 Vegetation

Timber harvests and prescribed burns would be expected to have moderate, short- and long-term adverse impacts to vegetation and would result in a measurable loss of vegetation within the proposed project areas. Although these activities create adverse impacts, the moderate, long-term beneficial impacts significantly outweigh the adverse impacts. Other projects proposed for FWVA would likely produce minor, short-term adverse impacts to vegetation resources. Most of the vegetation removal that would occur under projects within this EA would be specific to invasive species removal or for targeted habitat management, both of which would ultimately result in beneficial impacts, especially in the long-term after native revegetation efforts. Additionally, FWVA partnered with several other agencies to create the Mattaponi Wildlife Management Area, which protects 2,500 acres of land from residential development near the installation and secures this land as open space for use in outdoor recreational activities such as canoeing, hunting, and hiking. Impacts from implementing the Preferred Alternative would not be expected to contribute to cumulative impacts on the post-wide or regional level. Impacts would be minimized through the implementation of BMPs located in Table 2-1.

All actions in Table 4-9, except for Project 6, will occur in areas of preexisting development and will result in minor, short-term, adverse impacts to vegetation within each project area. Project 6 would result in moderate, long-term, adverse impacts to vegetation, as the project would presumably convert approximately 50 acres to a solar microgrid with permanently compacted soils barren of previously existing vegetation. If these projects are implemented at the same time and in the same or similar locations to the projects detailed in the Preferred Alternative, there is the potential for cumulative, short-term, adverse impacts to vegetation within each project area. Despite this, the long-term, beneficial impacts of the Preferred Alternative would offset its contributing, adverse impacts. Therefore, the implementation of the Preferred Alternative would not result in significant cumulative impacts to vegetation.

4.6.2.10 Fish and Wildlife

Adverse impacts to fish and wildlife associated with the implementation of the Preferred Alternative would primarily arise from site-specific disturbance caused by natural resources management activities, which would be minor to moderate and short- to long-term. Invasive species removal could pose minor, short-term, adverse impacts to wildlife under activities and projects analyzed within this EA if wildlife are using invasive species for cover, nesting, or foraging; however, native revegetation projects would largely negate these adverse impacts in the long term. Adverse impacts would not result in permanent impacts to wildlife and would be minimized through the implementation of the REC process and BMPs (Table 2-1). Overall, the monitoring, maintenance, preservation, and protective measures in the INRMP and ICRMP

would have long-term beneficial impacts to fish and wildlife resources on the installation and in the surrounding area.

All actions in Table 4-9, except for Project 6, will occur in areas of preexisting development and will result in minor, short-term, adverse impacts to fish and wildlife within each project area. Project 6 would result in moderate, long-term, adverse impacts to fish and wildlife, as the project would presumably convert approximately 50 acres of undeveloped land to a solar microgrid. If these projects are implemented at the same time and in the same or similar locations to the projects detailed in the Preferred Alternative, there is the potential for cumulative, short-term, adverse impacts to fish and wildlife within each project area. Despite this, these cumulative impacts would cease after project completion and would not result in permanent or significant impacts to wildlife. These contributions result in the loss of wildlife habitat or increases in vehicular traffic on regional, local, and installation roads. In the case of wildlife habitat, adverse impacts regularly occur within the boundary of the installation and throughout the surrounding region.

The Army's continued preservation of undisturbed lands at FWVA offsets the intensity of this impact. Future development may potentially decrease the amount of naturally occurring habitat both on and off the installation. Development outside FWVA is guided by county and town plans, which take fish and wildlife resources into consideration during project planning. Additionally, FWVA partnered with several other agencies to create the Mattaponi Wildlife Management Area, which protects 2,500 acres of land from residential development near the installation and secures this land as open space for use in outdoor recreational activities such as canoeing, hunting, and hiking. Therefore, the implementation of the Preferred Alternative would not result in significant cumulative impacts to fish and wildlife.

4.6.2.11 Threatened and Endangered Species

Adverse impacts to threatened and endangered species associated with the implementation of the Preferred Alternative would primarily arise from site-specific disturbance caused by natural resources management activities, which would be minor to moderate and short- to long-term. Like what is described under cumulative impacts to fish and wildlife, possible adverse impacts would primarily arise from noise, disturbance, and habitat destruction resulting from natural resources management activities. Adverse impacts would not result in permanent impacts to threatened and endangered species and would be minimized through the implementation of the REC process and BMPs (Table 2-1). Overall, the monitoring, maintenance, preservation, and protective measures in the INRMP and ICRMP would have long-term beneficial impacts to threatened and endangered species on the installation and in the surrounding area.

All actions in Table 4-9, except for Project 6, will occur in areas of preexisting development and may result in minor, short-term, adverse impacts to threatened and endangered species within each project area. Project 6 would potentially result in minor, long-term, adverse impacts to threatened and endangered species, as the project would presumably convert approximately 50 acres of undeveloped land to a solar microgrid. If these projects are implemented at the same time and in the same or similar locations to the projects detailed in the Preferred Alternative, there is the potential for cumulative, short-term, adverse impacts to threatened and endangered species within each project area. Despite this, these cumulative impacts would cease after project completion and would not result in permanent or significant impacts to threatened and endangered species. These contributions result in the loss of wildlife habitat or increases in

vehicular traffic on regional, local, and installation roads. In the case of threatened and endangered species habitat, adverse impacts are avoided through surveys for species prior to project execution.

The Army's continued preservation of undisturbed lands at FWVA offsets the intensity of this impact. Future development may potentially decrease the amount of naturally occurring habitat both on and off the installation. Development outside FWVA is guided by county and town plans, which take threatened and endangered species into consideration during project planning. Additionally, FWVA partnered with several other agencies to create the Mattaponi Wildlife Management Area, which protects 2,500 acres of land from residential development near the installation and secures this land as open space for use in outdoor recreational activities such as canoeing, hunting, and hiking. Therefore, the implementation of the Preferred Alternative would not result in significant cumulative impacts to threatened and endangered species.

4.6.2.12 Wetlands

Projects proposed for FWVA in the INRMP would likely produce minor adverse impacts to wetlands. However, projects would require compliance with federal, state, and installation policies as well as local regulations and would be minimized through the implementation of the REC process and BMPs (Table 2-1). For example, the installation's continued implementation of RPAs around wetlands would contribute to beneficial cumulative impacts to natural resources occurring on the installation.

Other minor contributions to cumulative impacts are related to actions that are occurring on FWVA and throughout the surrounding region. If projects listed in Table 4-9 are implemented at the same time and in the same or similar locations to activities/projects analyzed under this EA, there is the potential for cumulative adverse impacts for a short period of time; however, these cumulative impacts would cease after project completion and would not result in permanent or significant impacts to wetlands. These contributions result in increased soil erosion, disturbance from construction in and around wetlands, and subsequently increased recreational usage of wetlands. Development outside FWVA is guided by county and town plans, which take wetland resources into consideration during project planning. Additionally, FWVA partnered with several other agencies to create the Mattaponi Wildlife Management Area, which protects 2,500 acres of land from residential development near the installation and secures this land as open space for use in outdoor recreational activities such as canoeing, hunting, and hiking. Overall, the monitoring, maintenance, preservation, and protective measures in the INRMP and ICRMP would have long-term beneficial impacts to wetland resources on the installation and in the surrounding area.

All actions in Table 4-9, except for Project 6, will occur in areas of preexisting development. Projects 3, 4, and 5 would have the potential to occur within wetlands and would result in minor, short-term, adverse impacts to wetlands within each project area; however, these projects are designed to maintain hydrological function and transportation, which would beneficially impact wetlands in the long-term. These contributions result in increased soil erosion, disturbance from construction in and around wetlands, and subsequently increased recreational usage of wetlands. These cumulative impacts would cease after project completion and would not result in permanent or significant impacts to wetlands. The remaining projects would presumably not be located within wetlands. If Projects 3, 4, and 5 are implemented at the same time and in the same or similar locations to the projects detailed in the Preferred Alternative, there is the

potential for cumulative, short-term, adverse impacts to wetlands within each project area. Despite this, the long-term, beneficial impacts of the Preferred Alternative and BMPs (i.e., monitoring, maintenance, preservation, and protective measures in the INRMP and ICRMP) would offset its contributing, adverse impacts. In addition, a FONPA would be required to analyze any project impacts to wetlands prior to implementation. Therefore, the implementation of the Preferred Alternative would not result in significant cumulative impacts to wetlands.

4.6.2.13 Transportation

Implementation of the INRMP and ICRMP would not be expected to adversely impact transportation on FWVA in the long-term. Projects detailed in this EA would be expected to have negligible, short-term impacts to transportation post-wide from increased traffic associated with commuting to project sites. The capacity of existing routes into FWVA is adequate to accommodate both the anticipated future growth in the surrounding communities and development on FWVA, as well as any minor increases associated with the proposed action. Additionally, FWVA's RPMP will guide future transportation and circulation improvements and development within installation boundaries.

All actions in Table 4-9, except for Project 6, will occur in areas of preexisting development and will result in minor, short-term, adverse impacts to transportation post-wide due to increased construction traffic. None of these projects would be expected to permanently increase the long-term traffic patterns on FWVA. If these projects are implemented at the same time and in the same or similar locations to the projects detailed in the Preferred Alternative, there is the potential for cumulative, short-term, adverse impacts to transportation within the installation. Many of the proposed projects in Table 4-9 are designed to improve roadways or parking areas, and the long-term, beneficial impacts of the Preferred Alternative would offset its contributing, adverse impacts. Therefore, the implementation of the Preferred Alternative would not result in significant cumulative impacts to transportation.

4.6.2.14 Economics

Since the proposed action would have negligible, direct impacts on population, demographics, employment, housing, and the demand on community services, no adverse cumulative socioeconomic impacts are anticipated to occur when considered with the growth of the surrounding community. Long-term beneficial impacts to the local economy would be expected as a result of implementation of the proposed action. The combination of proposed projects would generate employment opportunities and support local business sales within the ROI.

All actions in Table 4-9 would be expected to have minor, beneficial, short- and long-term impacts on a post-wide and regional level. All of the projects are designed to improve infrastructure and facilities on FWVA, which would benefit the installation and surrounding community through employment and increased functionality. If these projects are implemented at the same time and in the same or similar locations to the projects detailed in the Preferred Alternative, there is the potential for cumulative, long-term, beneficial impacts to socioeconomics on FWVA and the region. Therefore, the implementation of the Preferred Alternative would not result in adverse, significant cumulative impacts to economics.

4.6.2.15 Safety

Implementation of the proposed action, in combination with other proposed FWVA projects and surrounding community growth, would not result in any significant cumulative impacts to health and human safety, or any environmental health or safety risks that may disproportionately affect children. No adverse cumulative impacts are anticipated to occur regarding human health and safety.

5.0 PREPARERS AND REFERENCES

5.1 PREPARERS, CONTRIBUTORS, AND REVIEWERS

This EA has been prepared under the direction of the DPW-ENRD at FWVA, with support from CEMML.

The individuals that contributed to the preparation of this EA are listed below.

Jon O. Hammer	Environmental Analyst Center for Environmental Management of Military Lands Years of Experience: 6
Christi Gabriel	Principal Investigator Center for Environmental Management of Military Lands Years of Experience: 14
Pamela Sullivan	Environmental Analyst Center for Environmental Management of Military Lands Years of Experience: 15
Tamera Breidenbach	Junior Environmental Scientist Center for Environmental Management of Military Lands Years of Experience: 6
John Mullin	Archaeologist Directorate of Public Works, Environmental and Natural Resources Division U.S. Army Garrison, Fort Walker, VA Years of Experience: 30
Kristine Brown	NEPA Planner/Sustainability Coordinator U.S. Army Garrison, Fort Walker, VA Years of Experience: 24
Andrew Satterwhite	Natural Resources Coordinator Directorate of Public Works, Environmental and Natural Resources Division U.S. Army Garrison, Fort Walker, VA Years of Experience: 20

George Fisher	Chief Directorate of Public Works, Environmental and Natural Resources Division U.S. Army Garrison, Fort Walker, VA Years of Experience: 24

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APPENDIX A: NOTICE OF AVAILABILITY AND AGENCY CORRESPONDENCE

PLACE HOLDER - WILL BE INSERTED INTO FINAL DOCUMENT

APPENDIX B: COASTAL ZONE MANAGEMENT ACT (CZMA) CONSISTENCY DETERMINATION

Determination of Consistency with Virginia's Coastal Resources Management Program for Environmental Assessment: Implementation of the Integrated Natural Resources Management Plan and Integrated Cultural Resources Management Plan at Fort Walker, Virginia

This document provides the Commonwealth of Virginia with the United States (U.S.) Army's Consistency Determination under Coastal Zone Management Act (CZMA) § 307(c)(1) [or (2)] and 15 CFR § 930(c), for the implementation of the 2024-2029 Integrated Natural Resources Management Plan (INRMP) and 2023-2028 Integrated Cultural Resources Management Plan (ICRMP) at Fort Walker, Virginia (FWVA). The information in this Consistency Determination is provided pursuant to 15 CFR § 930.39. This activity includes:

The proposed action analyzed in the Environmental Assessment (EA) is the implementation of the 2024-2029 INRMP and the 2023-2028 ICRMP. These plans reflect FWVA's commitment to conserve, protect, and enhance the Installation's natural and cultural resources in a manner that supports and enhances realistic military training. The primary objective of these plans is to provide proactive natural and cultural resources management tools that allow FWVA to achieve resource management goals, mission requirements, and compliance with environmental regulations and policies. Each plan has elements specific to the management of the resources it is designed to support. Further detail on the proposed action is included in 2.0 Proposed Action of the EA.

The U.S. Army has determined that the implementation of the 2024-2029 INRMP and 2023-2028 ICRMP at FWVA affects the land or water uses or natural resources of Virginia in the following manner:

- No significant impacts to land or water uses or natural resources are anticipated to occur as a result of implementing the INRMP. Potential impacts would be associated with implementing activities associated with the INRMP. Impacts would be minimized through the implementation of BMPs in Table 2-1 of the EA.
- No significant impacts to land or water uses or natural resources are anticipated to occur as a result of implementing the ICRMP. Potential impacts would be associated with implementing cultural resource identification projects proposed in the ICRMP. Impacts would be minimized through the implementation of BMPs in Table 2-1 of the EA.
- Further detail on impacts and mitigation measures is included in Section 2.2 and Section 4.0 of the EA.

The Virginia Coastal Zone Management Program (CZMP) contains the following applicable enforceable policies:

I. TIDAL AND NON-TIDAL WETLANDS

It is the Commonwealth's policy that non-tidal surface waters, including wetlands and streams, shall be protected. Development shall only be permitted in a manner consistent with the protection of wetland acreage and function and stream function. Impacts to wetlands and

streams shall be avoided or minimized to the maximum extent practicable in order to achieve no net loss in non-tidal wetland acreage and function and to achieve no net loss in stream function.

No significant impacts to wetlands are anticipated to occur as a result of implementing the proposed action. Potential impacts to wetlands would be associated with implementing activities associated with ICRMP and the INRMP. Impacts would be minimized through the implementation of BMPs located in Table 2-1 of the EA. More specifics on potential wetlands impacts are described in Section 4.3.4 of the EA. Although the projects in the proposed action may temporarily impact wetlands, no net loss in non-tidal wetland acreage and function and no net loss in stream function are anticipated in the long-term. Long-term, the projects would have moderate beneficial impacts on the natural resources and military mission at FWVA. Projects would be reviewed individually by the FWVA Environmental and Natural Resources Division (ENRD) to evaluate and minimize environmental impacts prior to execution.

II. SUBAQUEOUS LANDS

All decisions affecting subaqueous lands shall be guided by the Commonwealth's General Policy to conserve, develop, and utilize its natural resources, its public lands, and its historical sites and buildings and to protect its atmosphere, lands, and waters from pollution, impairment, or destruction for the benefit, enjoyment, and general welfare of the people of the Commonwealth. Subaqueous lands include all the beds of the bays, rivers, creeks, and the shores of the sea within the jurisdiction of the Commonwealth and shall remain the property of the Commonwealth and may be used as a common by all the people of the Commonwealth for the purpose of fishing, fowling, hunting, and taking and catching oysters and other shellfish. The General Assembly has authorized the Virginia Marine Resources Commission to grant or deny any use of state-owned bottomlands, including dredging, aquaculture, the taking and use of material from the bottomland, and the placement of wharves, bulkheads, and fill.

No significant impacts to subaqueous lands are anticipated to occur as a result of implementing the proposed action. Potential impacts to subaqueous lands would be associated with implementing activities associated with the ICRMP and INRMP. Impacts would be minimized through the implementation of BMPs located in Section 2 of Table 2-1. More specifics on potential subaqueous land impacts are described in Sections 4.2.1, 4.2.3, 4.3.2, 4.3.4, and 4.4.1 of the EA. The projects in the proposed action would be anticipated to result in disturbance of subaqueous lands during the lifetime of the projects in the short-term. Long-term, the projects would have moderate beneficial impacts on the natural resources and military mission at FWVA through improved water quality, reduced flood risk, and maintaining function of the installation's transportation network. Projects would be reviewed individually by the FWVA ENRD to evaluate and minimize environmental impacts prior to execution.

IV. CHESAPEAKE BAY PRESERVATION AREAS

It is the policy of the Commonwealth to protect and improve the water quality of the Chesapeake Bay, its tributaries, and other state waters by minimizing the effect of human activity upon these waters. To that end, the Commonwealth will ensure that land use and development performance criteria and standards are implemented in Chesapeake Bay Preservation Areas (CBPAs), which if improperly used or developed may result in substantial damage to the water quality of the Chesapeake Bay and its tributaries.

No significant impacts to Chesapeake Bay Preservation Areas are anticipated to occur as a result of implementing the proposed action. Potential impacts to Chesapeake Bay Preservation Areas would be associated with implementing activities associated with the ICRMP and INRMP. Impacts would be minimized through the implementation of BMPs located in Table 2-1 of the EA. Specifics on potential Chesapeake Bay Preservation Areas impacts are described in Section 4.2.3 of the EA.

In accordance with Bay Act *Chesapeake Bay Preservation Area Designation and Management Regulations*, FWVA has established 100-foot-wide Resource Protection Areas (RPAs) around all intermittent and perennial streams that preclude or limit most forms of land disturbance. The construction of new facilities, roads, trails, and mechanically created firebreaks (i.e., plow lines) are prohibited within an RPA; the sole exception to the latter is in the event of wildfire suppression, which may require subsequent remediation. FWVA also applies land disturbance restrictions within the 100-foot-wide RPA to include forestry and other, non-silvicultural vegetation management activities.

Exceptions to the RPA policy may be required to meet military mission objectives and shall be validated and documented by the proponent and approved by the Department of Public Words (DPW)-ENRD Chief. Examples of such exceptions may include, but are not limited to, establishing desired terrain conditions for military mission support, thinning of overstocked forest stands for forest health improvement, forest insect and disease control, site-specific habitat management practices, and/or ecological restoration. When an exception has been approved, a 50-foot “no disturbance” buffer shall be established around all wetlands, perennial streams, and intermittent streams to minimize any impacts from management actions unless that buffer conflicts with military mission requirements (e.g., line of sight).

VI. WILDLIFE AND INLAND FISHERIES

No person shall import, export, take, pursue, kill, or possess in the Commonwealth any fish or wildlife, or stock any species of fish in inland waters, in a manner that negatively impacts the Commonwealth’s efforts in conserving, protecting, replenishing, propagating and increasing of the supply of game birds, game animals, fish and other wildlife of the Commonwealth. No person shall harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, possess, collect, transport, sell or offer to sell, or attempt to do so, any species of fish or wildlife listed as threatened or endangered by the Board of Game and Inland Fisheries, except:

- for zoological, educational, or scientific purposes and for propagation of such fish or wildlife in captivity for preservation purposes, when such actions will result in long-term survival benefits to such species; or
- when incidental to other lawful actions and where the species will accrue long-term survival benefits from measures implemented in concert with or as mitigation for the incidental take; or
- actions affecting a designated experimental population of said species, when such actions are taken in the context of implementing an approved Conservation Plan for the species; or
- possession, breeding, sale, and transport of nonnative wildlife listed as threatened or endangered by the United States Secretary of the Interior pursuant to provisions of the

federal Endangered Species Act of 1973 (P.L. 93-205), as amended, when (i) the federal designation does not specifically prohibit such possession, breeding, selling, or transporting and (ii) the nonnative wildlife is not listed by the Board of Game and Inland Fisheries as a predatory or undesirable species because its introduction into the

No significant impacts to fish and wildlife or threatened and endangered species are anticipated to occur as a result of implementing the proposed action. Potential impacts to wildlife and inland fisheries would be associated with implementing activities associated with ICRMP and INRMP objectives. Impacts would be minimized through the implementation of BMPs located in Table 2-1 of the EA. More specifics on potential wildlife and inland fisheries impacts are described in Sections 4.2.3 and 4.3.3 of the EA. Long-term, the projects would have moderate beneficial impacts on the wildlife and inland fisheries at FWVA. Projects would be reviewed individually by the FWVA ENRD to evaluate and minimize environmental impacts prior to execution.

IX. POINT SOURCE AIR POLLUTION

In addition to the requirements of the Clean Air Act established by the Federal Government and the Commonwealth of Virginia, which in accordance with 15 CFR § 923.45 are part of the Commonwealth's CZMP, it is the policy of the Commonwealth, after observing the effects of air pollution, to abate, control, and prohibit air pollution throughout the Commonwealth. It is the policy of the Commonwealth that, during the construction or operation of any structure or facility, reasonable precautions will be taken to prevent particulate matter from becoming airborne.

No significant impacts to air quality are anticipated to occur as a result of implementing the proposed action. Potential impacts to air quality would be associated with implementing activities associated with ICRMP and INRMP objectives.

Larger-scale projects, such as timber harvesting, site rehabilitation, stand improvement, and prescribed burns, would be expected to have moderate, short-term, adverse impacts to post-wide and regional air quality. The Integrated Wildland Fire Management Plan states a goal of 32,217 acres be burned annually, but the installation actually averages approximately 10,000 acres of annual burning. Prescribed burning activities would contribute the greatest amount of criteria pollutants. These activities would produce large quantities of smoke, containing particulate matter, volatile organic compounds, carbon monoxide, and some nitrogen oxides. The amount of pollutant emissions varies and is dependent on many factors, including the size of the burn, the heat at which the fire burns, and the fuel (vegetation type that is being burned). These impacts would be moderate and affect post-wide and regional air quality. However, given the short-term and seasonally limited nature of these burns, no significant impacts to air quality would be anticipated.

The proposed action would not generate air emissions that exceed *de minimis* threshold values, nor would it create any permanent stationary sources of air pollution. A Clean Air Act general conformity determination is not required. Impacts would be minimized through the implementation of BMPs located in Table 2-1 of the EA. More specifics on potential air quality impacts are described in Section 4.2.4 of the EA.

XI. NONPOINT SOURCE WATER POLLUTION

It is the policy of the Commonwealth to control stormwater runoff to protect the quality and quantity of state waters from the potential harm of unmanaged stormwater; to control soil erosion and sediment deposition in order to prevent unreasonable degradation of properties, stream channels, state waters, and other natural resources; and to otherwise act to control nonpoint source water pollution to ensure the general health, safety, and welfare of the citizens of the Commonwealth.

The proposed action would not be expected to result in any significant nonpoint source pollutants due to the implementation of sound, proactive stormwater management procedures. Limited soil erosion would be expected during construction projects. Long-term, the projects would have moderate beneficial impacts on the natural resources and military mission at FWVA through improved water quality. Projects would be reviewed individually by the FWVA ENRD to evaluate and minimize environmental impacts prior to execution. Impacts would be minimized through the implementation of BMPs located in Table 2-1 of the EA. More specifics on potential air quality impacts are described in Section 4.2.3 of the EA.

CONCLUSION

Based upon the following information, data, and analysis, the U.S. Army finds that the implementation of the 2024-2029 INRMP and the 2023-2028 ICRMP at Fort Walker, Virginia is consistent to the maximum extent practicable with the enforceable policies of the Virginia Coastal Zone Management Program.

Under the proposed action, the Army would implement best management practices (BMPs) and low-impact-development (LID) measures to reduce the potential for adverse impacts on Virginia CZMP resources. BMPs and LID measures are incorporated into the proposed action to avoid or minimize impacts to Virginia CZM Program resources and are further detailed in Section 2 of Table 2-1 in the EA. Taken together, these and other yet to be determined BMPs and mitigation measures would avoid or minimize impacts to Virginia CZMP resources at FWVA. These measures represent all practicable measures to minimize harm to these resources.

Pursuant to 15 CFR § 930.41, the Virginia CZMP has 60 days from the receipt of this letter in which to concur with or object to this Consistency Determination, or to request an extension under 15 CFR § 930.41(b). Virginia's concurrence will be presumed if its response is not received by the U.S. Army on the 60th day from receipt of this determination. The State's response should be sent to: Commander, U.S. Army Garrison Fort Walker, ATTN: ENRD, 19952 North Range Road, Fort Walker, VA 22427-3123