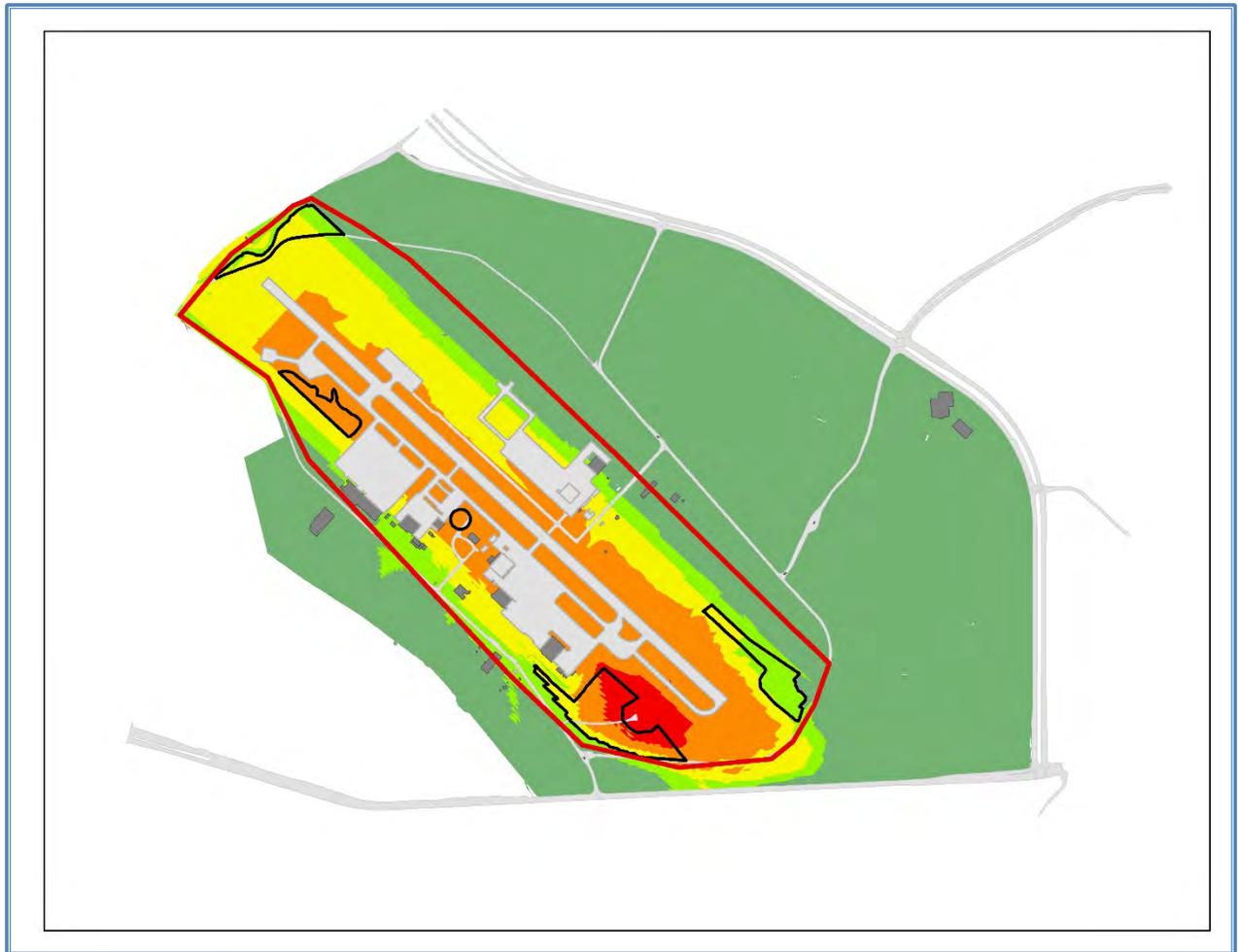


**DAVISON ARMY AIRFIELD HAZARDOUS TREE REMOVAL
ENVIRONMENTAL ASSESSMENT**



U.S. ARMY GARRISON FORT BELVOIR

VIRGINIA

OCTOBER 2016

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Finding of No Significant Impact (FNSI)
Davison Army Airfield Hazardous Tree Removal
U.S. Army Garrison, Fort Belvoir
Directorate of Public Works
Fort Belvoir, Virginia

Name of Action: Davison Army Airfield (DAAF) Hazardous Tree Removal

Description of Proposed Action and Need: The Proposed Action entails the removal of trees on DAAF airfield property that violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas to ensure pilot safety and to comply with regulatory guidance outlined in Unified Facilities Criteria (UFC) 3-260-01, Airfield and Heliport Planning Design, and Federal Aviation Regulation (FAR) Part 77.

In accordance with UFC 3-260-01, trees that project into imaginary surfaces must be removed or lowered to a distance that does not violate airfield and airspace criteria. Imaginary surfaces are surfaces in space established around airfields in relation to runway(s), helipad(s), or helicopter runway(s) that are designed to define the obstacle free airspace around the airfield. The imaginary surfaces for Department of Defense (DOD) airfields are the primary surface, the approach-departure clearance surface, the transitional surface, the inner horizontal surface, the conical surface, and the outer horizontal surface. Under the Proposed Action, Fort Belvoir would remove trees that encroach the imaginary surface creating a hazardous condition.

The Proposed Action is needed for safety and compliance purposes. During the 2012 Installation Management Command (IMCOM) Quality Assurance Evaluation, 2013 Airfield Certification and Safety Inspection, and 2014 United States Army Aeronautical Service Airfield Waiver Package review, it was determined that DAAF was not in compliance with regulatory guidance due to trees that penetrate the imaginary surfaces and create hazardous obstructions to aviation operations around the airfield.

Trees would be removed from five sections of DAAF by topping or cutting: 24 trees in the Northeast Section, 8 trees in the West Section, 2.5 acres of tree removal in the Northwest Section, 9.2 acres of tree removal in the Southwest Section, and 4.7 acres of tree removal in the Southeast Section. The stumps would be left in place. In compliance with the Federal Emerald Ash Borer quarantine (7 Code of Federal Regulations [CFR] 301.53), all trees removed for this project would be chipped or taken to landfills within the quarantine zone.

Alternatives: The Environmental Assessment (EA) evaluated the Proposed Action and the No Action Alternatives. Implementation of the No Action Alternative would not meet the safety and compliance requirements of UFC 3-260-01 or FAR Part 77.

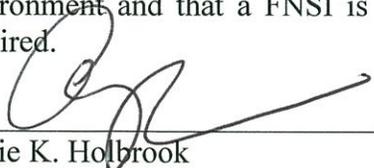
Environmental Consequences: The EA, which is attached hereto and incorporated by reference into this FNSI, examines the potential effects of the Proposed Action and the No Action Alternative on the following resource areas: air quality, water resources, biological resources, and coastal zone. No impact or negligible impacts to the following resources are anticipated and were not further analyzed in the EA: land use; noise; geology and topography; cultural resources; socioeconomics; environmental justice; traffic and transportation; utilities; hazardous materials and wastes; and visual and aesthetic resources.

Summary of Environmental Impacts: It is anticipated that the Proposed Action would result in no or negligible impacts to land use; noise; geology; topography; cultural resources; socioeconomics; environmental justice; traffic and transportation; utilities; hazardous materials and wastes; visual and aesthetic resources; ground water; floodplains; rare, threatened, and endangered species; and the coastal zone. Minor impacts to air quality would be anticipated from the use of equipment for the tree cutting. Minor impacts would be anticipated to surface water with regard to potential for erosion due to use of heavy machinery and from the loss of tree land cover that could result in increased stormwater runoff; stumps would be left in place and a construction general permit and Erosion and Sediment Control Plan would not be required, appropriate temporary erosion and sediment control measures and stormwater management planning would determine the appropriate best management practices to minimize these impacts. Minor impacts would be anticipated to water resources where tree cutting activities would take place in wetland areas and permanently convert palustrine forested wetlands to palustrine emergent wetlands; this impact would be mitigated through purchase of wetland mitigation credits. Minor temporary impacts from bringing vehicles into wetland areas for tree cutting would be minimized through the use of deck mats that prevent compaction and rutting but are considered temporary fill in the wetlands. Minor impacts to biological resources would be anticipated from the loss of trees, though the adjacent forested habitat would remain intact. Minor impacts are expected to occur from trees being removed in the resource protection area. Minor impacts to wildlife and wildlife habitat from the removal of trees that would convert forested habitat to shrub habitat are expected. Tree cutting activities would take place outside of the Northern Long-eared Bat time of year restriction to avoid impacts. No significant cumulative impacts are anticipated. No significant impacts on human health or the environment are expected to result from the Proposed Action.

Notice of Availability: A Notice of Availability was published on 22 June 2016 in the Mount Vernon Voice and on 23 June 2016 in the Springfield Connection and the Mount Vernon Gazette with comments due on 30 July 2016. Copies of the draft EA and draft FNSI were available for review at the Van Noy Library, Fort Belvoir, Virginia; the Lorton Branch of the Fairfax County Library in Lorton, Virginia; and the Sherwood Regional Branch, and the Kingstowne Branch of the Fairfax County Library in Alexandria, Virginia. A copy of this notice and the EA can be viewed at <http://www.belvoir.army.mil/envirodocssection2.asp>.

Response to Comments: Comments from federal, state, and local agencies received during the public review period were considered by Fort Belvoir for inclusion into the Final EA. No comments from the public were received. For more information, contact the Fort Belvoir Directorate of Public Works, Environmental and Natural Resources Division at 703-806-3193.

Conclusion: Pursuant to the Council on Environmental Quality (CEQ) regulations; Title 40 CFR Section 1500-1508 regarding procedural implementation of the National Environmental Policy Act (NEPA) of 1969; and implemented for the Army by Title 32 CFR 651, Environmental Analysis of Army Actions, it is anticipated that the Proposed Action would not have a significant effect on the environment and that a FNSI is appropriate. An Environmental Impact Statement (EIS) is not required.



Angie K. Holbrook
Colonel, U.S. Army
Commanding

5 Dec 16

Date

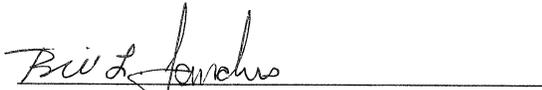
**DAVISON ARMY AIRFIELD HAZARDOUS TREE REMOVAL
ENVIRONMENTAL ASSESSMENT**

Reviewed by:
U.S. Army Garrison Fort Belvoir



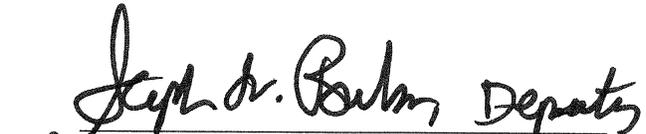
Felix M. Mariani
Chief, Environmental and Natural Resources Division

Recommended for Approval:
U.S. Army Garrison Fort Belvoir



Bill Sanders
Director, Public Works

Approved by:
U.S Army Garrison Fort Belvoir



~~for~~ Michelle D. Mitchell
Colonel, U.S. Army
Garrison Commander

ENVIRONMENTAL ASSESSMENT

Lead Agency: Department of Army

Title of Proposed Action: Environmental Assessment for the Davison Army Airfield Hazardous Tree Removal at Fort Belvoir, Virginia

Affected Jurisdiction: Fort Belvoir, Virginia

Prepared By: Directorate of Public Works, Fort Belvoir, Virginia

Approved By: Colonel Michelle D. Mitchell, Commander, Fort Belvoir, Virginia

Abstract: This environmental assessment (EA) analyzes and documents the impacts of the Proposed Action to remove hazardous trees at the Davison Army Airfield (DAAF) at Fort Belvoir. A No Action Alternative is also evaluated to serve as a baseline against which the impacts of the Proposed Action are evaluated. None of the predicted impacts of the Proposed Action would result in significant impacts at Fort Belvoir. Best management practices, however, would be employed to reduce or minimize impacts. Adverse impacts to wetland resources would be minimized through use of deck mats, which are a temporary impact but would prevent compaction and rutting, and permanent impacts would be mitigated through purchase of wetland mitigation credits. As a result, it is anticipated that preparation of an environmental impact statement is not required and a Finding of No Significant Impact (FNSI) will be published in accordance with the National Environmental Policy Act of 1969.

Review Period: Interested parties are invited to review and comment on the EA and draft FNSI during a 30 day period. Please submit any comments to Commander, U.S. Army Garrison Fort Belvoir, ATTN: Directorate of Public Works, Building 1442, 9430 Jackson Loop, Fort Belvoir, VA 22060-5116 or email your comments to imcom.fortbelvoir.dpw.environmental@us.army.mil. For further information, contact Mr. Felix Mariani, Chief of Environmental and Natural Resources Division at (703) 806-4007. The EA and draft FNSI were available for review on the internet at:

<http://www.belvoir.army.mil/envirodocssection2.asp>.

The EA and draft FNSI were also available for review at the following libraries:

Van Noy Library
5966 12th St., Building 1024
Fort Belvoir, VA 22060

Fairfax County Library
Lorton Branch
9520 Richmond Highway
Lorton, VA 22079-2124

Fairfax County Library
Sherwood Regional Branch
2501 Sherwood Hall Lane
Alexandria, VA 22306-2799

Fairfax County Library
Kingstowne Branch
6500 Landsdowne Centre
Alexandria, VA 22315-5011

EXECUTIVE SUMMARY

ES. 1 INTRODUCTION

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended, and 32 Code of Federal Regulations (CFR) Part 65, Fort Belvoir has prepared an Environmental Assessment (EA) to evaluate potential environmental and cultural effects associated with the proposed removal or topping of trees and shrubs on the Davison Army Airfield (DAAF) that violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas to comply with regulatory guidance outlined in the Federal Aviation Administration (FAA) flight safety criteria, Federal Aviation Requirement (FAR) Part 77, and the Unified Facilities Criteria 3-260-01, Airfield and Heliport Planning and Design. This EA has been prepared in accordance with NEPA (Title 42, United States Code [USC] §4321 et seq.), NEPA-implementing regulations of the Council on Environmental Quality (CEQ) (40 Code of Federal Regulations [CFR] Parts 1500–1508), and the Army’s NEPA-implementing regulations (32 CFR Part 651, Environmental Analysis of Army Actions). This EA was prepared concurrently with and integrated with environmental impact analyses and related surveys and studies required by the Fish and Wildlife Coordination Act (16 USC §661 et seq.), the National Historic Preservation Act of 1966 (16 USC 470 et seq.), the Endangered Species Act of 1973 (16 USC §1531 et seq.), and other environmental review laws (and their implementing regulations), and Executive Orders.

The DAAF is located along U.S. Route 1 on the North Post of Fort Belvoir. It is a Class A Army airfield equipped with an adjacent heliport that accommodates fixed and rotary wing aircraft. The mission of the DAAF is to transport passengers and freight for the Army and the Department of Defense (DOD). This facility is also used for training. The airfield contains five repair shops, maintenance aprons, storage areas for fuel and other flammable materials, and fuel dispensing facilities.

ES. 2 PROPOSED ACTION

The Proposed Action entails the removal of trees on DAAF airfield proper that violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas to ensure pilot safety and to comply with regulatory guidance outlined in UFC 3-260-01, Airfield and Heliport Planning Design, and FAR Part 77.

In accordance with UFC 3-260-01, trees that project into imaginary surfaces must be removed or lowered to a distance that does not violate airfield and airspace criteria. Fort Belvoir would remove trees that encroach the imaginary surface creating a hazardous condition. Imaginary surfaces are surfaces in space established around airfields in relation to runway(s), helipad(s), or helicopter runway(s) that are designed to define the obstacle free airspace around the airfield. The imaginary surfaces for DOD airfields are the primary surface, the approach-departure clearance surface, the transitional surface, the inner horizontal surface, the conical surface, and the outer horizontal surface.

Trees would be removed from five sections of DAAF by topping or cutting: 24 trees in the Northeast Section, 8 trees in the West Section, 2.5 acres of tree removal in the Northwest Section, 9.2 acres

of tree removal in the Southwest Section, and 4.7 acres of tree removal in the Southeast Section. The stumps would be left in place. In compliance with the Federal Emerald Ash Borer quarantine (7 CFR 301.53), all trees removed for this project would be chipped or taken to landfills within the quarantine zone.

ES. 3 PURPOSE AND NEED

The purpose of the Proposed Action is to create a less hazardous airspace to ensure pilot safety while balancing the needs of sensitive environmental resources and the surrounding human environment. The proposed action is needed to ensure compliance with FAR Part 77 and UFC 3-260-01. During the 2012 Installation Management Command (IMCOM) Quality Assurance Evaluation, 2013 Airfield Certification and Safety Inspection, and 2014 United States Army Aeronautical Service Airfield Waiver Package review, it was determined that DAAF was not in compliance with regulatory guidance due to trees that penetrate the imaginary surfaces and are obstructions that create a hazard to aviation operations around the airfield.

ES. 4 ALTERNATIVES

This Environmental Assessment evaluates the Proposed Action and the No Action Alternatives. Implementation of the No Action Alternative would not meet the safety and compliance requirements of UFC 3-260-01 or FAR Part 77.

An alternative considered but eliminated from further consideration included elements of the Proposed Action as well as clearing additional trees, grading and filling wetlands. This alternative was eliminated as it involves clearing trees and grading topography that does not pose an immediate threat of obstruction to the imaginary surface, and it involved negative environmental impacts.

ES. 5 ENVIRONMENTAL CONSEQUENCES

Environmental Consequences: This EA examines the potential effects of the Proposed Action and the No Action Alternative on the following resource areas: air quality, water resources, biological resources, and coastal zone. It was found that there would be no impact or negligible impact on the following resources, which were not further analysed in the EA: land use and zoning; noise; topography, soils and geology; cultural resources; socioeconomics; traffic and transportation; utilities; hazardous materials and waste; and visual and aesthetic resources.

Summary of Environmental Impacts: It is anticipated that the Proposed Action would result in no or negligible impacts to land use; noise; geology; topography; cultural resources; socioeconomics; environmental justice; traffic and transportation; utilities; hazardous materials and wastes; visual and aesthetic resources; ground water; floodplains; rare, threatened, and endangered species; and the coastal zone. Minor impacts to air quality would be anticipated from the use of equipment and transportation for the tree cutting. Minor impacts would be anticipated to surface water with regard to potential for erosion due to use of heavy machinery and from the loss of tree land cover that could result in increased stormwater runoff; stumps would be left in place and a construction general permit and Erosion and Sediment Control Plan would not be required, appropriate temporary erosion and sediment control measures and permanent stormwater best

management practices would be implemented to minimize these impacts. Minor impacts would be anticipated to water resources where tree cutting activities would take place in wetland areas and permanently convert palustrine forested wetlands to palustrine emergent wetlands; this impact would be mitigated through purchase of wetland mitigation credits. Minor temporary impacts from bringing vehicles into wetland areas for tree cutting would be minimized through the use of deck mats that prevent compaction and rutting but are considered temporary fill in the wetlands. Minor impacts to biological resources would be anticipated from the loss of trees, though the adjacent forested habitat would remain intact. Minor impacts are expected to occur from trees being removed in the resource protection area. Wildlife and wildlife habitat from the removal of trees that would convert forested habitat to shrub habitat is also expected to be a minor impact. Tree cutting activities would take place outside of the northern long-eared bat active period to avoid impacts. No significant cumulative impacts are anticipated. No significant impacts on human health or the environment are expected to result from the Proposed Action.

ES. 6 CONCLUSIONS

Pursuant to CEQ regulations, 40 CFR Parts 1500-1508 regarding procedural implementation of the NEPA, and implemented for the Army by 32 CFR Part 651, Environmental Analysis of Army Actions, it is anticipated that the Proposed Action would not have a significant effect on the environment and that a Finding of No Significant Impact (FNSI) is appropriate. An environmental impact statement (EIS) will not be prepared.

Table ES-1: Summary of Impacts of the Proposed Action and the No Action Alternative

Resource	Resource Evaluated in Detail in the EA	Proposed Action	No Action Alternative
Air Quality	Yes	Minor temporary impacts from equipment.	No impacts
Ground Water	Yes	No impacts	No impacts
Surface water	Yes	Minor impacts from heavy machinery use during tree cutting activity and from permanent loss of trees. Temporary erosion and sediment control measures would be employed during tree removal activity and stormwater management best management practices would be employed, as appropriate, to address the change in land cover that could result in increased stormwater quantity and water quality concerns.	No impacts
Floodplains	Yes	No impacts	No impacts
Wetlands	Yes	Minor permanent adverse impacts would occur from converting 1.31 acres of forested wetland to emergent wetland and temporary impact to 1.31 acres of palustrine emergent wetland would occur from placing deck mats in the wetlands to prevent compaction and rutting from vehicle access to the trees to be removed. Mitigation would be provided by the purchase of credits from a mitigation bank at a one to one ratio.	No impacts

Resource	Resource Evaluated in Detail in the EA	Proposed Action	No Action Alternative
Vegetation	Yes	Minor adverse impacts due to the removal of trees along the edges of forests.	No impacts
Wildlife and Wildlife Habitat	Yes	Minor adverse impacts through the removal of trees from the project areas and converting forested habitat to shrub habitat.	No impacts
Rare, threatened and endangered species	Yes	No impacts. Tree removal activities would take place outside of the active period for the northern long-eared bat.	No impacts
Coastal Zone	Yes	The Proposed Action would be consistent with the Virginia Coastal Zone Management Policy.	No impacts.
Land Use	No	No impacts	No impacts
Noise	No	Negligible impacts during the tree removal process.	No impacts
Geology and Topography	No	No impacts	No impacts
Cultural Resources	No	No impacts	No Impacts
Socioeconomics	No	Negligible beneficial impacts during tree topping through personnel hired to complete the Proposed Action.	No impacts
Environmental Justice	No	No impacts	No impacts

Resource	Resource Evaluated in Detail in the EA	Proposed Action	No Action Alternative
Traffic and Transportation	No	Negligible impacts due to minimal traffic increases from the Proposed Action. Minor temporary impact to air traffic while trees are being cut and transported, long term beneficial impact for air traffic by removing obstructions.	Long term adverse impacts to air traffic due to airspace obstructions
Utilities	No	No impacts	No impacts
Hazardous Materials and Wastes	No	Negligible impacts generated by the Proposed Action in the form of logs, wood chips and other wood products. In compliance with the Federal Emerald Ash Borer quarantine, all trees removed for this project would be chipped or taken to landfills within the quarantine zone.	No impacts
Visual and Aesthetic Resources	No	Negligible impacts through the removal of trees along the border of the airfield.	No impacts

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- Appendix B: Air Quality Record of Non-Applicability
- Appendix C: Coastal Zone Federal Consistency Determination

1.0 PURPOSE AND NEED

1.1 INTRODUCTION

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended, and 32 Code of Federal Regulations (CFR) Part 65, Fort Belvoir has prepared an Environmental Assessment (EA) to evaluate potential environmental and cultural effects associated with the proposed removal or topping of trees and shrubs on the Davison Army Airfield (DAAF) that violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas to comply with regulatory guidance outlined in the Federal Aviation Administration (FAA) flight safety criteria, Federal Aviation Requirement (FAR) Part 77, and the Unified Facilities Criteria (UFC) 3-260-01, Airfield and Heliport Planning and Design.

The DAAF is located along U.S. Route 1 on the North Post of Fort Belvoir (Figure 1-1). It is a Class A Army airfield equipped with an adjacent heliport that accommodates fixed and rotary wing aircraft. The mission of DAAF is to transport passengers and freight for the Army and the Department of Defense (DOD). This facility is also used for training. The airfield contains five repair shops, maintenance aprons, storage areas for fuel and other flammable materials, and fuel dispensing facilities.

1.2 BACKGROUND

The DAAF is a 388-acre airfield facility that is comprised of 4,700 linear feet of painted runway, with extensions for overruns on either end bringing the total length to 5,630 feet. The runway is 81 feet wide, made of asphalt, and is located parallel to a 4,900-foot extended taxiway. A smaller concrete runway that is 450 feet long and 40 feet wide is used for the helipad (USAG Fort Belvoir, 2001).

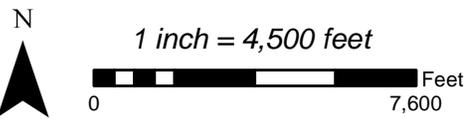
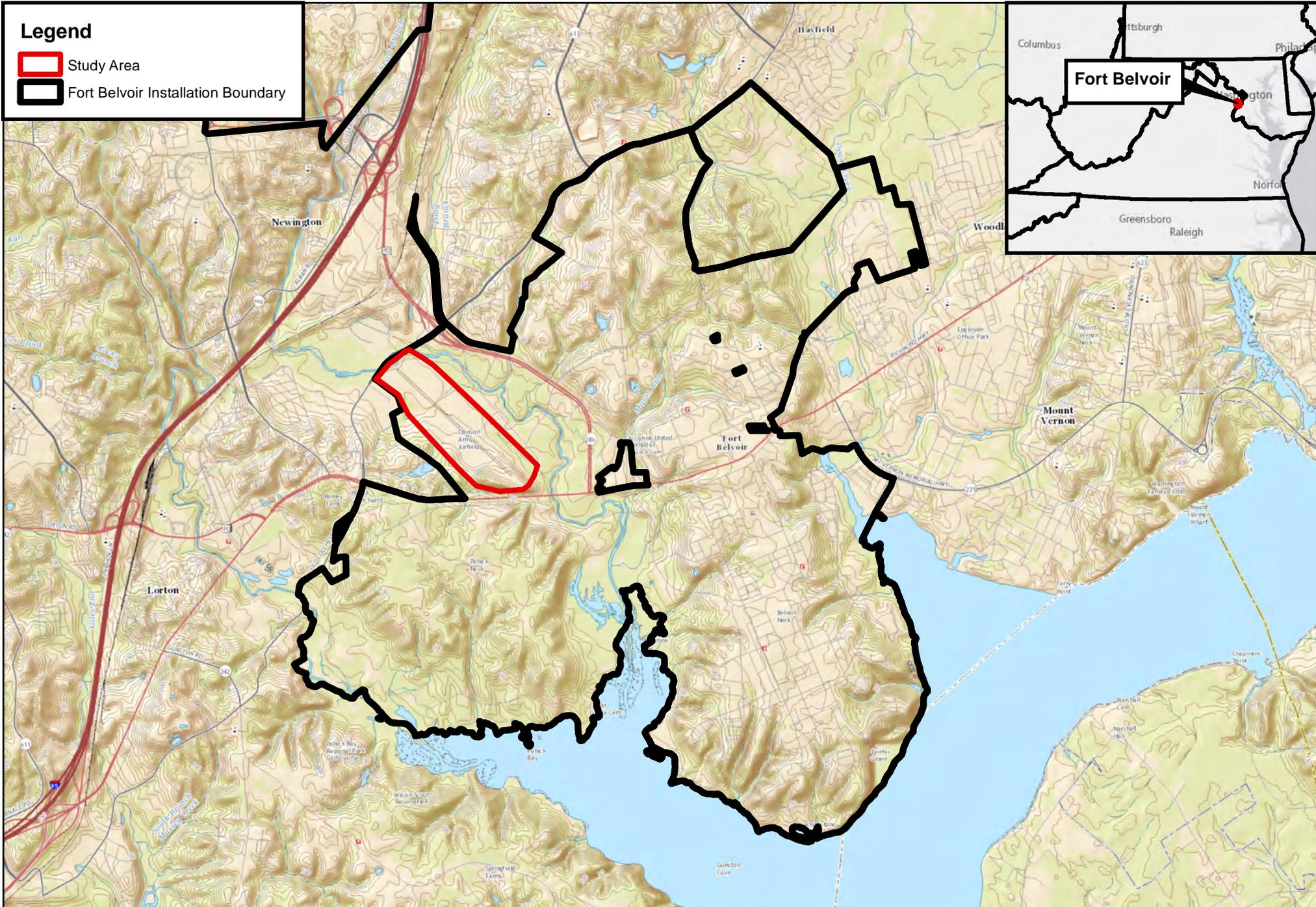
The runways and two helicopter landing pads require adequate clear zones (areas free of trees and other obstructions) to meet safety requirements. Vegetation surrounding the landing areas is maintained in a manner that does not encourage wildlife (e.g., deer, geese, and other birds). Aircraft are restricted to a minimum vectoring altitude of 2,000 feet over the Accotink Bay Wildlife Refuge (USAG Fort Belvoir, 2001).

In accordance with UFC 3-260-01, trees that project into imaginary surfaces must be removed or lowered to a distance that does not violate airfield and airspace criteria. Fort Belvoir would remove trees that encroach the imaginary surface creating a hazardous condition. Imaginary surfaces are surfaces in space established around airfields in relation to runway(s), helipad(s), or helicopter runway(s) that are designed to define the obstacle free airspace around the airfield. The imaginary surfaces for DOD airfields are the primary surface, the approach-departure clearance surface, the transitional surface, the inner horizontal surface, the conical surface, and the outer horizontal surface.

The ground surface within these areas must be clear of fixed or mobile objects, and graded to the requirements of UFC 3-260-01. Fixed obstacles include man-made or natural features such as

Legend

-  Study Area
-  Fort Belvoir Installation Boundary



Project Location Map
Fort Belvoir, Virginia

Source: Basemap USGS and ESRI 2016, Boundary Fort Belvoir GIS Data 2016

Figure 1-1

buildings, trees, rocks, terrain irregularities and any other features constituting possible hazards to moving aircraft.

In addition, the FAA, in the FAR Part 77 *Objects Affecting Navigable Airspace*, has established standards for determining obstructions to navigable airspace, and their effect on the safe and efficient use of airspace. The FAA similarly defines airspace that must be kept free of obstruction. The surface dimensions that are defined in UFC 3-260-01 are equivalent or more restrictive than the FAR Part 77 dimensions, therefore compliance with the UFC will result in compliance with FAR Part 77 and ensure elimination of obstructions to ensure safety.

During the 2012 Installation Management Command (IMCOM) Quality Assurance Evaluation, 2013 Airfield Certification and Safety Inspection, and 2014 United States Army Aeronautical Service Airfield Waiver Package review, it was determined that DAAF was not in compliance with regulatory guidance due to trees that penetrate the imaginary surfaces and are obstructions that create a hazard to aviation operations around the airfield.

1.3 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the Proposed Action is to create a less hazardous airspace to ensure pilot safety while balancing the needs of sensitive environmental resources and the surrounding human environment. The proposed action is needed to ensure compliance with FAR Part 77 and UFC 3-260-01. During the 2012 Installation Management Command (IMCOM) Quality Assurance Evaluation, 2013 Airfield Certification and Safety Inspection, and 2014 United States Army Aeronautical Service Airfield Waiver Package review, it was determined that DAAF was not in compliance with regulatory guidance due to trees that penetrate the imaginary surfaces and are obstructions that create a hazard to aviation operations around the airfield.

1.4 THE NEPA PROCESS

NEPA established the national policy for the environment and the Council on Environmental Quality (CEQ), and provides for the consideration of environmental issues in federal agency planning and decision-making. To implement the NEPA policies, CEQ promulgated *the Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 CFR Parts 1500-1508, referred to as the CEQ Regulations). Both NEPA and the CEQ Regulations require that federal agencies establish procedures to comply with the intended purpose of NEPA. Both also require federal agencies to encourage and facilitate public involvement as part of the NEPA process.

Army procedures to comply with NEPA are set forth in 32 CFR Part 651, *Environmental Analysis of Army Actions*. As such, these regulations establish the Army policies and responsibilities to integrate environmental considerations early in the decision making process. Instructions on preparing NEPA documentation and carrying out public and agency coordination are provided in the subject regulations.

Under the guidance provided in NEPA and in 32 CFR Part 651, either an Environmental Impact Statement (EIS) or an EA must be prepared for any federal action. Actions that are determined to be exempt by law, emergencies, or categorically excluded do not require the preparation of an EA

or EIS. If an action may significantly affect the environment, an EIS would be prepared. An EA provides sufficient evidence and analysis for determining whether or not to prepare an EIS. The contents of an EA include the need for the proposed action, alternatives to the proposed action, environmental impacts of the proposed action and alternatives; and documentation of agency coordination.

An evaluation of the environmental consequences of the proposed action and alternatives includes direct, indirect, and cumulative effects, as well as qualitative and quantitative (where possible) assessment of the level of significance of these effects. The EA results in either a Finding of No Significant Impact (FNSI) or a Notice of Intent (NOI) to prepare an EIS. If Fort Belvoir determines that this proposed action may have a significant impact on the quality of the human environment, then an EIS will be prepared.

1.5 AGENCY AND PUBLIC PARTICIPATION

1.5.1 Scoping

Fort Belvoir initiated coordination early in the development of the EA by conducting agency scoping in compliance with Section 7 of the Endangered Species Act. Fort Belvoir corresponded with the U.S. Fish and Wildlife Service (USFWS), the Virginia Department of Conservation and Recreation (VDCR), and the Virginia State Historic Preservation Office (SHPO) regarding the potential impacts from the Proposed Action on rare, threatened and endangered species. The correspondence is included in Appendix A.

1.5.2 EA Public Review

A Public Notice was released in May 2016 to appropriate local, state, and federal agencies to provide the opportunity for their review of the Draft EA and draft FNSI. Copies of the Public Notice, coordination letters, mailing list, and response letters are included in Appendix A.

Public participation opportunities with respect to this EA and decision making on the Proposed Action are guided by 32 CFR Part 651. The EA was made available to the public for 30 days, along with a draft FNSI. A Notice of Availability was published on June 22nd in the Mount Vernon Voice and on June 23rd in the Springfield Connection and the Mount Vernon Gazette with comments due on July 30th, 2016. Copies of the draft EA and draft FNSI are available for review at the Van Noy Library, Fort Belvoir, Virginia; the Lorton Branch of the Fairfax County Library in Lorton, Virginia; and the Sherwood Regional Branch, and the Kingstowne Branch of the Fairfax County Library in Alexandria, Virginia.

1.6 ENVIRONMENTAL LAWS AND REGULATIONS

Army decisions that affect environmental resources and conditions occur within the framework of numerous laws, regulations, and Executive Orders (EO). Some of these authorities prescribe standards for compliance while others require specific planning and management actions to protect environmental values potentially affected by Army actions. These include, but are not limited to: the Clean Air Act; Clean Water Act (CWA); Noise Control Act; Farmland Protection Policy Act; Endangered Species Act; Migratory Bird Treaty Act; National Historic Preservation Act (NHPA);

Archaeological Resources Protection Act; Native American Graves Protection and Repatriation Act; American Indian Religious Freedom Act; Resource Conservation and Recovery Act; EO 11988, *Floodplain Management*; EO 11990, *Protection of Wetlands*; EO 13508, *Chesapeake Bay Protection and Restoration*; EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*; EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*; EO 13693, *Planning for Federal Sustainability in the Next Decade*. Key provisions of appropriate statutes and EOs are described in more detail throughout the text of this EA.

This EA has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA), as amended (Title 42, United States Code [USC] §4321 et seq.), NEPA-implementing regulations of the Council on Environmental Quality (40 Code of Federal Regulations [CFR] Parts 1500–1508), and the Army’s NEPA-implementing regulations (32 CFR Part 651, *Environmental Analysis of Army Actions*). This EA was prepared concurrently with and integrated with environmental impact analyses and related surveys and studies required by the Fish and Wildlife Coordination Act (16 USC §661 et seq.), the National Historic Preservation Act of 1966 (16 USC 470 et seq.), the Endangered Species Act of 1973 (16 USC §1531 et seq.), and other environmental review laws (and their implementing regulations), and Executive Orders.

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2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

The Proposed Action entails the removal of trees and shrubs on DAAF airfield proper that violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas to comply with regulatory guidance outlined in UFC 3-260-01. Trees would be removed from five sections of DAAF that are described below and illustrated on Figure 2-1:

1. Southeast Section

All trees would be cleared within the Southeast Section of the airfield, within upland and wetland areas. The tree removal in this section would result in permanent conversion of 0.072 acres of palustrine forested wetlands to palustrine emergent wetlands. The area will be flagged to distinguish clearing areas and prevent incidental impacts. Tree trunks and crowns would need to be cut with care and caution, and all tree cuttings in the wetland area would need to be removed from the site. No cut trees, including limbs, can be placed or left in the wetland, and no grubbing nor grading are permissible in this area. When using heavy equipment, deck mats would be necessary to prevent equipment from sinking on the site and causing compaction and rutting in the wetland areas. Stumps will be left in place. Following clearing, at an appropriate time of year, wetlands seed mix would be spread. The Southeast Section is approximately 4.7 acres.

2. Northeast Section

The Northeast Section is approximately 3.5 acres and is within the area along the Accotink Creek, adjacent to the Northeast corner of the runway, the 24 tallest trees would be selectively removed from the upland area. Stumps would be left in place.

3. Northwest Section

Within the easternmost section of this area, all trees would be removed from a palustrine forested wetland. The tree removal in this section would result in permanent conversion of 1.234 acres of palustrine forested wetlands to palustrine emergent wetlands. The area will be flagged to distinguish clearing areas and prevent incidental impacts. Tree trunks and crowns would need to be cut with care and caution, and all tree cuttings in the wetland area would need to be removed from the site. No cut trees, including limbs, can be placed or left in the wetland, and no grubbing nor grading are permissible in this area. When using heavy equipment, deck mats would be necessary to prevent equipment from sinking on the site and causing compaction and rutting in the wetland areas. Stumps will be left in place. Following clearing, at an appropriate time of year, wetlands seed mix would be spread. The Northwest Section is approximately 2.5 acres.

4. West Section:

Approximately eight trees would be removed that are not shielded by buildings in the developed area west of DAAF runway.

5. Southwest Section:

On the hill located in the southwest section of the runway, all trees would be cleared. The Southwest Section is approximately 9.2 acres.

In compliance with the Federal Emerald Ash Borer quarantine (7 CFR 301.53), all trees removed for this project would be chipped or taken to landfills within the quarantine zone.

2.2 ALTERNATIVES

2.2.1 No Action Alternative

NEPA regulations refer to the continuation of the present course of action without the implementation of, or in the absence of, the Proposed Action, as the “No Action alternative.” Inclusion of the No Action alternative is the baseline against which Federal actions are evaluated, and is prescribed by the CEQ regulations and 32 CFR 651.

Under the No Action alternative, Fort Belvoir would forego the proposed tree removal and topping, thereby maintaining the current unsafe conditions and intrusions into the imaginary surface established around the airfield runway.

Implementing the No Action alternative would not satisfy the purpose and need to provide safe navigation and compliance with the regulatory guidance outlined in the FAR Part 77 and UFC 3-260-01.

2.3 ALTERNATIVE CONSIDERED BUT ELIMINATED

One additional alternative was considered for clearing obstructions from the imaginary surfaces around the airfield, but was eliminated from further consideration in this EA. The eliminated alternative was similar to the proposed action for the Northeast and West sections, but differed for the Southeast, Northwest, and Southwest sections:

1. Southeast Section

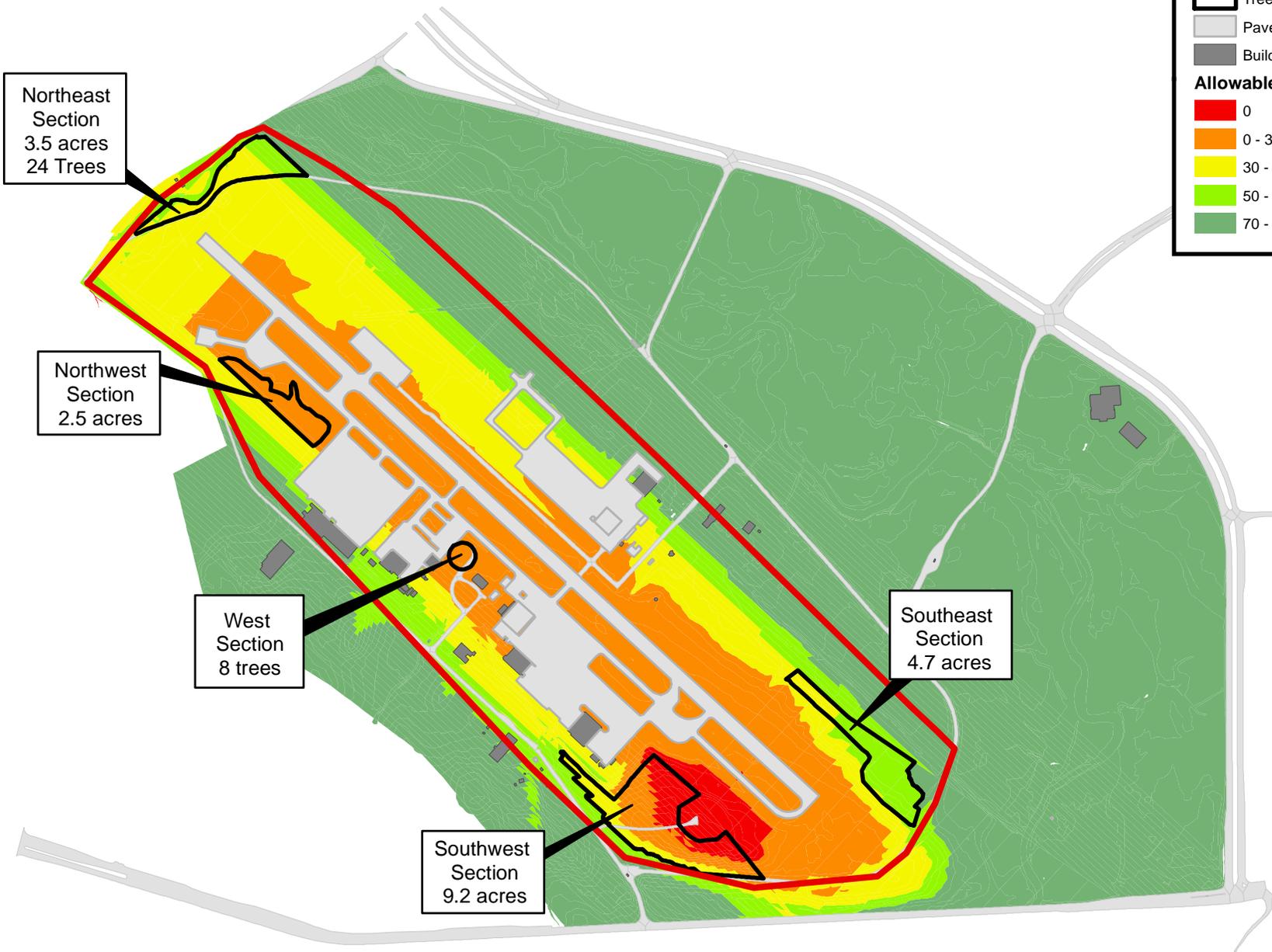
All trees would be cleared and grubbed, including stump removal, within the Southeast Section of the airfield. The entire Southeast Section would be graded and filled, to include the wetland area.

Legend

- Study Area
- Tree Removal Areas
- Pavement
- Buildings

Allowable Tree Height in Feet

- 0
- 0 - 30
- 30 - 50
- 50 - 70
- 70 - 215



N

1 inch = 1,000 feet

0

 Feet

1,500

Tree Removal Areas
Fort Belvoir, Virginia
 Source: Fort Belvoir GIS Data, 2016

Figure 2-1

2. Northwest Section

In addition to the work described in the Proposed Action, an additional 2.7 acres of canopy trees would be removed from a wetland area to the west of the work described in the Proposed Action. Low growing tree and shrub species would be preserved.

3. Southwest Section:

All trees on the hill in the Southwest Section of the airfield would be cleared and the hill would be leveled and graded. The soil from the hill would be used for fill and grading at the wetland area in the Southeast Section.

While this alternative would involve clearing additional trees and leveling some topography on the airfield, these trees and topography do not pose an immediate threat of obstruction to the imaginary surface. Furthermore, this removal and grading would result in negative impacts. Permanent impacts to wetlands in the Southeast Section would result from the clearing, grubbing, and filling of a wetland area; permanent impacts to wetlands in the Northwest section would result from removing trees that would convert the palustrine forested wetland to a palustrine emergent wetland; and permanent impacts to topography in the Southwest section would result from leveling and grading a hill. For the purposes of compliance with FAR Part 77 and UFC 3-260-01, these actions are not required at this time and this alternative is not evaluated in this EA.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 INTRODUCTION

The purpose of this chapter is to identify the affected environment and to disclose the potential environmental consequences of the Proposed Action and the No Action Alternative.

The affected environment includes the existing conditions of the environmental resources that may be potentially impacted by the alternatives. The first step in describing the affected environment is to establish the geographic area where potential impacts are expected to take place by identifying a study area. The study area is the geographic area where the potential impacts of the alternatives retained for further study are analyzed. The extent of the study area depends upon the environmental resource being evaluated. For the purposes of this EA, the study area is the DAAF with the five sections of proposed tree removal within the DAAF boundary, as illustrated in Figure 2-1.

The potential effects of the alternatives on the affected environment are assessed within this section of the EA. Several terms are used to describe effects, also referred to as impacts, in this document. The effect may be described as positive or adverse. “Positive” means that the alternative would have a beneficial effect on the subject resource. The level of adverse or negative effect is described relative to the established threshold of significance. Adverse or negative impacts described as minimal or minor would have little effect on the resource and therefore would not exceed the applicable threshold of significance. An impact would be described as “significant” if it were to exceed the applicable threshold of significance. The threshold of significance is resource specific and established by considering context and intensity. Both context and intensity are considered because the level of intensity deemed significant may differ based on context. For instance, the threshold of significance for noise impacts would likely be different in a large city as compared to a remote national park.

3.2 RESOURCES NOT EVALUATED IN THIS ENVIRONMENTAL ASSESSMENT

To the extent possible, analyses of the various resources presented in this EA are streamlined based on the anticipated level of potential impact. The focus of this EA is on the potential environmental impacts associated with the proposed project to remove or top trees that are obstructions and violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas of the DAAF to ensure pilot safety while balancing the needs of sensitive environmental resources and the surrounding human environment in compliance with FAR Part 77 and UFC 3-260-01. The following resource areas are not analyzed in this EA because the Proposed Action either has no potential to affect them or the potential impacts would be negligible:

- **Land Use**— In 2007, in response to the 2005 Base Realignment and Closure actions, the United States (U.S.) Department of the Army (Army) updated and amended the land use plan in Fort Belvoir’s 1993 Real Property Master Plan. The *Final Environmental Impact Statement (FEIS) for Implementation of the 2005 Base Realignment and Closure Recommendations and Related Army Actions at Fort Belvoir, Virginia* addressed the

adoption of the amended land use plan as well as the Base Realignment and Closure realignment actions at Fort Belvoir. In 2015, Fort Belvoir's Real Property Master Plan Final Environmental Impact Statement was completed. Implementation of the Proposed Action would not impact current or future land use because tree removal would not change land use designations within DAAF and Fort Belvoir.

Additionally, the National Capital Planning Commission (NCPC) provides planning guidance for federal land and building in the National Capital Region through its document, *Comprehensive Plan for the National Capital: Federal Elements* (NCPC, 2004). NCPC will be afforded the opportunity to review this EA; assess the Proposed Action's compatibility with federal planning goals, guidelines, and initiatives; and provide comments before a decision is made on the final action. As a result, impacts to land use are not analyzed in this EA.

- **Noise**—The Noise Control Act of 1972 (Public Law 92-574) directs federal agencies to comply with applicable federal, state, interstate, and local noise control regulations. Fairfax County Code prohibits creating sounds louder than 55 decibels (dB) in a residential area and 60 dB in a commercial area. It also prohibits creating any excessive noise on any street adjacent to any school, institution of learning, court, or hospital that interferes with its function (Fairfax County Code Section 108-4-1). Construction and demolition activities are, however, exempt from the Fairfax County ordinance if they occur between 7:00 a.m. and 9:00 p.m. The topping and cutting of trees and removal of tree trunks would require use of chainsaws and vehicles that would generate short-term increases in noise within the DAAF; these activities would be performed during the noted hours and would comply with all noise ordinances and regulations; therefore, impacts would be negligible. In addition, noise created by the Proposed Action would be below current day-night average noise levels experienced by persons on the ground underneath the flight patterns of aircraft approaching or taking off from DAAF. The trees being removed may offer a slight sound buffer to areas in close proximity to DAAF, but it is predicted that the removal of the noise buffer would not have a detectable effect with the approach of aircraft on DAAF. No long-term impacts from the Proposed Alternative are anticipated to the noise environment at Fort Belvoir. Therefore, noise impacts are not analyzed in this EA.
- **Geology and Topography**—The natural geologic character and the general topography of the installation would not be impacted under the Proposed Action. No grading or excavation of land is required under the Proposed Action and no long term effects to geology and topography are anticipated. As a result, impacts to geology and topography are not analyzed in this EA.
- **Cultural Resources**—The Proposed Action is not expected to impact cultural resources as no historic properties or archaeological resources were identified adjacent to or within the direct or indirect Area of Potential Effect (APE), as defined by Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. Fort Belvoir evaluated DAAF for eligibility for listing on the National Register of Historic Places and determined the facility was not eligible for listing (Virginia Department of Historic Resources [VDHR] No. , 029-5623, 2009-0716). Section 106 consultation for the Proposed Action was

coordinated with the VDHR, Catawba Indian Nation, Eastern Band of Cherokee-Indians, Pamunkey Indian Tribe, Tuscarora Nation of New York, and United Keetoowah Band of Cherokee Indians in Oklahoma. VDHR concurred with Fort Belvoir's determination of No Historic Properties Affect from the Proposed Action (VDHR File No. 2016-0188); this letter can be found in Appendix A. As no cultural resources are located adjacent to or within the APE for the Proposed Action, and no earth disturbance will occur, no impacts to cultural resources are expected and no further analysis is included in this EA.

- **Socioeconomics**—The Proposed Action to remove hazardous trees from DAAF would not result in changes to population, demographics, income, community services and facilities, or housing. Personnel hired and required to complete the Proposed Action are not likely to change their place of residence. Additionally, the Proposed Action would result in only temporary and negligible additive impacts to the local economy, no long term effects are anticipated. As a result, socioeconomics are not analyzed in this EA.
- **Environmental Justice** — EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations*, directs agencies to address environmental and human health conditions in minority and low-income communities to avoid the disproportionate placement of any adverse effects from federal policies and actions on these populations. Census Block Groups 4220-1, 4211.03-2, 4211.03-1 are block groups with environmental justice minority populations directly adjacent to DAAF. There are no block groups directly adjacent to DAAF that are considered environmental justice low-income populations. Local residents may include low-income populations, but these populations would not be particularly or disproportionately affected by the Proposed Action, as it would be limited to within DAAF. The proposed removal of hazardous trees would not disproportionately effect minority populations or low income communities and thus environmental justice is not analyzed in this EA.
- **Traffic and Transportation**—Implementation of the Proposed Action would require the use of construction vehicles to remove tree debris. It would also require the use of privately owned vehicles to bring the construction crew onto the installation; however; the removal of trees and shrubs on DAAF airfield would contribute less than ten percent of the total traffic stream during the morning and evening peak hours. The increase in traffic created by the Proposed Action would be a negligible impact to the existing traffic patterns, and as a result, transportation is not analyzed in this EA.

Flight and airfield operations could be temporarily impacted when equipment is actively working on areas in close approximation to the runway. All contractors involved with the Proposed Action would receive flight line training, and would be required to update training and certifications accordingly. Long term beneficial impacts to air traffic would be realized from removal of flight obstructions. Although a minor temporary impact would take place to flight operations, implementing the No Action alternative would have a permanent adverse impact by jeopardizing the ability of air traffic to safely conduct missions within DAAF.

- **Utilities**—Implementation of the Proposed Action would not result in the need for any upgrades in utilities that service Fort Belvoir. The Proposed Action would not increase the long-term demand for public utility services and would not affect regional or local water or energy supplies. Any work involving the trimming or removal of trees near overhead electric conductors would be performed by qualified line-clearance arborists. The Proposed Action would not require any short-term or long term amounts of electricity, water or other resources supplied by the base or by regional utilities; therefore, utilities are not analyzed in this EA.
- **Hazardous Materials and Wastes**—Fort Belvoir conducts its hazardous waste management program in compliance with the Resource Conservation and Recovery Act. The installation has a Hazardous Waste Management/Waste Minimization Plan and a Master Spill Plan. Fort Belvoir complies with EO 13693, *Planning for Federal Sustainability in the Next Decade*, by promoting the use of products to reduce solid and hazardous waste. In addition, the cleaning and maintenance departments have replaced toxic and hazardous materials with environmentally friendly chemicals and adhere to an Integrated Pest Management Plan. Fort Belvoir, Environmental and Natural Resources Division (ENRD), also files annual hazardous material and toxic chemical reports in compliance with the Emergency Planning and Community Right-to-Know Act. The Proposed Action would not generate hazardous waste, but would generate solid waste in the form of logs, wood chips and other wood products derived from trees. In compliance with the Federal Emerald Ash Borer quarantine (7 CFR 301.53), all trees removed for this project would be chipped or taken to landfills within the quarantine zone. It is anticipated that effects from the Proposed Action would be temporary and minimal and therefore are not be analyzed in this EA. Any soil or sediment that is suspected of contamination of wastes that are generated during construction related activities must be tested and disposed of in accordance with applicable federal, state and local laws.
- **Visual and Aesthetic Resources**—The existing aesthetics of DAAF is an open, maintained lawn with buildings and forests around the outer edge of the field. During the tree removal process, equipment to perform the removal would be present and attribute to minor short term impacts. Long term impacts are not anticipated since the aesthetic effects would be minimal and would be consistent with current land uses. The removal of trees is entirely within the boundary of Fort Belvoir and would not affect areas outside of the base. It is anticipated that effects from the Proposed Action would be temporary and minimal and therefore are not be analyzed in this EA.

3.3 AIR QUALITY

Air Quality is protected by the Clean Air Act. In the following sections, air quality in and around DAAF are described, applicable laws and regulations are explained, and potential impacts are disclosed. The study area for this analysis includes Fairfax County as a portion of the Washington, D.C., Maryland-Virginia airshed.

3.3.1 Affected Environment

The U.S. Environmental Protection Agency (USEPA) defines ambient air in 40 CFR Part 50 as: “that portion of the atmosphere, external to buildings, to which the general public has access.” In compliance with the 1970 Clean Air Act (CAA) and the 1977 and 1990 CAA Amendments, the USEPA has promulgated National Ambient Air Quality Standards (NAAQS). The NAAQS were enacted for the protection of the public health and welfare, allowing for an adequate margin of safety. To date, the USEPA has issued NAAQS for the following criteria pollutants: carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter (particles with a diameter less than or equal to a nominal 10 micrometers [PM₁₀] and particles with a diameter less than or equal to nominal 2.5 micrometers [PM_{2.5}]), ozone (O₃), nitrogen dioxide (NO₂), and lead (Pb).

3.3.1.1 Air Quality General Conformity

Federal regulations designate Air Quality Control Regions (AQCRs) in violation of the NAAQS as nonattainment areas. According to the severity of the pollution problem, nonattainment areas can be categorized as marginal, moderate, serious, severe, or extreme. Severity categories have not yet been applied to PM_{2.5} nonattainment areas. The USEPA classifies AQCR 47, which includes Fairfax County, as in marginal nonattainment for O₃ and as in nonattainment for PM_{2.5}. Fairfax County is in attainment for all other criteria pollutants. AQCR 47 was previously in nonattainment for CO, however, that portion of the airshed does not include Fairfax County.

AQCR 47 is also in the Ozone Transport Region. The Ozone Transport Region includes states in the northeast United States that must adhere to stricter conformity thresholds for nitrogen oxides (NO_x) and volatile organic compounds (VOCs), which are precursors for O₃.

The NAAQS for PM_{2.5} and O₃ are listed in Table 3-1.

Table 3-1: Ambient Air Quality Standards

Pollutant	Federal Standard	Virginia Standard
PM _{2.5} – 24-hour average	35 µg/m ³	35 µg/m ³
Ozone – 8-hour average	0.070 ppm	0.075 ppm

Sources: USEPA (2016), Commonwealth of Virginia (2012)

Notes: µg/m³ – micrograms per cubic meter; ppm – parts per million

To regulate the emission levels resulting from a project, federal actions located in nonattainment or maintenance areas are required to demonstrate compliance with the general conformity guidelines established in 40 CFR Part 93, *Determining Conformity of Federal Actions to State or Federal Implementation Plans* (the Rule).

AQCR 47 is in nonattainment for O₃ and PM_{2.5}; therefore, a General Conformity Rule applicability analysis to evaluate any impact to air quality is required. A summary of the analysis results is presented below, while detail of the methodology and calculations can be found in Appendix B. Emissions have been estimated for the O₃ precursor pollutants NO_x and VOCs, along with PM_{2.5}. Annual emissions for these compounds were estimated for the project actions (tree removal) and compared to the *de minimis* levels established in the Rule. The *de minimis* level for marginal O₃ nonattainment areas is 100 tons per year for NO_x and 50 tons per year for VOCs. Sources of NO_x

and VOCs associated with the proposed project would include emissions from tree topping and clearing equipment and construction worker commuter vehicles.

During land-disturbing activities, fugitive dust must be kept to a minimum by using control methods outlined in 9VAC5-50-60 et seq. of the Regulations for the Control and Abatement of Air Pollution. These precautions include, but are not limited to, the following:

- Use, where possible, water or suitable chemicals for dust control during the proposed demolition and construction operations and from material stockpiles;
- Install and use of hoods, fans and fabric filters to enclose and vent the handling of dusty materials;
- Cover open equipment for conveying materials; and
- Promptly remove spilled or tracked dirt or other materials from paved streets and dried sediments resulting from soil erosion.

If project activities include the burning of vegetative debris or use of special incineration devices in the disposal of land clearing debris, this activity must meet the requirements under 9VAC5-130 et seq. and 9VAC5-80-1100 et seq. of the regulations for open burning, and it may require a permit and Permits for fuel-burning equipment. The regulations provide for, but do not require, the local adoption of a model ordinance concerning open burning.

On July 11, 2006 USEPA established *de minimis* levels for PM_{2.5}. The final rule established 100 tons per year as the *de minimis* emission level for directly emitted PM_{2.5} and each of the precursors that form it (sulfur dioxide [SO₂], NO_x, VOCs, and ammonia). This 100 tons per year threshold applies separately to each precursor, meaning that if an action's direct or indirect emissions of PM_{2.5}, SO₂, NO_x, VOC, and ammonia cumulatively exceed 100 tons per year, but the emissions of no single precursor exceeds 100 tons per year, a general conformity determination would not be required. Neither the USEPA nor Virginia have found VOCs or ammonia to be a significant precursor of PM_{2.5} in AQCR 47; therefore, VOCs and ammonia are not required to be evaluated for PM_{2.5} under the Rule. Ammonia is not further addressed in this EA (VOCs are addressed as an O₃ precursor).

3.3.1.2 Air Permit Requirements

Title V Permit

The Virginia Department of Environmental Quality (Virginia DEQ) administers a program for permitting the construction and operation of new, existing, and modified stationary sources of air emissions in Virginia. Air permitting is required for many industries and facilities that emit regulated pollutants. The Virginia DEQ sets permit rules and standards for emissions sources on the basis of the age and size of the emitting units, attainment status of the region where the source is located, dates of equipment installation and/or modification, and type and quantities of pollutants emitted.

As a major stationary source for emissions, Fort Belvoir operates under a Title V Permit. The current installation-wide Title V Permit had an expiration date of March 21, 2008, but because Fort Belvoir submitted a renewal application by the regulatory deadline, the current permit does

not expire until the Virginia DEQ either issues or denies a renewal permit, which it has not done to date. All terms and conditions of the Title V Permit issued on March 21, 2003, remain in effect. The installation is required to submit a comprehensive emission statement annually.

3.3.1.3 Air Emissions at Fort Belvoir

As part of its Title V Permit, Fort Belvoir calculates permanent source emissions annually. Construction and vehicle emissions are not included in the calculation of annual emissions because these emission sources are temporary and not regulated by Title V of the CAA. Total emissions from significant sources at Fort Belvoir for 2014 are shown in Table 3-2.

Table 3-2: Emissions for Permitted Stationary Sources in 2014 (tons)

SO₂	CO	PM₁₀	PM_{2.5}	NO_x	VOC
0.30	23.94	2.23	1.55	40.29	3.06

Source: Virginia DEQ (2014)

Note: Emission totals do not include emissions from stationary sources that are not significant under Title V and/or otherwise subject to permit terms or restrictions.

3.3.1.4 Greenhouse Gases

There is broad scientific consensus that humans are changing the chemical composition of the earth’s atmosphere. Activities, such as fossil fuel combustion, deforestation, and other changes in land use, are resulting in the accumulation of trace greenhouse gases (GHGs), such as CO₂, in our atmosphere. An increase in GHG emissions is said to result in an increase in the earth’s average surface temperature, which is commonly referred to as global warming. Global warming is expected, in turn, to affect weather patterns, the average sea level, ocean acidification, chemical reaction rates, and precipitation rates, all of which is commonly referred to as climate change.

GHGs include water vapor, CO₂, methane, nitrous oxide, O₃, and several hydrocarbons and chlorofluorocarbons. Each GHG has an estimated global warming potential, which is a function of its atmospheric lifetime and its ability to absorb and radiate infrared energy emitted from the earth’s surface. A gas’s global warming potential provides a relative basis for calculating its carbon dioxide equivalent (CO₂e), which is a metric measure used to compare the emissions from various GHGs based upon their global warming potential. CO₂ has a global warming potential of 1 and is therefore the standard to which all other GHGs are measured.

Water vapor is a naturally occurring GHG and accounts for the largest percentage of the greenhouse effect. Next to water vapor, CO₂ is the second-most abundant GHG. Uncontrolled CO₂ emissions from power plants, heating sources, and mobile sources are a function of the power rating of each source, the feedstock (fuel) consumed, and the source’s net efficiency at converting the energy in the feedstock into other useful forms of energy (e.g., electricity, heat, and kinetic). Because CO₂ and the other GHGs are relatively stable in the atmosphere and essentially uniformly mixed throughout the troposphere and stratosphere, the climatic impact of these emissions does not depend upon the source location on the earth (i.e., regional climatic impacts/changes will be a function of global emissions).

Regulatory Climate

In April 2007, the U.S. Supreme Court determined that the USEPA has the regulatory authority to list GHGs as pollutants under the federal CAA. Congress has considered numerous proposals and bills to regulate GHGs but has not adopted any legislation.

Currently, federal agencies address emissions of GHGs by reporting and meeting reductions mandated in laws, executive orders, and policies. The most recent of these are EO 13693, *Planning for Federal Sustainability in the Next Decade*, of March 19, 2015.

The Energy Policy Act of 2005, Energy Independence and Security Act of 2007, and EO 13693 require an installation to adhere to specific energy improvements, which address waste reduction and improvements in efficiency. Specifically, the DoD Strategic Sustainability Performance Plan contains strategies to reduce energy waste and improve efficiency (DoD, 2015).

Baseline Greenhouse Gas Emissions at Fort Belvoir

GHG emission sources at Fort Belvoir include vehicle use, boilers, chillers, water heaters, and emergency generators. Current CO₂e emissions at Fort Belvoir in 2014 were 29,899 metric tons. The emission total is the amount reported annually under the requirements of 40 CFR Part 98 and does not include GHG emissions from mobile sources or emergency generator use.

3.3.2 Environmental Consequences

3.3.2.1 *Impacts of No Action Alternative*

Under the No Action Alternative, there would be no tree removal at DAAF on Fort Belvoir. No additional emissions would be generated from Fort Belvoir, and as a result, there would be no impacts to air quality.

3.3.2.2 *Impacts of Proposed Action Alternative*

A General Conformity Applicability Analysis was performed for the Proposed Action, which estimated the level of potential air emissions (CO, NO_x, VOC, SO₂, and PM_{2.5}). Appendix B contains a detailed description of the assumptions and methodology used to estimate the potential emissions for the project.

Emissions related to the hazardous tree removal project would be temporary and only occur during the time it takes to remove the trees. Emissions from the tree removal project activities are shown in Table 3-3. Emissions will occur in a period of less than twelve months but are presented in tons per year for comparison with Conformity thresholds.

Table 3-3: Total Annual Emissions from the Proposed Action

Construction Activity	Total Annual Emissions (tons per year)				
	CO	NO _x	VOC	PM _{2.5}	SO ₂
Use of chainsaws	1.03	0.002	0.32	0.02	0.0003
Support equipment	0.41	1.91	0.16	0.14	0.001
Total Emissions from Construction	1.44	1.92	0.47	0.15	0.001

The estimated emissions associated with the tree removal project are very low, a small fraction of what was reported for Fort Belvoir for each pollutant in 2014. The temporary impacts to air quality would be minor temporary impacts that are not regionally or locally significant.

Greenhouse Gases

Under the Proposed Action Alternative, short-term GHG emissions would be produced as a result of the tree removal activities. The contribution to CO₂ emissions is estimated at 66.0 metric tons, a 0.2 % increase over the GHG level reported for Fort Belvoir for 2014. As such, this increase is short-term and essentially negligible. Long-term GHG emissions would not increase under this alternative; therefore, the Proposed Action Alternative would have no significant, adverse impacts on GHG emissions.

The conclusion is that air quality impacts would not be significant on either a local or regional level from the tree removal activity of the Proposed Action. All emissions would be below *de minimis* levels and would also not be regionally significant for the pollutants of concern. A Record of Non-Applicability is available in Appendix B.

3.4 WATER RESOURCES

Water resources are protected by the Clean Water Act, Executive Orders, and state laws and regulations. In the following sections, the water resources in and around DAAF are described, applicable laws and regulations are explained, and potential impacts are disclosed. The study area for this analysis includes portions of the watershed of Accotink Creek and the streams and wetlands adjacent to or in which tree removal would occur.

3.4.1 Affected Environment

Fort Belvoir is located in Fairfax County, which lies within the Potomac River Basin of the Chesapeake Bay watershed. Fairfax County is drained by the Potomac River and its five major tributaries; Cameron Run, Hunter Creek, Dogue Creek, Accotink Creek, Pohick Creek, and the Occoquan River. DAAF is located within the Accotink Creek watershed.

3.4.1.1 Groundwater

Fort Belvoir is underlain by three main aquifers: lower Potomac aquifer, middle Potomac aquifer, and Bacons Castle Formation. The lower Potomac aquifer is the primary aquifer on the installation and in eastern Fairfax County. The lower Potomac aquifer exists between a layer of crystalline

bedrock and a thick wedge of clay that contains interbedded layers of sand. Water in this aquifer flows to the southeast; it is recharged in the western section of Fort Belvoir (USAG Fort Belvoir, 2001). Depth to the water table on the installation fluctuates, but it is typically 10 to 35 feet below ground surface. However, the water table may be at or near the surface near streams in the form of shallow, unconfined aquifers or perched water tables (USAG Fort Belvoir, 2001).

3.4.1.2 Surface Water

Fort Belvoir is located on the Potomac River in the Chesapeake Bay watershed. There are three named tributaries to the Potomac River on the installation: Accotink Creek, Pohick Creek, and Dogue Creek. Accotink Creek and Pohick Creek flow into the Potomac River near each other and form Gunston Cove on the Potomac River. The installation also contains the headwaters to Mason Run, which is a tributary to Accotink Creek, and several other unnamed tributaries. Accotink Creek flows through the center of the installation, and both Dogue Creek and Pohick Creeks form the northeast and southwest boundaries of Fort Belvoir, respectively. A total of 106 miles of streams occur on the installation, including 28 miles of perennial stream, and 32 miles of intermittent streams (USAG Fort Belvoir, 2001). Wetland features are discussed in Section 3.4.1.4.

Laws and regulations have been implemented to protect water quality. The Federal Water Pollution Control Act, as amended by the Clean Water Act (CWA) of 1977, establishes water quality standards for restoring and maintaining the integrity of the nation's water. "Water quality standards define the goals for a water body by designating its uses, setting criteria to measure attainment of those uses, and establishing policies to protect water quality from pollutants." Section 305(b) of the CWA, requires that states report on the status of water quality of their navigable waters every two years. Section 303(d) requires that states identify impaired waters; waters where the water quality does not meet standards for the designated use. Section 303(d) also requires that the state identify impaired waters for which Total Maximum Daily Loads (TMDLs) will be developed to improve water quality. A TMDL "is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards."

Water quality problems in the waterways on the installation relate mostly to urbanization, including issues related to bacteria, changes in stream morphology from increased impervious surface, and sedimentation. Within Fort Belvoir, according to the draft 2014 Virginia Water Quality Assessment 305(b)/303(d) Integrated Report (Virginia DEQ, 2014), Accotink Creek is listed as impaired for recreation because of the presence of *Escherichia coli* (*E. coli*) bacteria because of:

- Urban runoff/storm sewers
- Wastes from Pets
- Waterfowl
- Wildlife other than Waterfowl

Accotink Creek is also listed as impaired for fish consumption due to high levels of polychlorinated biphenyls in fish tissue (Virginia DEQ, 2014). Aquatic life is also impaired, as seen from benthic-macroinvertebrate bioassessments indicators (Virginia DEQ, 2014). In spite of these impairments

under the Clean Water Act (33 USC §1251 et seq.), the waterways on the installation still possess significant water resources with high conservation priority (USAG Fort Belvoir, 2001).

For projects with land disturbance of 10,000 square feet or greater, an erosion and sediment control (ESC) plan is required to be prepared and submitted to Virginia Department of Environmental Quality (VADEQ) for review and approval. In addition, for projects with land disturbance one acre or greater, a stormwater management plan is required to be prepared and submitted to VADEQ for review and approval. For projects with land disturbance of one acre or greater, a Construction General Permit must be obtained from VADEQ prior to commencement of construction. A Stormwater Pollution Prevention Plan is required to be developed prior to submittal for the Construction General Permit and is reviewed by Directorate of Public Works, Environmental and Natural Resources Division to ensure that total maximum daily loads (TMDL), pollution prevention, stormwater management and erosion and sediment control requirements are met during construction.

There are three existing Industrial Stormwater Outfalls that are covered under an existing Virginia Pollution Discharge Elimination System (VPDES) General Permit: one located on the northwest corner of DAAF, one located downstream of the northwest section, and one located in the southeast section. Regular monitoring is conducted at these outfalls for TMDLs and metals.

3.4.1.3 Wetlands and Chesapeake Bay Preservation Areas

Construction in jurisdictional wetlands and streams is regulated by the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act as implemented in regulations contained in 33 CFR, Parts 320–330. Impacts to state waters, including wetlands, are regulated by the Virginia Water Protection Permit Program (9 Virginia Administrative Code [VAC] 25-210-10 et seq.), which serves as Virginia’s 401 Water Quality Certification Program for federal Section 404 Permits. The Virginia Marine Resources Commission regulates activities in submerged lands, marine fisheries, and coastal resources (tidal wetlands and coastal sand dunes/beaches) under the Code of Virginia Title 28.2, Chapters 12, 13, and 14.

Virginia’s Chesapeake Bay Preservation Act (CBPA), Virginia Code 10.1-2100 et seq., and its implementing Chesapeake Bay Preservation Area Designation and Management Regulations, 9 VAC 10-20-120 et seq., protect certain lands, designated as Chesapeake Bay Preservation Areas, which, if improperly developed, could result in substantial damage to the water quality of the Chesapeake Bay and its tributaries. Projects that occur on lands that are protected under the CBPA must be consistent with the Act and may be subject to the performance criteria for Resource Protection Areas (RPAs), as specified in 9 VAC 10-20-130 of the regulations. Under the CBPA, Fairfax County adopted a Chesapeake Bay Preservation Ordinance that designates RPAs and Resource Management Areas (RMAs) within in the county.

RPAs are sensitive lands at or near the shoreline or streambank that have an intrinsic water quality value due to the ecological and biological processes they perform. RPAs include tidal wetlands, tidal shores, nontidal wetlands connected by surface flow and contiguous to tidal wetlands or tributary perennial streams, and a minimum 100-foot buffer landward of the previous RPA components, riparian areas, and major floodplains (USAG Fort Belvoir, 2001). All lands not

designated as RPAs in Fairfax County are classified as RMAs. Fort Belvoir recognizes the RPA designation but, being a federal entity, is not subject to the provisions of the Fairfax County ordinance. As a result, Fort Belvoir does not use RPA maps produced by Fairfax County; instead, the Army delineates the RPA on the installation. In addition to RPA areas, Fort Belvoir places a 35-foot buffer around all intermittent streams.

It should be noted that Executive Order 13508, *Chesapeake Bay Protection and Restoration*, must be addressed in terms of the Army's obligation to consider the protection and restoration of the Chesapeake watershed in terms of meeting the goals, outcomes and objectives set out in the *Strategy for Protecting and Restoring the Chesapeake Bay Watershed*. This document not only sets goals/outcomes/objectives of the federal government, but encourages coordination with state, local, and nongovernmental partners to protect and restore the health of the Chesapeake Bay watershed.

Within the DAAF study area, there are 22 non-tidal wetland areas that are mostly one acre or less in size, with one wetland being approximately three acres in size (Figure 3-1) (WSSI, 2015c, 2015e, 2015g). The wetlands are palustrine emergent (PEM) and palustrine forested (PFO), with some palustrine open water (POW) and palustrine scrub shrub (PSS). The wetland areas are concentrated within the Northwest Section (Figure 3-2) and the Southeast Section (Figure 3-3). The RPA extends from Accotink Creek through much of the northern portion of the DAAF, with a 100-foot buffer on each of the wetlands.

3.4.1.4 Floodplains

EO 11988, *Floodplain Management*, was issued "... in order 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...". The Executive Order was issued in furtherance of NEPA, the National Flood Insurance Act of 1968, and the Flood Disaster Protection Act of 1973. Floodplains were defined as follows in Executive Order 11988,

"The term 'floodplain' shall mean the lowland and relatively flat areas adjoining inland and coastal waters including floodprone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year."

President Obama issued an EO entitled *Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input* on January 30, 2015. This new EO was issued "... to improve the resilience of communities and Federal assets against the impact of flooding" and includes amendments to EO 11988. One of the amendments regards the definition of a floodplain. Instead of establishing the floodplain based on the area subjected to a one percent or greater chance in any given year, the floodplain shall be:

- (i) the elevation and flood hazard area that result from using a climate-informed science approach that uses the best-available, actionable hydrologic and hydraulic data and methods that integrate current and future changes in flooding based on climate science.

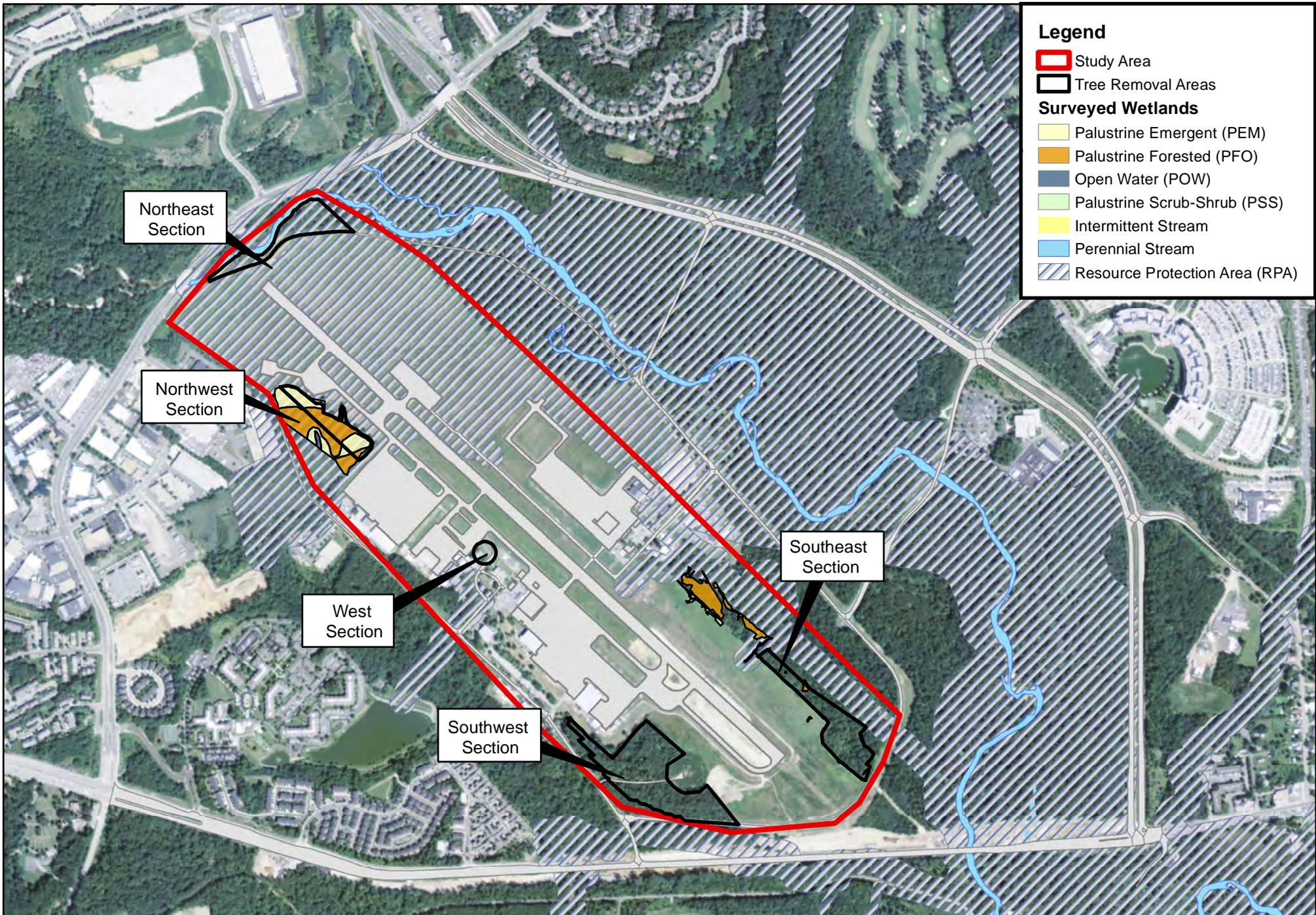
This approach will also include an emphasis on whether the action is a critical action as one of the factors to be considered when conducting the analysis;

(ii) the elevation and flood hazard area that result from using the freeboard value, reached by adding an additional 2 feet to the base flood elevation for non-critical actions and by adding an additional 3 feet to the base flood elevation for critical actions;

(iii) the area subject to flooding by the 0.2 percent annual chance flood; or

(iv) the elevation and flood hazard area that result from using any other method identified in an update to the FFRMS [Federal Flood Risk Management Standard].

The 100-year floodplain, or one percent annual chance flood, for the Accotink Creek, per the Federal Emergency Management Agency Flood Insurance Rate Map, covers much of the DAAF, including three of the areas where trees would be topped or removed. The location of the project in relationship to mapped floodplains are shown in Figure 3-4.



Legend

- Study Area
- Tree Removal Areas

Surveyed Wetlands

- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Open Water (POW)
- Palustrine Scrub-Shrub (PSS)
- Intermittent Stream
- Perennial Stream
- Resource Protection Area (RPA)

Northeast Section

Northwest Section

West Section

Southwest Section

Southeast Section

N

1 inch = 1,000 feet

0

 Feet

2,000

Wetlands and Resource Protection Areas
Fort Belvoir, Virginia

Source: Fort Belvoir GIS Data, 2016; Wetlands, WSSI, 2015.

Figure 3-1



Legend

- Study Area
- Tree Removal Area
- Resource Protection Area (RPA)

Surveyed Wetlands

Class

- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Open Water (POW)
- Palustrine Scrub-Shrub (PSS)
- Intermittent Stream
- Perennial Stream

N

1 inch = 200 feet

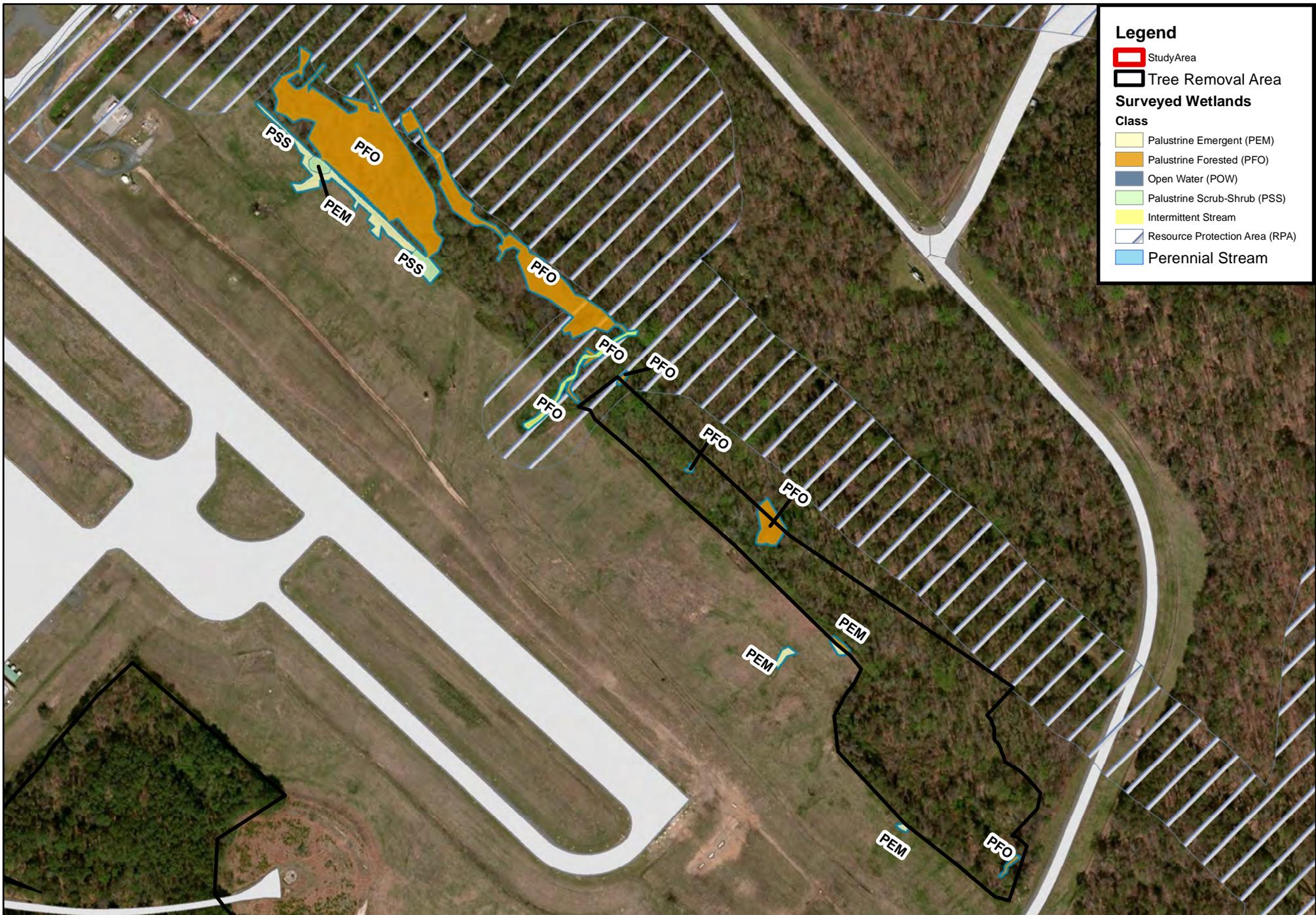
0

 400 Feet

Wetlands and Resource Protection Area
Northwest Section
Fort Belvoir, Virginia

Source: Fort Belvoir GIS Data, 2016; Wetlands, WSSI, 2015

Figure 3-2



Wetlands and Resource Protection Areas
Southeast Section
Fort Belvoir, Virginia

Source: Fort Belvoir GIS Data, 2016; Wetlands, WSSI, 2015

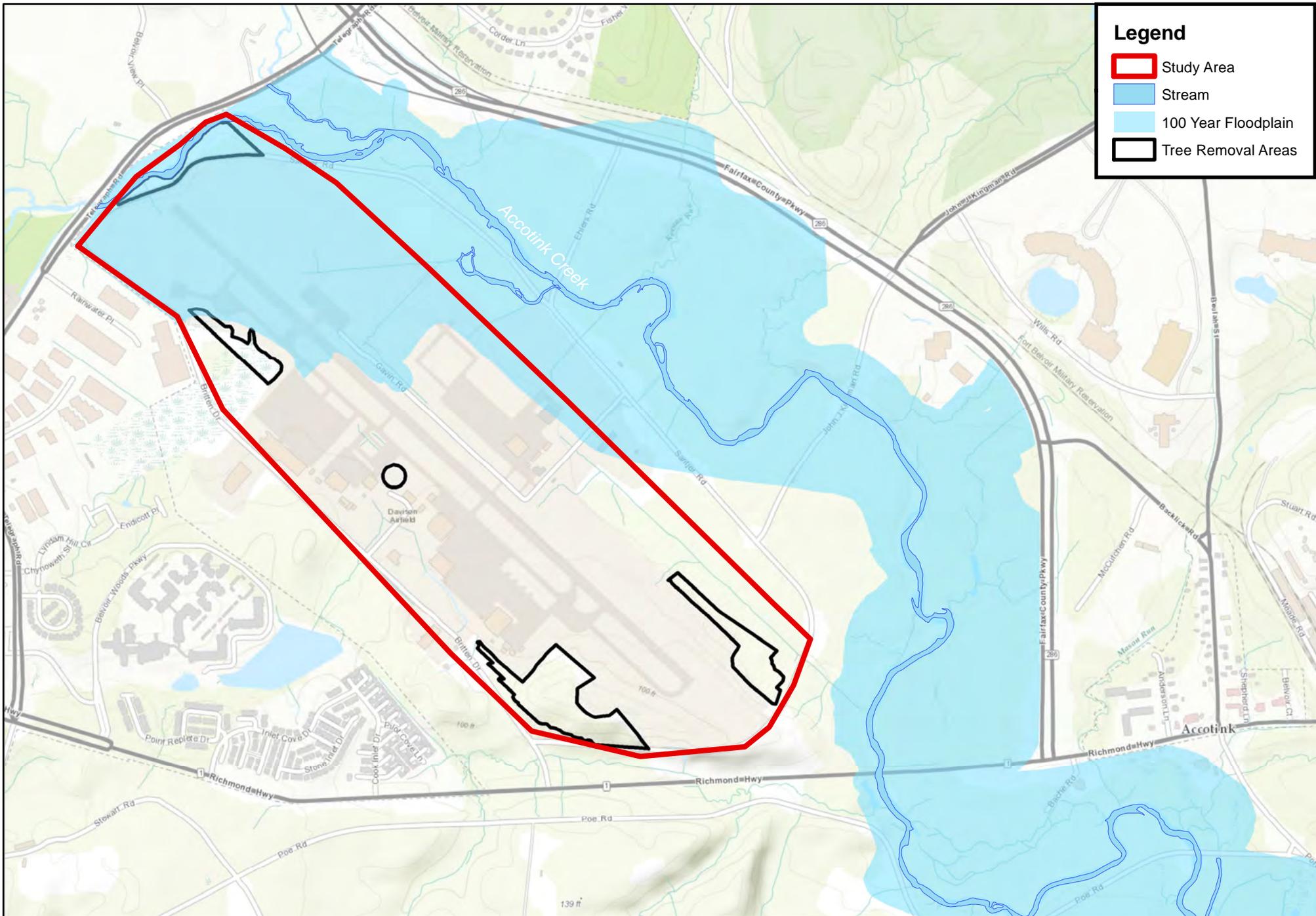
Figure 3-3

N



1 inch = 250 feet





Legend

- Study Area
- Stream
- 100 Year Floodplain
- Tree Removal Areas

N

1 inch = 1,000 feet

0

 Feet

2,000

Floodplains
Fort Belvoir, Virginia

Source: Floodplain, FEMA 2016; Baselayer, ESRI 2015;
 Stream, Fort Belvoir GIS Data, 2016

Figure 3-4

3.4.2 Environmental Consequences of the Alternatives on Water Resources

3.4.2.1 Threshold of Significance

The threshold of significance for water resources impacts would be exceeded if the alternative would result in any of the following:

- Change to regional groundwater patterns or depletion of groundwater;
- Alteration of local surface water;
- Notable adverse impact on natural and beneficial floodplain values; or
- Substantial degradation of wetlands without mitigation.

3.4.2.2 Impacts of the No Action Alternative

Under the No Action alternative, no trees would be removed from the project area of DAAF. As a result, no potential adverse impacts to local surface water, groundwater, floodplains, or wetlands would occur.

3.4.2.3 Impacts of the Proposed Action - Tree Removal

The Proposed Action is to remove trees that are obstructions and violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas of the DAAF to ensure aircraft safety.

Groundwater

Groundwater resources would not be disturbed during tree removal. Stumps would remain in place and there would not be any earth disturbance; therefore, no impacts to ground water are expected from this action.

Surface water

Streams would not be disturbed from the Proposed Action as there are no proposed activities within the Accotink Creek and appropriate temporary erosion and sediment control measures would be employed for work near streams, particularly in the Northeast Section.

Typically, a Proposed Action that is greater than one acre, would require an ESC plan and a stormwater management plan to be developed. The ESC plan would include temporary erosion and sediment control measures. The ESC plan and stormwater management plan would be prepared utilizing the requirements for water quality and quantity found in the Virginia Technical Criteria Part IIB (9VAC25-870-62 through 9VAC25-870-92). The Proposed Action is larger than one acre; however per § 62.1-44.15:34 the proposed action will not require a general construction permit and ESC plan because it is a maintenance project that is being performed to maintain the original construction of the airfield. Per a Phone conversation on September 6th with VADEQ (see Appendix A: Agency Coordination), it was discussed that any areas that would be disturbed due to the Proposed Action would not require a General Construction Permit and ESC if stumps remain in place. During the tree removal process the contractor selected should be prepared to

stabilize areas if bare soils are exposed. Bare soils in wetland areas should be seeded, or if trees are chipped in place, the woodchips should remain in place as additional stabilization. Minor adverse impacts would occur from the Proposed Action on surface water with regard to water quantity and water quality. Appropriate temporary erosion and sediment control measures or permanent stormwater BMPs will be employed to minimize impacts to water quality from disturbance during tree removal and potential increase in stormwater runoff. Monitoring of the outfalls would occur to ensure water quality is maintained during and after the tree removal activity. Fort Belvoir received a permit for the proposed action from the Northern Regional Office of DEQ, WP4-16-0862 which will become effective on 7/2/2016 and will expire on 7/31/2021. If the project changes scope causing differences to stated impacts, coordination with DEQ would be required and the revised project proposal would be reviewed in accordance with the Virginia Water Protection Permit (VWPP) program regulations and current VWPP program guidance.

Wetlands and Chesapeake Bay Preservation Areas

Minor adverse impacts to non-tidal wetlands would be expected from implementation of the Proposed Action. A total of 1.31 acres of PFO wetlands would be permanently converted to PEM wetlands to include 1.234 acres in the northwest section and 0.072 acres in the southeast section. Minor temporary impacts from placing deck mats in the wetlands, considered fill, would be anticipated, though the use of deck mats would minimize impacts of compaction and rutting from vehicles crossing into wetland areas during tree removal activity. The areas will be flagged to distinguish clearing areas and prevent incidental impacts to wetlands. Tree trunks and crowns would need to be cut with care and caution, and all tree cuttings in the wetland area would need to be removed from the site. No cut trees, including limbs, can be placed or left in the wetland, and no grubbing nor grading are permissible in this area. Stumps will be left in place. Following clearing, at an appropriate time of year, wetlands seed mix would be spread. Fort Belvoir would coordinate with USACE and the Commonwealth of Virginia through the Joint Permit Application process for an Individual Permit from USACE and Virginia to assess the impacts of conversion of palustrine forested wetlands to palustrine emergent wetlands, and for tree removal activities within the RPA in the Northeast, Northwest and Southeast Sections. Mitigation for this permanent impact would be provided by the purchase of credits from a mitigation bank. These impacts have been minimized through adjusting access routes through the wetlands for tree removal to reduce temporary impacts and also through the elimination of the alternative described in Section 2.3, which would have resulted in the filling of wetlands and maintaining the area in turf. Tree removal within the other sections would not impact wetlands nor the RPA, as there are none present in those areas.

Floodplains

The Northeast, Northwest and Southeast areas of tree removal are all located within the 100-year floodplain. The Proposed Action would not result in an impact to the floodplain with regard to water storage capacity or elevation.

3.5 BIOLOGICAL RESOURCES

Potential impacts to plants, wildlife, and fish are evaluated in accordance with applicable regulations including but not limited to the Endangered Species Act of 1973, the Fish and Wildlife Conservation Act of 1980, the Magnuson-Stevens Fishery Conservation and Management Act, as

amended, the Migratory Bird Treaty Act, and EO 13112 on Invasive Species. The study area for biological resources includes the proposed project site, which encompasses the DAAF.

3.5.1 Affected Environment

3.5.1.1 Vegetation

Fort Belvoir is home to multiple plant communities and vegetative species. An installation-wide vegetation study of Fort Belvoir conducted in 1998 identified 17 plant community types, four of which possess species with state conservation rankings of rare or very rare. These 17 types are included in the broader categories of mixed hardwood forests, pine forests, floodplain hardwood forests, wetlands, oldfield, grasslands and urban land, which describes land that has been developed (USAG Fort Belvoir, 2001). A large portion (approximately 70 percent) of Fort Belvoir is undeveloped and supports predominantly forest communities, as well as tidally flooded marsh and shrub-scrub communities. Within Fort Belvoir's Main Post, areas of native vegetation occur in large tracts, aligned from the northeast to the southwest. Vegetation cover in the remaining 30 percent of Fort Belvoir consists primarily of improved and semi-improved grounds associated with the installation's developed land uses that includes administration, housing and community service facilities, developed training areas, golf courses, and other recreational facilities (USAG Fort Belvoir, 2001). Figure 3-5 illustrates the multiple plant communities found on Fort Belvoir.

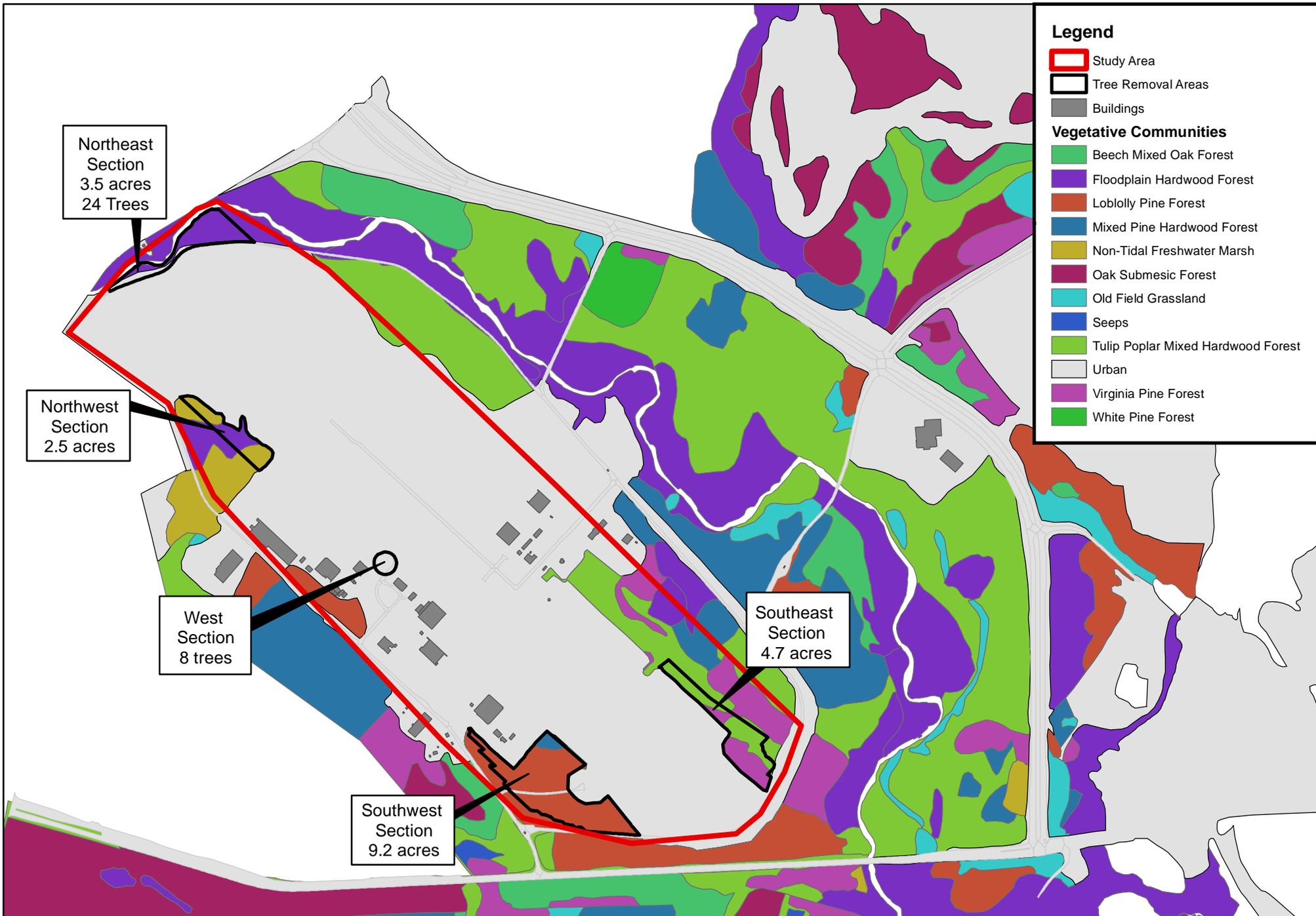
The tree removal areas within DAAF are mostly forested and some areas are located within the 100-year floodplain of Accotink Creek and non-tidal wetlands. Plant communities in the tree removal areas, listed by prominence, are floodplain hardwood forests, beech mixed oak forest and palustrine forested wetland. None of the vegetative communities in the proposed project area are considered rare by the Commonwealth of Virginia.

3.5.1.2 Wildlife and Wildlife Habitat

Fort Belvoir is home to numerous wildlife species. Based on installation-wide surveys, Fort Belvoir contains the potential habitat for 43 species of mammals, 274 species of birds, 32 species of reptiles, 27 species of amphibians and 60 species of fish (USAG Fort Belvoir, 2001). More than 2,500 acres of land have been set aside on Fort Belvoir for wildlife including the Accotink Bay Wildlife Refuge, the Jackson Miles Abbott Wildlife Refuge, and a Forest and Wildlife Corridor. Fort Belvoir also participates in the Partners in Flight Program. Partners in Flight is a partnership between federal and state agencies, industry, non-governmental organizations and others, with the goal of conserving North American birds.

The proposed project area is not within any wildlife corridors, refuges, or Partners in Flight habitat areas, though some exist to the east of DAAF along the Accotink Creek. With the broad variety of habitats and food sources adjacent to DAAF, many of the wildlife species associated with forests on Fort Belvoir can be found on or near the project site.

A number of aquatic species and their habitat exist in the streams, creeks, and wetlands within or near the proposed project. A full listing of species and habitat are found in the installation's Integrated Natural Resources Management Plan (USAG Fort Belvoir, 2001).



Legend

- Study Area
- Tree Removal Areas
- Buildings

Vegetative Communities

- Beech Mixed Oak Forest
- Floodplain Hardwood Forest
- Loblolly Pine Forest
- Mixed Pine Hardwood Forest
- Non-Tidal Freshwater Marsh
- Oak Submesic Forest
- Old Field Grassland
- Seeps
- Tulip Poplar Mixed Hardwood Forest
- Urban
- Virginia Pine Forest
- White Pine Forest

Northeast
Section
3.5 acres
24 Trees

Northwest
Section
2.5 acres

West
Section
8 trees

Southwest
Section
9.2 acres

Southeast
Section
4.7 acres

N

1 inch = 1,000 feet

0

 Feet
1,500

Vegetative Communities
Fort Belvoir, Virginia
Source: Fort Belvoir GIS Data, 2016

Figure 3-5

3.5.1.3 Rare, Threatened and Endangered Species

The Endangered Species Act of 1973 (ESA) requires federal agencies to ensure that their action is not likely to jeopardize the continued existence of any endangered or threatened species (animal and plant species) or result in the destruction or adverse modification of designated critical habitat. Special status species include species listed under the ESA as endangered, threatened, proposed endangered, proposed threatened, candidate, and species of special concern; and species listed by the VDCR as endangered, threatened, or rare.

Federally-listed Species

The northern long-eared bat (*Myotis septentrionalis*) is listed as a threatened species under the Endangered Species Act, due largely to the impacts of White-nose Syndrome. It roosts singly or in colonies underneath bark or in crevices of live and dead trees during the summer. During the winter, the bats hibernate in caves and mines. Female northern long-eared bats roost in maternity colonies in the summer months, and typically give birth between late May and late July. The study area is within the Whitenose Syndrome Buffer Zone for the northern long-eared bats. The White-nose Syndrome Buffer Zone identifies the portion of the range of the northern long-eared bat within 150 miles of the boundaries of U.S. counties or Canadian districts where White-nose Syndrome or the associated fungus has been detected. Under Section 7 of the Endangered Species Act, federal agencies must consult with the Service to ensure that any action they authorize, fund, permit or carry out does not jeopardize the existence of a listed species. Surveys to date have not located the northern long-eared bat on site at DAAF. Acoustic monitoring recorded a potential call at a location more than one half mile to the east of DAAF. Per USFWS, tree removal is prohibited during the northern long-eared bat active season from April 15 through September 15. Section 7 consultation letters can be found in Appendix A.

The small whorled pogonia (*Isotria medeoloides*) is an orchid found in deciduous woods. It is considered threatened throughout its range by the USFWS, and endangered by the State of Virginia. The habitat at Fort Belvoir has been mapped previously and was characterized by low, medium, and high quality. A field survey was conducted on the airfield in the areas of the proposed tree removal and all areas were considered to be poor quality habitat for the small whorled pogonia. (WSSI, 2015a, 2015b, 2015h). No individuals were observed during the surveys and none are expected to occur within the project areas based on the habitat observed. The small whorled pogonia is known to be present at only one location on Fort Belvoir North Area that is more than a mile from DAAF.

Habitat for the federally threatened Sensitive joint-vetch (*Aeschynomene virginica*) is not present on DAAF; habitat for this species is mudflats that have been surveyed elsewhere on Fort Belvoir and this species was not observed.

State-listed Species

Fort Belvoir has five state-listed animal species that occur on the installation and include the state-listed threatened wood turtle (*Glyptemys insculpta*), the state-listed endangered peregrine falcon (*Falco peregrinus*, during fall migration), the state-listed endangered little brown bat (*Myotis*

lucifugus), the state-listed endangered tri-colored bat (*Perimyotis subflavus*), and the state and federally-listed threatened northern long-eared bat (*Myotis septentrionalis*). Potential habitat for the wood turtle is primarily located along Accotink Creek and its tributaries. A 2015 survey was conducted along Accotink Creek, adjacent to Davison Army Airfield, and no turtles or suitable habitat were observed (WSSI, 2015a, 2015b, 2015d). The little brown bat and the tri-colored bat have an active season similar to that of the northern long-eared bat. The conservation measures outlined by the state include time of year restrictions that fall within the bounds of the time of year restrictions already established for the northern long-eared bat. Therefore, the conservation measures required for protection of the northern long-eared bat would also be adequate for protection of the state-listed species.

The bald eagle (*Haliaeetus leucocephalus*) was delisted by the Commonwealth of Virginia in 2013, however, it is still protected by the Bald and Golden Eagle Protection Act. The bald eagle occurs on the installation, but the known nesting sites are found in the eastern portion of Fort Belvoir, along the shore. No known bald eagle nesting or roosting sites are located in or around the airfield. The nearest eagle nest and eagle concentration area are more than one mile from DAAF.

3.5.2 Environmental Consequences

3.5.2.1 Threshold of Significance

The threshold of significance for biological resources impacts would be exceeded if the alternative would:

- Jeopardize the continued existence of any federally listed threatened or endangered species or result in destruction of critical habitat;
- Decrease the available habitat for commonly found species to the extent that the species could no longer exist in the area; or
- Eliminate a sensitive habitat such as breeding areas, habitats of local significance, or rare or state-designated significant natural communities needed for the survival of a species.
- Substantially degrade or minimize habitat.

3.5.2.2 Impacts of No Action Alternative

Under the No Action alternative, no trees would be removed from the project area of DAAF. As a result, no potential adverse impacts to biological resources, including vegetation, wildlife, and aquatic species would occur. Based on the characteristics of species of special concern and the location of the potential areas impacted, it is expected that the No Action alternative would not result in any impacts to species of special concern. All biological resources would continue to be managed in accordance with the Fort Belvoir Integrated Natural Resources Management Plan.

3.5.2.3 Impacts of the Proposed Action – Tree Removal

The Proposed Action is to remove trees that are obstructions and violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas of the DAAF to ensure aircraft safety.

Vegetation

Minor adverse vegetation impacts would be expected from the removal of trees within the project areas. Small patches of forest, within the suburban landscape of northern Virginia, would be converted to shrub or grassland which would abut the grassland of the existing airfield. These minor impacts are necessary due to federal and state aviation regulations which ensure the safety of aircraft at DAAF.

Wildlife and Wildlife Habitat

Minor adverse impacts are expected to wildlife habitat due to the tree removal. Removal of trees from the project areas surrounding DAAF would convert small patches of forested land, on the edges of existing forests, to open forest or shrub habitat. The tree removal would not create fragments of unsuitable habitat because all areas of tree removal abut the open mowed grass of the airfield. Tree cutting and removal would be avoided from April 1 to July 15 to avoid disturbance, removal, damage or destruction to birds and their nests, eggs, and hatchlings per the Migratory Bird Treaty Act.

Rare, Threatened and Endangered Species

There is a potential to impact the northern long-eared bat habitat with the proposed tree removal. To avoid impacts, tree removal would only be performed outside of the closure period, from April 15 to September 15, per the chapter 7 consultation (Appendix A). Therefore, impacts to the northern long-eared bat would be avoided. The little brown bat and the tri-colored bat have an active season similar to that of the northern long-eared bat. Therefore, the conservation measures required for protection of the northern long-eared bat would also be adequate for protection of the state-listed species. No other rare, threatened or endangered species are known to exist within the project areas around DAAF, therefore; no impacts are anticipated to rare, threatened or endangered species.

3.6 COASTAL ZONE

The Coastal Zone Management Act of 1972 (16 USC §1451 et seq., as amended) provides assistance to the states, in cooperation with federal and local agencies, for developing land and water use programs in coastal zones. Section 307 (c)(1) of the Coastal Zone Management Act Reauthorization Amendment stipulates that federal projects that affect land uses, water uses, or coastal resources of a state's coastal zone must be consistent to the maximum extent practicable with the enforceable policies of that state's federally approved coastal management plan. The Commonwealth of Virginia has developed and implemented a federally approved Coastal Resources Management Program describing current coastal legislation and enforceable policies. There are enforceable policies for:

- Fisheries management
- Subaqueous lands management
- Wetlands management

- Dune management
- Non-point source pollution control
- Point source pollution control
- Shoreline sanitation
- Air pollution control
- Coastal lands management

3.6.1 Affected Environment

Virginia's coastal zone includes all of Fairfax County, including Fort Belvoir; therefore, federal actions at Fort Belvoir are subject to federal consistency requirements. The Virginia DEQ serves as the lead agency for consistency reviews. The project area is characterized as an airfield with some areas of forest, wetlands, and previously disturbed land with Accotink Creek at the northern border of the project area. While there is streambank adjacent to the project area, there is no coastline present, nor dunes.

3.6.2 Environmental Consequences

3.6.2.1 Impacts of the No Action Alternative

The No Action Alternative would have no impacts on the Virginia coastal zone or future implementation of the Coastal Resources Management Plan.

3.6.2.2 Impacts of the Proposed Action Alternative

The proposed hazardous tree removal at DAAF would be consistent with Virginia's Coastal Resources Management Policies. As described above in Section 3.4.3.2, impacts to wetlands would be to non-tidal wetlands and would be mitigated through purchase of wetland mitigation credits. Non-point source pollution would be managed through the use of temporary erosion and sediment control measures defined in the approved Erosion and Sediment Control plan or permanent stormwater management BMPs, as appropriate. Minory temporary impacts to air quality are anticipated for the duration of the tree removal activity. The Coastal Zone Consistency determination will be submitted to the Commonwealth of Virginia as an appendix in the Final EA/Draft FNSI. Complete results of this coordination, including recommendations from Virginia DEQ, when received, will be presented in Appendix C.

3.7 CUMULATIVE EFFECTS

In addition to identifying the direct and indirect environmental impacts of their actions, the CEQ's NEPA regulations require federal agencies to address cumulative impacts related to their proposals. A cumulative impact is defined in the CEQ regulations (40 CFR Part 1508.7) as "the 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. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." This

section describes the process used to identify potential cumulative impacts related to the Proposed Action at Fort Belvoir and discusses those impacts for each of the resources analyzed in this EA.

The process outlined by CEQ includes identifying significant cumulative impacts issues, establishing the relevant geographic and temporal (time frame) extent of the cumulative effects analysis, identifying other actions affecting the resources of concern, establishing the cause-and-effect relationship between the Proposed Action and the cumulative impacts, determining the magnitude and significance of the cumulative impacts, and identifying ways in which the agency’s proposal might be modified to avoid, minimize, or mitigate significant cumulative impacts.

CEQ regulations specify that cumulative impacts analyses encompass past, present, and reasonably foreseeable future actions. As a practical matter, the impacts of past actions on Fort Belvoir are already reflected in the conditions that currently exist, as described earlier in this chapter, in the Affected Environment section of each resource topic. For example, past actions on Fort Belvoir that involve the clearing of trees.

Present and reasonably foreseeable future actions on Fort Belvoir that may have a cumulative impact in combination with the Proposed Action are listed in Table 3-4. In general, this EA considered present and reasonably foreseeable future actions as those that currently exist or are under construction, are the subject of an existing plan or proposal, or have identified funding. Actions beyond that become increasingly speculative and difficult to assess.

Table 3-4: Projects Near DAAF

Project	Description	Approximate Distance to DAAF	Project Type	NEPA Action
OSEG Training Compound	Construct a permanent compound for OSEG training and operations.	3,000 ft. from nearest tree removal area.	Construction	Environmental Assessment prepared, and FNSI signed. Construction projected for 2017.
National Museum of the US Army (NMUSA)	Construct a national museum to showcase the history and artifacts of the US Army.	5,000 ft. from nearest tree removal area.	Construction	Environmental Assessment prepared, and FNSI signed. Construction started February 2016 to continue into 2019.

Project	Description	Approximate Distance to DAAF	Project Type	NEPA Action
911 th Engineering Company Operations Complex	Construct a medium-duty tactical equipment maintenance complex with integrated company operations and administrative space.	3,000 ft. from nearest tree removal area.	Construction	Environmental Documentation has yet to be prepared.
Fairfax County Parkway/John J. Kingman Road Intersections & NMUSA Entrance	Grade separate intersections along Fairfax County Parkway at John J Kingman Road and the NMUSA entrance.	4,000 ft. from nearest tree removal area.	Transportation	Environmental Assessment prepared in 2010, REC will be prepared for future actions not included in the EA
US Route 1 intersections with Fairfax County Parkway, Pohick Road and Belvoir Road	Monitor intersections along US Route 1 at Fairfax County Parkway, Pohick Road, and Belvoir Road to determine need for future improvements.	2,500 ft. from nearest tree removal area.	Transportation	Environmental Documentation has yet to be prepared.

Source: Final Environmental Impact Statement for Short-Term Projects & Real Property Master Plan Update. Volume 1 June 2015.

Air Quality

Tree removal activities associated with the Proposed Action would result in minimal adverse cumulative impacts related to air quality. Short term impacts are expected through the operation of tree removal machinery, but would be minor and therefore no long-term cumulative impacts are anticipated.

Water Resources

Ground Water

Cumulative impacts to groundwater are also not anticipated because the Proposed Action and other associated planned activities would not involve the disturbance, storage or appreciable use of materials that could degrade groundwater quality.

Surface Water

Cumulative impacts to surface water from the Proposed Action would be minor from the tree cutting activities and the loss of tree land cover. Appropriate temporary erosion and sediment control measures would be employed and permanent stormwater management BMPs necessary to mitigate for the loss of tree land cover would be determined and in compliance with the MS4 permit requirements. Projects at Fort Belvoir with a land disturbance of greater than 2,500 square feet are required to have ESC and stormwater management plans in compliance with Section 438 of the Energy Independence and Security Act, the Fort Belvoir MS4 permit, Virginia ESC, Stormwater Management and Chesapeake Bay laws and regulations.

Wetlands

Throughout the project, impacts to wetlands would be avoided where possible, and mitigated in circumstances in which avoidance is not possible. Minor adverse impacts due to the Proposed Action are anticipated, including the permanent conversion of a total of 1.31 acres of palustrine forested wetland to palustrine emergent wetlands, and 1.18 acres of palustrine emergent wetlands would be impacted as vehicles cross through to access the trees to be removed. Though there would be a direct impact to wetlands, proper mitigation in accordance with Section 404 of the Clean Water Act would mitigate these impacts, as well as temporary erosion and sediment control measures, and the use of deck mats to prevent compaction and rutting, during the tree removal activity to account for no net loss of wetlands. Mitigation would be provided through the purchase of credits from a mitigation bank. Tree removal in areas that are not within a wetland are expected to have no impact to wetlands. Other projects at Fort Belvoir that impact wetlands have also minimized impacts to wetlands and completed wetland mitigation to address wetland losses. Thus, minor cumulative impacts are anticipated to wetlands as impacts from this project and all projects on Fort Belvoir are mitigated.

Biological Resources

DAAF is characterized by mostly open land, impervious surface, and associated buildings surrounded by forested land along the perimeter of the DAAF boundary. Past development of the airfield has changed the natural environment by reducing the amount of habitat, fragmenting remaining habitat, and consequently changing the number and types of wildlife that depend on that habitat. Minor adverse effects would occur to vegetation due to the removal of the trees within patches of forest, but removal of trees would be limited to the edges of forest land and would not disrupt forest interior habitat, therefore, no further fragmentation is expected to result from the Proposed Action. Although the permanent removal of trees for the Proposed Action would result in a minor adverse effect to vegetation, proposed cumulative projects would follow the Fort Belvoir two for one tree replacement policy and cumulative impacts would therefore be minor.

Minor adverse impacts are expected to wildlife and migratory birds as a result of the Proposed Action from the removal of habitat. Most of the projects identified in Table 3-8 would occur in developed areas and would have minimal impacts to wildlife and wildlife habitat. Many of the proposed cumulative projects would occur on previously disturbed areas and impacts to wildlife and migratory birds in these areas would be minor. The removal of trees would not create fragmented unsuitable habitat, and would therefore result in minor cumulative impacts to wildlife and migratory birds.

No cumulative effects are anticipated to the federally listed northern long-eared bat as tree removal and other construction projects on Fort Belvoir would be performed outside the active period from April 15 to September 15.

Coastal Zone

The Proposed Action is consistent with the Coastal Zone Management Program, and would abide by current appropriate permits and mitigation requirements. Therefore, there are no anticipated cumulative effects as future projects would also be consistent with the Coastal Zone Management Program.

No Action Alternative

Implementation of the No Action Alternative would avoid new impacts for all resource areas and would not result in any cumulative impacts to Air Quality, Water Resources, Biological Resources, or the Coastal Zone.

4.0 FINDINGS AND CONCLUSIONS

4.1 UNAVOIDABLE ADVERSE IMPACTS

Unavoidable impacts are those impacts that the USAG Fort Belvoir would experience if the proposed hazardous tree removal at DAAF were implemented under the Proposed Action Alternative. The Proposed Action is required, however, for pilot safety and compliance requirements. Potential minor temporary impacts that would occur from implementation of the Proposed Action include minor adverse impacts to air quality from equipment use; minor impacts to surface water from heavy machinery during tree cutting that could cause erosion that would be minimized or avoided through the use of temporary erosion and sediment control measures; and minor temporary impacts from bringing vehicles into wetland areas for tree cutting would be minimized through the use of deck mats that prevent compaction and rutting but are considered temporary fill in the wetlands. Potential minor permanent impacts that would occur from implementation of the Proposed Action include minor adverse impacts from the loss of trees along the edges of the forested area on DAAF, that could result in an increase in stormwater runoff; minor impacts from trees removed in the RPA; and minor adverse impacts to wildlife and wildlife habitat from the removal of trees that would convert forested habitat to shrub habitat. Minor permanent adverse impacts from the conversion of 1.31 acres of palustrine forested wetland to palustrine emergent would be mitigated through the purchase of wetland mitigation bank credits. The Proposed Action would result in no or negligible impacts to land use; noise; geology; topography; cultural resources; socioeconomic; environmental justice; traffic and transportation; utilities; hazardous materials and wastes; visual and aesthetic resources; ground water; floodplains; rare, threatened, and endangered species; and the coastal zone. Tree cutting activities would take place outside of the northern long-eared bat active period to avoid impacts. No significant cumulative impacts are anticipated. No significant impacts on human health or the environment are expected to result from the Proposed Action.

Under the No Action Alternative, the DAAF would continue to be non-compliant with safety requirements, which would impact the mission at DAAF. The No Action Alternative would not remove the obstructions from the airfield and DAAF would continue to be an unsafe environment for operating aircrafts.

4.2 BEST MANAGEMENT PRACTICES AND MITIGATION MEASURES

Mitigation for the impacts from converting palustrine forested wetlands to palustrine emergent wetlands would be accomplished through the purchase of wetland mitigation credits. During tree removal activity, temporary impacts to wetlands would be minimized through the use of deck mats for access to the trees to be removed. Other than wetland mitigation, there are no expected impacts that would require mitigation to avoid being considered significant. Temporary erosion and sediment control measures and permanent stormwater management BMPs would be employed where appropriate to reduce or minimize impacts. The actions discussed below would be employed to minimize potential adverse impacts:

- In compliance with the Federal Emerald Ash Borer quarantine (7 CFR 301.53), all trees removed for this project would be chipped or taken to landfills within the quarantine zone.
- Temporary erosion and sediment control measures, such as the use of deck mats for work in wetlands, would be employed during tree removal activities.
- Permanent stormwater BMPs would also be employed, as appropriate, in compliance with all applicable local, state, and federal regulations.
- Seasonal restrictions would be followed for tree removal activities to avoid impacts to the northern long-eared bat.

In addition to these BMPs and mitigation measures, all activities would be in compliance with the Federal Consistency Determination and the recommendations from Virginia Department of Environmental Quality; and Occupational Safety and Health Administration regulations and standard operating procedures to ensure the safety of all installation and construction personnel.

4.3 PERMITS AND OTHER REQUIREMENTS

USAG Fort Belvoir is responsible for preparing and submitting permit applications and other information needed for the hazardous tree removal at DAAF. Permits or other requirements that could be required include, but are not limited to:

- Virginia Stormwater Management Program, General Permit for Discharges of Stormwater and Construction Activities and associated Stormwater Pollution Prevention
- Virginia Pollutant Discharge Elimination System (VPDES) Industrial Stormwater General Permit and Individual Major Permit
- VADEQ approved Erosion and Sediment Control Plan
- VADEQ approved Stormwater Management Plan
- Section 404 Individual Permit
- Section 401 Water Quality Certification
- Virginia Wetlands Program Individual Permit
- State Historic Preservation Office concurrence
- Coastal Zone Federal Consistency Determination concurrence

4.4 CONCLUSION

The implementation of the hazardous tree removal at DAAF, as proposed under the Proposed Action Alternative, is not expected to result in significant impacts on the environment; therefore, an environmental impact statement is not required.

Table 4-1 provides a brief comparison of the environmental impacts associated with the Proposed Action and No Action alternatives.

Table 4-1: Summary of Impacts of the Proposed Action and the No Action Alternative

Resource	Resource Evaluated in Detail in the EA	Proposed Action	No Action Alternative
Air Quality	Yes	Minor temporary impacts from equipment.	No impacts
Ground Water	Yes	No impacts	No impacts
Surface water	Yes	Minor impacts from heavy machinery use during tree cutting activity and from permanent loss of trees. Temporary erosion and sediment control measures would be employed during tree removal activity and stormwater management best management practices would be employed, as appropriate, to address the change in land cover that could result in increased stormwater quantity and water quality concerns.	No impacts
Floodplains	Yes	No impacts	No impacts
Wetlands	Yes	Minor permanent adverse impacts would occur from converting 1.31 acres of forested wetland to emergent wetland and temporary impact to 1.31 acres of palustrine emergent wetland would occur from placing deck mats in the wetlands to prevent compaction and rutting from vehicle access to the trees to be removed. Mitigation would be provided by the purchase of credits from a mitigation bank at a one to one ratio.	No impacts

Resource	Resource Evaluated in Detail in the EA	Proposed Action	No Action Alternative
Vegetation	Yes	Minor adverse impacts due to the removal of trees along the edges of forests.	No impacts
Wildlife and Wildlife Habitat	Yes	Minor adverse impacts through the removal of trees from the project areas and converting forested habitat to shrub habitat.	No impacts
Rare, threatened and endangered species	Yes	No impacts. Tree removal activities would take place outside of the active period for the northern long-eared bat.	No impacts
Coastal Zone	Yes	The Proposed Action would be consistent with the Virginia Coastal Zone Management Policy.	No impacts.
Land Use	No	No impacts	No impacts
Noise	No	Negligible impacts during the tree removal process.	No impacts
Geology and Topography	No	No impacts	No impacts
Cultural Resources	No	No impacts	No Impacts
Socioeconomics	No	Negligible beneficial impacts during tree topping through personnel hired to complete the Proposed Action.	No impacts
Environmental Justice	No	No impacts	No impacts

Resource	Resource Evaluated in Detail in the EA	Proposed Action	No Action Alternative
Traffic and Transportation	No	Negligible impacts due to minimal traffic increases from the Proposed Action. Minor temporary impact to air traffic while trees are being cut and transported, long term beneficial impact for air traffic by removing obstructions.	Long term adverse impacts to air traffic due to airspace obstructions
Utilities	No	No impacts	No impacts
Hazardous Materials and Wastes	No	Negligible impacts generated by the Proposed Action in the form of logs, wood chips and other wood products. In compliance with the Federal Emerald Ash Borer quarantine, all trees removed for this project would be chipped or taken to landfills within the quarantine zone.	No impacts
Visual and Aesthetic Resources	No	Negligible impacts through the removal of trees along the border of the airfield.	No impacts

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5.0 REFERENCES

- AIRnow. 2016. Air Quality Index (AQI) Basics. Website: <http://www.airnow.gov/?action=aqibasics.aqi>. Last Updated: January 28, 2016. Accessed: February 1, 2016.
- Commonwealth of Virginia, 2012. State Air Pollution Control Board – Regulations for the Control and Abatement of Pollution. 9VAC5 Chapter 30 – Ambient Air Quality Standards. Amended November 21, 2012.
- Department of Defense (DoD). 2015. Strategic Sustainability Performance Plan FY15. Website: <http://www.denix.osd.mil/sustainability/upload/DoD-SSPP-FY15-Final.pdf>. Accessed: February 1, 2016.
- National Capital Planning Commission (NCPC). 2004. National Capital Planning Commission. Comprehensive Plan for the National Capital: Federal Elements. Adopted on August 5, 2004. Accessed at: [http://www.ncpc.gov/ncpc/Main\(T2\)/Planning\(Tr2\)/ComprehensivePlan.html](http://www.ncpc.gov/ncpc/Main(T2)/Planning(Tr2)/ComprehensivePlan.html)
- The Louis Berger Group, Inc. 2013. Water/Wastewater Utility Upgrade Fort Belvoir, Virginia, Environmental Assessment.
- U.S. Army Corps of Engineers (USACE). 2007. U.S. Army Corps of Engineers, Mobile District. Final Environmental Impact State for Implementation of 2005 Base Realignment and Closure (BRAC) Recommendation and Related Army Action at Fort Belvoir, Virginia. June 2007.
- U.S. Army Garrison (USAG) Fort Belvoir. 2001. U.S. Army Garrison Fort Belvoir – Environmental and Natural Resources Division Directorate of Installation Support. *Integrated Natural Resources Management Plan 2001-2005*. March 2001. http://www.belvoir.army.mil/docs/environdocs/inrmp_4_web.pdf
- USAG Fort Belvoir. 2015. Final Environmental Impact Statement for Short-Term Projects and Real Property Master Plan Update. Fort Belvoir, Virginia.
- U.S. Army Garrison Fort Belvoir (USAG Fort Belvoir). 2016. Fort Belvoir GIS.
- U.S. Environmental Protection Agency. 2016. National Ambient Air Quality Standards. Website: <http://www.epa.gov/ttn/naaqs/>. Last updated January 7, 2016. Accessed: February 1, 2016.
- Virginia Department of Environmental Quality. (VADEQ). 2014a. 2014 Emission Statement – US ARMY – FORT BELVOIR
- Virginia Department of Environmental Quality. (VA DEQ). 2014b. Draft 2014 305(b)/303(d) Water Quality Integrated Report. Website: [http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/WaterQualityAssessments/2014305\(b\)303\(d\)IntegratedReport.aspx](http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/WaterQualityAssessments/2014305(b)303(d)IntegratedReport.aspx). Released December 15, 2014. Accessed January 5, 2016.

Wetland Studies and Solutions, Inc. (WSSI). 2015a. Endangered and Threatened Species (ETS) Habitat Evaluation, Fort Belvoir Davison Army Airfield – Northwest Section. Fort Belvoir, Virginia.

WSSI. 2015b. Endangered and Threatened Species (ETS) Habitat Evaluation Fort Belvoir Davison Army Airfield – Southeast Section. Fort Belvoir, Virginia.

WSSI. 2015c. Fort Belvoir Davison Army Airfield; Northeast Section, Waters of the U.S. (Including Wetlands) Delineation and Resource Protection Area Evaluation. Fort Belvoir, Virginia.

WSSI. 2015d. Fort Belvoir Davison Army Airfield; Northeast Section, Wood Turtle (*Glyptemys insculpta*) Survey and Habitat Evaluation. Fort Belvoir, Virginia.

WSSI. 2015e. Fort Belvoir Davison Army Airfield; Northwest Section, Waters of the U.S. (Including Wetlands) Delineation and Resource Protection Area Evaluation. Fort Belvoir, Virginia.

WSSI. 2015f. Fort Belvoir Davison Army Airfield Northwest Tree Assessment Map. Fort Belvoir, Virginia.

WSSI. 2015g. Fort Belvoir Davison Army Airfield; Southeast Section, Waters of the U.S. (Including Wetlands) Delineation and Resource Protection Area Evaluation. Fort Belvoir, Virginia.

WSSI. 2015h. Small Whorled Pogonia (*Isotria medeoloides*) Habitat Evaluation Fort Belvoir Davison Army Airfield – Northeast Section. Fort Belvoir, Virginia.

6.0 ACRONYMS AND ABBREVIATIONS

µg	Micrograms
AQCR	Air-quality Control Region
AQI	Air Quality Index
BMP	Best Management Practice
°C	Degrees Celsius
CAA	Clean Air Act
CBPA	Chesapeake Bay Preservation Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO _{2e}	Carbon Dioxide Equivalent
CWA	Clean Water Act
DAAF	Davison Army Airfield
dB	Decibel
DCR	Department of Conservation and Recreation
DEQ	Department of Environmental Quality
DOD	Department of Defense
EA	Environmental Assessment
EIS	Environmental Impact Statement
ENRD	Environmental and Natural Resources Division
EO	Executive Order
ESA	Endangered Species Act
ESC	Erosion and Sediment Control
°F	Degrees Fahrenheit
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FEIS	Final Environmental Impact Statement
FFRMS	Federal Flood Risk Management Standard
FNSI	Finding of No Significant Impact
GHG	Greenhouse Gas
IMCOM	Installation Management Command
MS4	Municipal Separate Storm Sewer System
NAAQS	National Ambient Air Quality Standards
NCPC	National Capital Planning Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
NOA	Notice of Availability
NOI	Notice of Intent
O ₃	Ozone
Pb	Lead

PEM	Palustrine Emergent
PFO	Palustrine Forested
PM	Particulate Matter
POW	Palustrine Open Water
ppm	Parts Per Million
PSD	Prevention of Significant Deterioration
PSS	Palustrine Scrub Shrub
RMA	Resource Management Area
RPA	Resource Protection Area
SHPO	State Historic Preservation Office
SO ₂	Sulfur Dioxide
TMDL	Total Maximum Daily Load
UFC	Unified Facilities Criteria
U.S.	United States
USC	United States Code
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VOC	Volatile Organic Compound

APPENDIX A – AGENCY COORDINATION



COMMONWEALTH of VIRGINIA

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August 18, 2016

Commander, U.S. Army Garrison Fort Belvoir,
ATTN: Directorate of Public Works,
Building 1442, 9430 Jackson Loop
Fort Belvoir, VA 22060-5116

RE: U.S. Army Garrison Fort Belvoir, Environmental Assessment and Federal
Consistency Determination: Davison Army Airfield Hazardous Tree Removal,
Fairfax County (DEQ 16-149F)

Dear Commander:

The Commonwealth of Virginia has completed its review of the draft Environmental Assessment (EA), including a federal consistency determination (FCD), for the above-referenced project. The Department of Environmental Quality (DEQ) is responsible for coordinating Virginia's review of federal environmental documents prepared pursuant to the National Environmental Policy Act (NEPA) and responding to appropriate federal officials on behalf of the Commonwealth. DEQ is also responsible for coordinating state reviews of federal consistency determinations (FCD) submitted under the Coastal Zone Management Act. The following agencies and locality participated in this review:

Department of Environmental Quality
Department of Game and Inland Fisheries
Department of Conservation and Recreation
Department of Health
Department of Historic Resources
Marine Resources Commission
Fairfax County

The Department of Agriculture and Consumer Services, Department of Forestry, Department of Aviation and the Northern Virginia Regional Commission also were invited to comment on the project.

PROJECT DESCRIPTION

The U.S. Army Garrison, Fort Belvoir, submitted an EA, including a FCD, for the proposed removal of trees at Davison Army Airfield (DAAF) in Fairfax County. The proposed action entails the removal of trees on DAAF that violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas to ensure pilot safety and to comply with federal aviation safety regulations. According to the EA, the proposed action would not cause significant impacts. However, best management practices would be implemented to reduce or minimize impacts. Adverse impacts to wetland resources would be minimized through use of deck mats, which are a temporary impact but would prevent compaction and rutting, and permanent impacts would be mitigated through purchase of wetland mitigation credits. Trees would be removed from five sections of DAAF by topping or cutting:

- 24 trees in the Northeast Section,
- 8 trees in the West Section,
- 2.5 acres of tree removal in the Northwest Section,
- 9.2 acres of tree removal in the Southwest Section, and
- 4.7 acres of tree removal in the Southeast Section.

The stumps would be left in place. In compliance with the Federal Emerald Ash Borer quarantine, all trees removed for this project would be chipped or taken to landfills within the quarantine zone. According to the FCD, the project is consistent with the enforceable policies of the Virginia Coastal Zone Management (CZM) Program to the maximum extent practicable.

FEDERAL CONSISTENCY PURSUANT TO THE COASTAL ZONE MANAGEMENT ACT

Pursuant to the Coastal Zone Management Act of 1972, as amended, activities both within and outside of the Commonwealth's designated coastal zone with reasonably foreseeable effects on any coastal uses or resources resulting from a Federal agency activity (15 CFR Part 930, Subpart C) or Federal license or permit activity (15 CFR Part 930, Subpart D) must be consistent with Virginia's Coastal Zone Management (CZM) Program. The Virginia CZM Program consists of a network of programs administered by several agencies. DEQ coordinates the review of FCDs and federal consistency certifications (FCCs) with agencies administering the enforceable policies of the Virginia CZM Program.

PUBLIC PARTICIPATION

In accordance with 15 CFR §930.2, a public notice of this proposed action was published in OEIR's Program Newsletter and on the DEQ website from July 29, 2016 to August 11, 2016. No public comments were received in response to the notice.

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FEDERAL CONSISTENCY CONCURRENCE

The EA includes a FCD that states that the project is consistent to the maximum extent practicable with the enforceable policies of the Virginia CZM Program. The reviewing agencies that are responsible for the administration of the enforceable policies generally agree with the FCD. Based on the review of the FCD and the comments submitted by agencies administering the enforceable policies of the Virginia CZM Program, DEQ concurs that the proposed project is consistent with the Virginia CZM Program provided all applicable permits and approvals are obtained as described. However, other state approvals which may apply to this project are not included in this concurrence. Therefore, the responsible agent must also ensure that this project is constructed and operated in accordance with all applicable federal, state and local laws and regulations.

4

ENVIRONMENTAL IMPACTS AND MITIGATION

1. Wetlands and Water Quality. The EA (page 3-18) states that minor adverse impacts to non-tidal wetlands would be expected from implementation of the proposed action.

1(a) Agency Jurisdiction.

1(a)(i) DEQ. The State Water Control Board promulgates Virginia's water regulations, covering a variety of permits to include Virginia Pollutant Discharge Elimination System Permit, Virginia Pollution Abatement Permit, Surface and Groundwater Withdrawal Permit, and the Virginia Water Protection Permit (VWPP). The VWPP is a state permit which governs wetlands, surface water, and surface water withdrawals/impoundments. It also serves as § 401 certification of the federal Clean Water Act § 404 permits for dredge and fill activities in waters of the U.S. The VWPP Program is under the Office of Wetlands and Stream Protection (OWSP).

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1(a)(ii) VMRC. Tidal wetlands are regulated by VMRC under the authority of Virginia Code §28.2-1301 through §28.2-1320.

1(b) Agency Findings.

1(b)(i) DEQ Findings. The DEQ Northern Regional Office (NRO) states that according to the application, the project as proposed, will impact surface waters and DEQ issued a VWP permit, WP4-16-0862, that became effective 7/8/2016 and expires on 7/31/2021,

for the project. The project manager is reminded if the scope of the project's impacts change, coordination with DEQ is required and the revised project proposal will be reviewed in accordance with the VWP permit program regulations and current VWP permit program guidance.

1(b)(ii) VMRC Findings. VMRC states that no permit will be required for the proposed project.

1(c) Requirement. The project must comply with the VWP permit, WP4-16-0862, that became effective 7/8/2016 and expires on 7/31/2021.

1(d) Conclusion. Provided the project meets the requirements of the VWP permit, WP4-16-0862, the project would be consistent with the wetlands management enforceable policy of the Virginia CZM Program.

2. Air Quality. The EA (page 3-8) states that impacts to air quality would be minor, temporary impacts that are not regionally or locally significant as a result of the tree removal.

2(a) Agency Jurisdiction. The DEQ Air Division, on behalf of the State Air Pollution Control Board, is responsible for developing regulations that implement Virginia's Air Pollution Control Law (Virginia Code §10.1-1300 et seq.). DEQ is charged with carrying out mandates of the state law and related regulations as well as Virginia's federal obligations under the Clean Air Act as amended in 1990. The objective is to protect and enhance public health and quality of life through control and mitigation of air pollution. The division ensures the safety and quality of air in Virginia by monitoring and analyzing air quality data, regulating sources of air pollution, and working with local, state and federal agencies to plan and implement strategies to protect Virginia's air quality. The appropriate DEQ regional office is directly responsible for the issuance of necessary permits to construct and operate all stationary sources in the region as well as monitoring emissions from these sources for compliance. As a part of this mandate, environmental impact reviews (EIRs) of projects to be undertaken in the state are also reviewed. In the case of certain projects, additional evaluation and demonstration must be made under the general conformity provisions of state and federal law.

The Air Division regulates emissions of air pollutants from industries and facilities and implements programs designed to ensure that Virginia meets national air quality standards. The most common regulations associated with projects are:

- Open burning: 9VAC5-130 et seq.
- Fugitive dust control: 9VAC5-50-60 et seq.
- Permits for fuel-burning equipment: 9VAC5-80-1100 et seq.

2(b) Ozone Nonattainment Area. According to the DEQ Air Division, the project site is located in an ozone nonattainment area and an emission control area for volatile organic compounds (VOCs) and oxides of nitrogen (NO_x), which are contributors to ozone pollution.

2(c) Requirements.

2(c)(i) Fugitive Dust. During land-disturbing activities, fugitive dust must be kept to a minimum by using control methods outlined in 9VAC5-50-60 et seq. of the Regulations for the Control and Abatement of Air Pollution. These precautions include, but are not limited to, the following:

- Use, where possible, water or suitable chemicals for dust control during the proposed demolition and construction operations and from material stockpiles;
- Install and use of hoods, fans and fabric filters to enclose and vent the handling of dusty materials;
- Cover open equipment for conveying materials; and
- Promptly remove spilled or tracked dirt or other materials from paved streets and dried sediments resulting from soil erosion.

2(c)(ii) Open Burning. If project activities include the burning of vegetative debris or use of special incineration devices in the disposal of land clearing debris, this activity must meet the requirements under 9VAC5-130 et seq. of the regulations for open burning, and it may require a permit. The regulations provide for, but do not require, the local adoption of a model ordinance concerning open burning. Contact officials with the appropriate locality to determine what local requirements, if any, exist.

2(d) Agency Recommendation. DEQ recommends that all precautions be taken to restrict the emissions of VOCs and NO_x during construction.

2(e) Conclusion. Provided the project complies with applicable requirements, it would be consistent with the air pollution control enforceable policy of the Virginia CZM Program.

3. Erosion and Sediment Control and Stormwater Management. According to the EA (page 3-17), the project will implement erosion and sediment controls and stormwater management methods.

3(a) Agency Jurisdiction. The DEQ Office of Stormwater Management (OSM) administers the following laws and regulations governing construction activities:

- Virginia Erosion and Sediment Control Law (§ 62.1-44.15:51 et seq.) and Regulations (VESCL&R) (9VAC25-840);
- Virginia Stormwater Management Act (VSMA) (§ 62.1-44.15:24 et seq.);
- Virginia Stormwater Management Program (VSMP) regulation (9VAC25-870); and
- 2014 General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharges of Stormwater from Construction Activities (9VAC25-880).

In addition, DEQ is responsible for the VSMP General Permit for Stormwater Discharges from Construction Activities related to Municipal Separate Storm Sewer Systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program (9VAC25-890-40).

3(b) Requirements. The DEQ OSM did not respond to a request for comments. Guidance on regulatory requirements is listed below.

3(b)(i) Erosion and Sediment Control and Stormwater Management Plans. The applicant and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with VESCL&R and VSMA, including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act-Section 313). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles, and related land-disturbing activities that result in the total land disturbance of equal to or greater than 10,000 square feet or 2,500 square feet on lands analogous to Chesapeake Bay Preservation Areas would be regulated by VESCL&R. Accordingly, the applicant must prepare and implement an erosion and sediment control (ESC) plan to ensure compliance with state law and regulations. The ESC plan is submitted to the DEQ regional office that serves the area where the project is located for review for compliance. The applicant is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy (Reference: VESCL 62.1-44.15 et seq.).

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3(b)(ii) General Permit for Stormwater Discharges from Construction Activities (VAR10). The operator or owner of a construction project involving land-disturbing activities equal to or greater than one acre is required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project-specific stormwater pollution prevention plan (SWPPP). The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and the SWPPP must address water quality and quantity in accordance

with the VSMP Permit Regulations. General information and registration forms for the General Permit are available on DEQ's website at <http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx> (Reference: VSWML 62.1-44.15 et seq.; VSMP Permit Regulations 9VAC 25-870-10 et seq.).

3(c) Conclusion. Provided the project is consistent with the above-referenced requirements, the project would be consistent with the nonpoint pollution control enforceable policy of the Virginia CZM Program.

4. Solid and Hazardous Waste Management. The EA (page 3-4) states it is anticipated that effects from the proposed action would be temporary and minimal and therefore are not analyzed in this EA in detail.

4(a) Agency Jurisdiction. On behalf of the Virginia Waste Management Board, the DEQ Division of Land Protection and Revitalization is responsible for carrying out the mandates of the Virginia Waste Management Act (Virginia Code §10.1-1400 et seq.), as well as meeting Virginia's federal obligations under the Resource Conservation and Recovery Act and the Comprehensive Environmental Response Compensation Liability Act, commonly known as Superfund. The DEQ Division of Land Protection and Revitalization also administers those laws and regulations on behalf of the State Water Control Board governing Petroleum Storage Tanks (Virginia Code §62.1-44.34:8 et seq.), including Aboveground Storage Tanks (9VAC25-91 et seq.) and Underground Storage Tanks (9VAC25-580 et seq. and 9VAC25-580-370 et seq.), also known as Virginia Tank Regulations, and § 62.1-44.34:14 et seq. which covers oil spills.
Virginia:

- Virginia Waste Management Act, Virginia Code § 10.1-1400 et seq.
- Virginia Solid Waste Management Regulations, 9VAC20-81
 - (9VAC20-81-620 applies to asbestos-containing materials)
- Virginia Hazardous Waste Management Regulations, 9VAC20-60
 - (9VAC20-60-261 applies to lead-based paints)
- Virginia Regulations for the Transportation of Hazardous Materials, 9VAC20-110.

Federal:

- Resource Conservation and Recovery Act (RCRA), 42 U.S. Code sections 6901 et seq.
- U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 Code of Federal Regulations, Part 107
- Applicable rules contained in Title 40, Code of Federal Regulations.

4(b) Database Search. DEQ's Division of Land Protection and Revitalization (DLPR) identified the following waste sites in close proximity of the project site:

7 Hazardous Waste/RCRA Facilities:

VAR000512715	FORT BELVOIR RESIDENTIAL COMMUNITIES LLC	FORT BELVOIR, VA
VA7213720082	US ARMY GARRISON FORT BELVOIR	FORT BELVOIR, VA
VA1210000914	US VAARNG- ARMORY-FT BELVOIR 170TH	FT BELVOIR, VA
VAD988228730	VA ARNG ARMORY FT BELVOIR	FORT BELVOIR, VA
VAD988228722	VA ARNG ARMORY FT BELVOIR 170TH	FT BELVOIR, VA
VA5210020082	VA ARNG-ARMORY- FT BELVOIR	FORT BELVOIR, VA
VAD982677841	VAARNG-OMS13	FT BELVOIR, VA

The hazardous wastes/RCRA information can be accessed from EPA's websites at <https://www3.epa.gov/enviro/> and <https://rcrainfopreprod.epa.gov/rcrainfoweb/action/main-menu/view>.

4 Petroleum Releases :

- PC#19920905, Fort Belvoir – Building 3118, Telegraph Rd & Potomac River, Fort Belvoir, VA 22060. Release Date: 11/14/1991. Status: Closed
- PC#19922217, Fort Belvoir – Building 03140, Telegraph Rd & Potomac River, Fort Belvoir, VA 22060. Release Date: 06/26/1992. Status: Closed
- PC#20023026, Fort Belvoir – Building 03146, Telegraph Rd & Potomac River, Fort Belvoir, VA 22060. Release Date: 07/06/2001. Status: Closed
- PC#19993355, Fort Belvoir – Building 03138, Telegraph Rd & Potomac River, Fort Belvoir, VA 22060. Release Date: 05/07/1999. Status: Closed

See the attached letter from DEQ for additional details.

4(c) Requirements.

- Any soil/sediment that is suspected of contamination or wastes that are generated during construction-related activities must be tested and disposed of in accordance with applicable federal, state, and local laws and regulations.
- Consider the nature and extent of the identified waste sites to determine their impact to the proposed project.

4(d) Agency Recommendations. DEQ encourages all projects to implement pollution prevention principles, including:

- the reduction, reuse and recycling of all solid wastes generated; and
- the minimization and proper handling of generated hazardous wastes.

5. Natural Heritage Resources. The EA (page 3-19) states that tree removal areas within DAAF are mostly forested and some areas are located within the 100-year floodplain of Accotink Creek and non-tidal wetlands. Plant communities in the tree removal areas, listed by prominence, are floodplain hardwood forests, beech mixed oak forest and palustrine forested wetland. None of the vegetative communities in the proposed project area are considered rare by the Commonwealth of Virginia. In addition (page 3-21), there is a potential to impact the northern long-eared bat habitat with the proposed tree removal. To avoid impacts, tree removal would only be performed outside of the closure period.

5(a) Agency Jurisdiction.

5(a)(i) The Virginia Department of Conservation and Recreation's (DCR) Division of Natural Heritage (DNH): DNH's mission is conserving Virginia's biodiversity through inventory, protection and stewardship. The Virginia Natural Area Preserves Act (Virginia Code §10.1-209 through 217), authorized DCR to maintain a statewide database for conservation planning and project review, protect land for the conservation of biodiversity, and to protect and ecologically manage the natural heritage resources of Virginia (the habitats of rare, threatened and endangered species, significant natural communities, geologic sites, and other natural features).

5(a)(ii) The Virginia Department of Agriculture and Consumer Services (VDACS): The Endangered Plant and Insect Species Act of 1979 (Virginia Code Chapter 39 §3.1-1020 through 1030) authorizes VDACS to conserve, protect and manage endangered and threatened species of plants and insects. Under a Memorandum of Agreement established between VDACS and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species.

5(b) Agency Findings – Natural Heritage Resources. According to the information currently in DCR DNH’s files, the Accotink Bay – Gunston Cove Stream Conservation Unit (SCU) is located downstream from the project site. The Accotink Bay – Gunston Cove SCU has been given a biodiversity ranking of B5, which represents a site of general significance. The natural heritage resources associated with this site are:

<i>Lampsilis radiata</i>	Eastern lampmussel	G5/S2S3/NL/NL
<i>Glyptemys insculpta</i>	Wood turtle	G3/S2/NL/LT

The wood turtle is currently classified as threatened by the Department of Game and Inland Fisheries (DGIF). In addition, the Unnamed Tributary to Dogue Creek, which has been designated by DGIF as a “Threatened and Endangered Species Water” for the wood turtle is within 2 miles of the project area.

The Accotink Wetlands Conservation Site is also located downstream from the project site and has been given a biodiversity significance ranking of B3, which represents a site of high significance. The natural heritage resources of concern at this site are:

<i>Lathyrus palustris</i>	Marsh pea	G5/S1/NL/NL
<i>Bolboschoenus fluviatilis</i>	River bulrush	G5/S2/NL/NL
<i>Ranunculus ambigens</i>	Water-plantain crowfoot	G4/S1/NL/NL
Tidal Freshwater Marsh	(Mixed High Marsh Type)	GNR/S4?/NL/NL

Additional information is available in the attached letter from DCR.

5(c) Agency Findings – Threatened and Endangered Plant and Insect Species. DCR states that the current activity will not affect any documented state-listed plant and insect species.

5(d) Agency Findings – Natural Area Preserves. There are no State Natural Area Preserves under DCR’s jurisdiction in the project vicinity.

5(e) Agency Recommendations.

- Contact DCR DNH to re-submit project information and a map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.
- Implement and strictly adhere to applicable state and local erosion and sediment control and stormwater management laws and regulations to minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities.
- DCR recommends that trees to be removed should be evaluated for potential bat habitat. If suitable habitat is documented, DCR recommends coordination with

the U.S. Fish and Wildlife Service for evaluation of impacts to currently listed and proposed listed species.

- Additionally, to avoid impacts to important bat colonies, remove trees in non-breeding season, October 15 – March 31, to minimize impacts to maternity sites.

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6. Historic Structures and Architectural Resources. The EA (page 3-2) states that the Army has been in consultation with the Department of Historic Resources (DHR).

6(a) Agency Jurisdiction. The Virginia DHR conducts reviews of both federal and state projects to determine their effect on historic properties. Under the federal process, DHR is the State Historic Preservation Office, and ensures that federal undertakings – including licenses, permits, or funding – comply with Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulation at 36 CFR Part 800. Section 106 requires federal agencies to consider the effects of federal projects on properties that are listed or eligible for listing on the National Register of Historic Places.

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6(b) Agency Findings. The Army at Fort Belvoir has consulted with DHR on this project pursuant to Section 106 of the National Historic Preservation Act, as amended, and its implementing regulation 36 CFR Part 800. DHR concurred with the Army that no historic properties will be affected by this undertaking.

7. Water Supply. The EA does not address water supply impacts.

7(a) Agency Jurisdiction. The Virginia Department of Health (VDH) Office of Drinking Water (ODW) reviews projects for the potential to impact public drinking water sources (groundwater wells, springs and surface water intakes). The VDH ODW administers both federal and state laws governing waterworks operation.

7(b) Agency Comment. VDH ODW finds that there may be impacts to public drinking water sources due to this project if the mitigation efforts identified below are not implemented. There are no public groundwater wells within a 1-mile radius of the project site. The following surface water intakes are located within a 5-mile radius of the project site:

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PWSID	SYSNAME	FACNAME
6059501	FAIRFAX COUNTY WATER AUTHORITY	OCCOQUAN RESERVIOR INTAKE

The project is within the watershed of the following public surface water source:

PWSID	SYSNAME	FACNAME
6059501	FAIRFAX COUNTY WATER AUTHORITY	OCCOQUAN RESERVIOR INTAKE

7(c) Agency Recommendations. Implement best management practices, including erosion and sediment controls as well as spill prevention controls and countermeasures, on the project site. Care should be taken while transporting materials in and out of the project site to prevent impacts to surface water intakes within 5 miles.

Contact VDH (Roy Soto at Roy.Soto@vdh.virginia.gov) for additional information if necessary.

8. Fisheries Management. The EA (FCD, page C-3) states that the proposed project would have no effect on commercial or recreational fisheries.

8(a) Agency Jurisdiction.

8(a)(i) Virginia Marine Resources Commission (VMRC) and Department of Game and Inland Fisheries (DGIF). The fisheries management enforceable policy is administered by the VMRC (Virginia Code Section 28.2-200 to 28.2-713) and the DGIF (Virginia Code Section 29.1-100 to 29.1-570).

8(a)(ii) Department of Health. The VDH Division of Shellfish Sanitation (DSS) is responsible for protecting the health of the consumers of molluscan shellfish and crustacea by ensuring that shellfish growing waters are properly classified for harvesting, and that molluscan shellfish and crustacea processing facilities meet sanitation standards. The mission of this Division is to minimize the risk of disease from molluscan shellfish and crustacea products at the wholesale level by classifying shellfish waters for safe commercial and recreational harvest; by implementing a statewide regulatory inspection program for commercial processors and shippers; and by providing technical guidance and assistance to the shellfish and crustacea industries regarding technical and public health issues.

8(b) Agency Findings. VDH and VMRC did not indicate resources under their jurisdictions would be affected. DGIF states that Accotink Creek has been designated a Confirmed Anadromous Fish Use Area. It appears tree removal immediately adjacent to Accotink Creek is proposed. Naturally vegetated riparian buffers, particularly wooded buffers, are important to aquatic systems. Such buffers provide instream temperature control, bank stability, nutrient treatment, and habitat to the system. The removal of a stable, intact riparian buffer may result in degradation of the Accotink Creek system which supports an important fishery. DGIF states that it understands the need for removal of line of site obstructions but has recommendations (see Item 8(c)).

8(c) Agency Recommendations. To protect the Accotink Creek system which supports an important fishery, DGIF recommends using select cuts, or other silvicultural prescriptions, that will minimize impacts upon the currently intact riparian buffer. If the riparian buffer must be removed, DGIF recommends that it be replanted with native shrubs and forbes that can replace some of the lost ecosystem functions provided by riparian buffers.

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8(d) Conclusion. Assuming adherence to erosion and sediment controls, DGIF finds this project consistent with the fisheries management enforceable policy of the Virginia CZM Program.

9. Wildlife Resources. The EA (page 3-21) states that minor adverse impacts are expected to wildlife habitat due to tree removal. The EA (page 3-22) states that the Army will implement conservation measures to protect the northern long-eared bat.

9(a) Agency Jurisdiction. The Virginia Department of Game and Inland Fisheries (DGIF), as the Commonwealth's wildlife and freshwater fish management agency, exercises enforcement and regulatory jurisdiction over wildlife and freshwater fish, including state- or federally-listed endangered or threatened species, but excluding listed insects (Virginia Code, Title 29.1). DGIF is a consulting agency under the U.S. Fish and Wildlife Coordination Act (16 U.S.Code §661 et seq.) and provides environmental analysis of projects or permit applications coordinated through DEQ and several other state and federal agencies. DGIF determines likely impacts upon fish and wildlife resources and habitat, and recommends appropriate measures to avoid, reduce or compensate for those impacts. For more information, see the DGIF website at www.dgif.virginia.gov.

9(b) Agency Findings. DGIF documents state-listed endangered tri-colored bats and state-listed threatened wood turtles from the project area. However, based on the scope and location of the proposed work, DGIF does not anticipate adverse impacts upon these species to result from the proposed work. DGIF documents bald eagles from the project area.

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9(c) Agency Recommendations. DGIF has the following recommendations about development activities:

- Ensure that this project is consistent with state and federal guidelines for protection of bald eagles (<http://www.dgif.virginia.gov/wp-content/uploads/virginia-bald-eagle-guidelines-for-landowners.pdf>) and coordinate as indicated with the U.S. Fish and Wildlife Service regarding possible impacts upon bald eagles or the need for a federal bald eagle take permit.

- Adhere to a time-of-year restriction from March 15 through August 15 of any year for all tree removal and ground clearing to protect nesting resident and migratory songbirds.
- Adhere to erosion and sediment controls during ground disturbance.
- Adhere to the currently approved Integrated Natural Resources Management Plan (INRMP) for the installation.

10. Coastal Lands Management. The EA (FCD, C-4) states that there are lands analogous to Resource Protection Areas (RPAs) located within the proposed project area. The lands analogous to RPAs are associated with Accotink Creek and its unnamed tributaries and wetlands. The tree removal would have no direct impacts to Accotink Creek or its unnamed tributaries. However, minor impacts to wetlands associated with Accotink Creek and within the land analogous to RPA will occur. Within the northwest section of the tree removal, one area of wetland will be converted from a palustrine forested to a palustrine emergent. All trees would be removed from the palustrine forested wetland. Tree trunks and crowns will be cut and all parts of the trees, excluding the stumps, will be removed from the site. Tree removal within the other sections would not impact wetlands or the lands analogous to RPA as there are none present in those areas.

10(a) Agency Jurisdiction. The DEQ Office of Local Government Programs (OLGP) administers the coastal lands management enforceable policy through the Chesapeake Bay Preservation Act (Bay Act) (Virginia Code §62.1-44.15 et seq.) and Chesapeake Bay Preservation Area Designation and Management Regulations (Regulations) (9VAC 25-830-10 et seq.).

10(b) Chesapeake Bay Preservation Act. In Fairfax County, the areas protected by the Chesapeake Bay Preservation Act, as locally implemented, require conformance with performance criteria. These areas include Resource Protection Areas (RPAs) and Resource Management Areas (RMAs) as designated by the local government. RPAs include tidal wetlands, certain non-tidal wetlands and tidal shores. RPAs also include a 100-foot vegetated buffer area located adjacent to and landward of these features and along both sides of any water body with perennial flow. All areas of the County not included in the RPA are designated as RMAs.

10(c) Local Comments. Fairfax County states that according to the EA, temporary impacts to some small forested and emergent wetland areas within the project envelope are anticipated. However, these wetlands have no direct connection by surface flow to nearby streams and would not be classified as lands analogous to RPAs under the Fairfax County Chesapeake Bay Preservation Ordinance. Fairfax County states that it agrees with the findings of the EA.

10(d) Agency Findings. DEQ OLGP states that the project proposes tree removal in five areas immediately adjacent to the Davidson Army Airfield. Of those five areas, only the northeast and northwest sections are located on lands analogous to RPA lands. The proposed project would result in the elimination of 24 trees in the northeast section, and tree removal on 2.5 acres of land in the northwest section.

10(e) Requirements. Under the Federal Consistency Regulations of the *Coastal Zone Management Act of 1972*, federal actions in Virginia must be conducted in a manner “consistent to the maximum extent practicable” with the enforceable policies of the Virginia Coastal Zone Management Program. The Coastal Lands Management enforceable policy is administered through the Chesapeake Bay Preservation Act and Regulations.

Federal actions on installations located within Tidewater Virginia are required to be consistent with the performance criteria of the Regulations on lands analogous to locally designated RPAs and Resource Management Areas (RMAs), as provided in §9VAC25-830-130 and 140 of the Regulations. The performance criteria include the requirement to minimize land disturbance (including access and staging areas), retain existing vegetation and minimize impervious cover as well as including compliance with the requirements of the Virginia Erosion and Sediment Control Handbook, and stormwater management criteria consistent with water quality protection provisions of the Virginia Stormwater Management Regulations. For land disturbance over 2,500 square feet, the project must comply with the requirements of the Virginia Erosion and Sediment Control Handbook.

Per 9VAC25-830-140 5 of the Regulations, trees may be removed as necessary to provide for sight lines and vistas, provided that where removed, they shall be replaced with other vegetation that is equally effective in retarding runoff, preventing erosion, and filtering nonpoint source pollution from runoff.

10(f) Conclusion. Provided adherence to the above-referenced requirements, the proposed activity would be consistent with the coastal lands management enforceable policy of the Virginia CZM Program.

11. Subaqueous Lands. The EA (FCD, Page C-3) states that the project would not affect subaqueous lands.

11(a) Agency Jurisdiction. The Virginia Marine Resources Commission (VMRC) regulates encroachments in, on or over state-owned subaqueous beds as well as tidal wetlands pursuant to Virginia Code §28.2-1200 through 1400. For nontidal waterways, VMRC states that it has been the policy of the Habitat Management Division to exert jurisdiction only over the beds of perennial streams where the upstream drainage area

is 5 square miles or greater. The beds of such waterways are considered public below the ordinary high water line.

11(b) Agency Finding. Based on a desktop review of the information provided, it appears that no permit will be required by the Marine Resources Commission for this project.

11(c) Conclusion. As proposed, the project would be consistent with the subaqueous lands management enforceable policy of the Virginia CZM Program.

12. Pollution Prevention. DEQ advocates that principles of pollution prevention and sustainability be used in all construction projects as well as in facility operations. Effective siting, planning, and on-site Best Management Practices (BMPs) will help to ensure that environmental impacts are minimized. However, pollution prevention and sustainability techniques also include decisions related to construction materials, design, and operational procedures that will facilitate the reduction of wastes at the source.

12(a) Recommendations. We have several pollution prevention recommendations that may be helpful in constructing or operating this facility:

- Consider development of an effective Environmental Management System (EMS). An effective EMS will ensure that the proposed facility is committed to complying with environmental regulations, reducing risk, minimizing environmental impacts, setting environmental goals, and achieving improvements in its environmental performance. DEQ offers EMS development assistance and recognizes facilities with effective Environmental Management Systems through its Virginia Environmental Excellence Program (VEEP). VEEP provides recognition, annual permit fee discounts, and the possibility for alternative compliance methods.
- Consider environmental attributes when purchasing materials. For example, the extent of recycled material content, toxicity level, and amount of packaging should be considered and can be specified in purchasing contracts.
- Consider energy efficiency when choosing materials and products, like insulation, fixtures, and HVAC systems.
- Consider contractors' commitment to the environment when choosing contractors. Specifications regarding raw materials and construction practices can be included in contract documents and requests for proposals.
- Choose sustainable materials and practices for building construction and design.

- Integrate pollution prevention techniques into the facility maintenance and operation, to include inventory control for centralized storage of hazardous materials. Maintenance facilities should have sufficient and suitable space to allow for effective inventory control and preventive maintenance.

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DEQ's Office of Pollution Prevention provides information and technical assistance relating to pollution prevention techniques and EMS. If interested, please contact DEQ (Meghann Quinn at 804-698-4021).

13. Pesticides and Herbicides. In general, when pesticides or herbicides must be used, their use should be strictly in accordance with manufacturers' recommendations. In addition, to the extent feasible, DEQ recommends that the responsible agent for the project use the least toxic pesticides or herbicides effective in controlling the target species. For more information on pesticide or herbicide use, please contact the Virginia Department of Agriculture and Consumer Services at (804) 786-3501.

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14. Regional Comments. As customary, DEQ invited the affected locality and planning district commission to participate in the Commonwealth's environmental review of this proposal.

14(a) Agency Jurisdiction. In accordance with CFR 930, Subpart A, § 930.6(b) of the Federal Consistency Regulations, DEQ, on behalf of the state, is responsible for securing necessary review and comment from other state agencies, the public, regional government agencies, and local government agencies, in determining the Commonwealth's concurrence or objection to a federal consistency certification.

14(b) Local Comments. Fairfax County states that as noted in the EA, all trees removed would be chipped onsite or taken to landfills within the quarantine zone in compliance with Emerald Ash Borer quarantine requirements. The forested areas are to be converted to shrub habitat with replanting in those areas. This should provide some storm water management benefits and help to reduce potential erosion in these areas while also meeting the safety goals for the continued airfield operations. It appears that much of the proposed work will result in some temporary impacts while no significant long-term impacts would be anticipated. Fairfax County is inclined to agree with the findings of the Draft EA. See Item 10(b) for other findings. Additional details from Fairfax County are in the attached letter.

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REGULATORY AND COORDINATION NEEDS

1. Water Quality and Wetlands. The project must comply with the DEQ VWP permit, WP4-16-0862, that became effective 7/8/2016 and expires on 7/31/2021. Contact DEQ

NRO (Trisha Beasley at 703-583-3940 or Trisha.Beasley@deq.virginia.gov) for additional information if necessary.

2. Erosion and Sediment Control and Stormwater Management. This project must comply with Virginia's Erosion and Sediment Control Law (Virginia Code § 62.1-44.15:61) and Regulations (9VAC25-840-30 et seq.) and Stormwater Management Law (Virginia Code § 62.1-44.15:31) and Regulations (9VAC25-870-210 et seq.) as administered by DEQ. Erosion and sediment control, and stormwater management requirements should be coordinated with the DEQ NRO (Kelly Vanover at Kelly.Vanover@deq.virginia.gov).

3. General Permit for Stormwater Discharges from Construction Activities (VAR10). The operator or owner of a construction activity involving land disturbance of equal to or greater than 1 acre is required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project specific stormwater pollution prevention plan (SWPPP). Specific questions regarding the Stormwater Management Program requirements should be directed to DEQ (Holly Sepety at 804-698-4039) (Reference: VSWML §62.1-44.15 et seq.).

4. Air Quality Regulations. This project may be subject to air regulations administered by DEQ. The following sections of Virginia Administrative Code are applicable:

- 9 VAC 5-50-60 et seq. governing fugitive dust emissions; and
- 9 VAC 5-130 et seq. for open burning.

4(a) Coordination.

- Contact officials with the appropriate locality for information on any local requirements pertaining to open burning.
- Contact DEQ NRO (James LaFratta at James.LaFratta@deq.virginia.gov or 703-583-3928) for additional information on air regulations if necessary.

5. Solid and Hazardous Wastes. All solid waste, hazardous waste and hazardous materials must be managed in accordance with all applicable federal, state and local environmental regulations. For additional information on waste management, contact DEQ NRO (Richard Doucette at 703-583-3838).

6. Protected Species, Wildlife Resources and Natural Heritage Resources.

- DCR recommends that trees to be removed should be evaluated for potential bat habitat. If suitable habitat is documented, DCR recommends coordination with

the US Fish and Wildlife Service (804-693-6694) for evaluation of impacts to currently listed and proposed listed species.

- Contact the DCR DNH (804-371-2708) to re-submit project information and a map for an update on natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.
- Coordinate with DCR DNH (Rene' Hypes, Natural Heritage Project Coordinator at 804-371-2708) for additional information on its comments and recommendations if necessary.
- DGIF's database may be accessed at <http://vafwis.org/fwis/> or by contacting DGIF (804-367-2733).
- Contact DGIF (Amy Ewing at Amy.Ewing@dgif.virginia.gov) for additional information about wildlife resources if necessary.

7. Coastal Lands Management. The project must be consistent with the requirements of the Chesapeake Bay Preservation Act (Virginia Code §62.1-44.15:67 – 62.1-44.15:78) and Chesapeake Bay Preservation Area Designation and Management Regulations (Regulations) as locally implemented. Contact DEQ (Daniel Moore at Daniel.Moore@deq.virginia.gov) for additional information if necessary.

Thank you for the opportunity to comment on this EA, including a FCD. The detailed comments of reviewers are attached. If you have questions, please do not hesitate to call me at (804) 698-4204 or Julia Wellman at (804) 698-4326.

Sincerely,



Bettina Sullivan, Manager
Environmental Impact Review and Long Range
Priorities Program

Enclosures

ec: Amy Ewing, DGIF
Keith Tignor, VDACS
Robbie Rhur, DCR
Roy Soto, VDH
Roger Kirchen, DHR
Greg Evans, DOF
Tony Watkinson, VMRC
Rusty Harrington, DOAV
Edward L. Long, Jr, Fairfax County
G. Mark Gibb, Northern Virginia Regional Commission

U.S. Army Garrison, Fort Belvoir
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Kristin Jones, Army Corps



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Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

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MEMORANDUM

TO: Julia Wellman, Environmental Impact Review Coordinator

FROM: Daniel Moore, Principal Environmental Planner

DATE: August 17, 2016

SUBJECT: DEQ - 16-149F-- FCD/Army: Davidson Army Airfield Hazardous Tree Removal, Fairfax County

We have reviewed the Federal Consistency Determination for the proposed Davidson Army Airfield Hazardous Tree Removal Project at Fort Belvoir in Fairfax County and offer the following comments regarding consistency with the provisions of the *Chesapeake Bay Preservation Area Designation and Management Regulations* (Regulations):

In Fairfax County, the areas protected by the *Chesapeake Bay Preservation Act*, as locally implemented, require conformance with performance criteria. These areas include Resource Protection Areas (RPAs) and Resource Management Areas (RMAs) as designated by the local government. RPAs include tidal wetlands, certain non-tidal wetlands and tidal shores. RPAs also include a 100-foot vegetated buffer area located adjacent to and landward of these features and along both sides of any water body with perennial flow. All areas of the County not included in the RPA are designated as RMAs.

Under the Federal Consistency Regulations of the *Coastal Zone Management Act of 1972*, federal actions in Virginia must be conducted in a manner "consistent to the maximum extent practicable" with the enforceable policies of the Virginia Coastal Zone Management Program. The Coastal Lands Management enforceable policy is administered through the Chesapeake Bay Preservation Act and Regulations.

Federal actions on installations located within Tidewater Virginia are required to be consistent with the performance criteria of the Regulations on lands analogous to locally designated RPAs/RMAs, as provided in §9VAC25-830-130 and 140 of the Regulations, including compliance with the requirements of the *Virginia Erosion and Sediment Control Handbook*, and

stormwater management criteria consistent with water quality protection provisions of the *Virginia Stormwater Management Regulations*.” For land disturbance over 2,500 square feet, the project must comply with the requirements of the *Virginia Erosion and Sediment Control Handbook*.

The project proposes tree removal in five areas immediately adjacent to the Davidson Army Airfield. Of those five areas, only the northeast and northwest sections are located on lands analogous to RPA lands. The proposed project would result in the elimination of 24 trees in the northeast section, and tree removal on 2.5 acres of land in the northwest section. Per 9VAC25-830-140 5 of the Regulations, trees may be removed as necessary to provide for sight lines and vistas, provided that where removed, they shall be replaced with other vegetation that is equally effective in retarding runoff, preventing erosion, and filtering nonpoint source pollution from runoff.

Provided adherence to the above-referenced requirements the proposed activity would be consistent with the *Chesapeake Bay Preservation Act* and Regulations.

Wellman, Julia (DEQ)

From: Ewing, Amy (DGIF)
Sent: Friday, July 29, 2016 1:51 PM
To: Wellman, Julia (DEQ)
Subject: ESSLog# 37049(37116)_16-149F_Ft. Belvoir_Davison Army Field_tree removal_DGIF_AME20160728

Julia,
Please see below the comments we sent to DEQ VWP regarding this project. They remain valid.

Assuming adherence to erosion and sediment controls, we find this project consistent with the Fisheries Management Section of the CZMA.

Amy M. Ewing

Environmental Services Biologist/FWIS Biologist Supervisor
Chair, Team WILD (Work, Innovate, Lead and Develop)
VA Department of Game and Inland Fisheries
7870 Villa Park Dr., Suite 400, PO Box 90778, Henrico, VA 23228
804-367-2211 ☎ www.dgif.virginia.gov

 Please consider the environment before printing this email.

From: Ewing, Amy (DGIF)
Sent: Thursday, July 07, 2016 5:08 PM
To: King, Allison (DEQ)
Cc: nhreview (DCR); Bugas, Paul (DGIF)
Subject: updated: ESSLog# 37049_16-0862_Ft. Belvoir_Davison Army Field_tree removal

We document state Endangered tri-colored bats and state Threatened wood turtles from the project area. However, based on the scope and location of the proposed work, we do not anticipate adverse impacts upon these species to result from the proposed work.

Accotink Creek has been designated a Confirmed Anadromous Fish Use Area. It appears tree removal immediately adjacent to Accotink Creek is proposed. Naturally vegetated riparian buffers, particularly wooded buffers, are important to aquatic systems. Such buffers provide instream temperature control, bank stability, nutrient treatment, and habitat to the system. The removal of a stable, intact riparian buffer may result in degradation of the Accotink Creek system which supports an important fishery. We understand the need to removal line of site obstructions, but recommend consideration of using select cuts, or other silvicultural prescriptions that will minimize impacts upon the currently intact riparian buffer. If the riparian buffer must be removed, we recommend that it be replanted with native shrubs and forbes that can replace some of the lost ecosystem functions provided by riparian buffers.

We document bald eagles from the project area. Therefore, we recommend that the applicant ensure that this project is consistent with [state and federal guidelines for protection of bald eagles](#); and that he coordinate as indicated with the U.S. Fish and Wildlife Service regarding possible impacts upon bald eagles or the need for a federal bald eagle take permit.

This project is located within 2 miles of a documented occurrence of a state or federal threatened or endangered plant or insect species and/or other Natural Heritage coordination species. Therefore, we recommend coordination with VDCR-DNH regarding the protection of these resources.

We recommend that all tree removal and ground clearing adhere to a time of year restriction protective of resident and migratory songbird nesting from March 15 through August 15 of any year.

We recommend adherence to erosion and sediment controls during ground disturbance.

We recommend adherence to the currently approved Integrated Natural Resources Management Plan (INRMP) for the installation.

Thanks, Amy

Amy M. Ewing

Environmental Services Biologist/FWIS Biologist Supervisor

Chair, Team WILD (Work, Innovate, Lead and Develop)

VA Department of Game and Inland Fisheries

7870 Villa Park Dr., Suite 400, PO Box 90778, Henrico, VA 23228

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 Please consider the environment before printing this email.

Wellman, Julia (DEQ)

From: Warren, Arlene (VDH)
Sent: Monday, July 18, 2016 1:52 PM
To: Wellman, Julia (DEQ)
Subject: RE: NEW PROJECT Army Davison Army 16-149F

Project Name: Davison Army Airfield Hazardous Tree Removal

Project #: 16-149 F

UPC #: N/A

Location: Fairfax County

VDH – Office of Drinking Water has reviewed the above project. Below are our comments as they relate to proximity to **public drinking water sources** (groundwater wells, springs and surface water intakes). Potential impacts to public water distribution systems or sanitary sewage collection systems **must be verified by the local utility.**

There are no public groundwater wells within a 1 mile radius of the project site.

The following surface water intakes are located **within** a 5 mile radius of the project site:

PWSID	SYSNAME	FACNAME
6059501	FAIRFAX COUNTY WATER AUTHORITY	OCCOQUAN RESERVIOR INTAKE

The project is within the watershed of the following public surface water sources (intakes where the project falls within 5 miles into their watershed are formatted in **bold**):

PWSID	SYSNAME	FACNAME
6059501	FAIRFAX COUNTY WATER AUTHORITY	OCCOQUAN RESERVIOR INTAKE

- ***Environmental Epidemiology, Mr. Dwight Flammia, no comments were received.***

Best Management Practices should be employed on the project site including Erosion & Sedimentation Controls as well as Spill Prevention Controls & Countermeasures.

Care should be taken while transporting materials in and out of the project site, as to prevent impacts to surface water intakes within 5 miles.

There may be impacts to public drinking water sources due to this project if the mitigation efforts outlined above are not implemented.

Molly Joseph Ward
Secretary of Natural Resources

Clyde E. Cristman
Director



Rochelle Altholz
Deputy Director of
Administration and Finance

David C. Dowling
Deputy Director of
Soil and Water Conservation
and Dam Safety

Thomas L. Smith
Deputy Director of Operations

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

MEMORANDUM

DATE: July 18, 2016
TO: Julia Wellman, DEQ
FROM: Roberta Rhur, Environmental Impact Review Coordinator
SUBJECT: DEQ 16-149F, Davison Army Airfield Hazardous Tree Removal

Division of Natural Heritage

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, the Accotink Bay – Gunston Cove Stream Conservation Unit is located downstream from the project site. Stream Conservation Units (SCUs) identify stream reaches that contain aquatic natural heritage resources, including 2 miles upstream and 1 mile downstream of documented occurrences, and all tributaries within this reach. SCUs are also given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain. The Accotink Bay – Gunston Cove SCU has been given a biodiversity ranking of B5, which represents a site of general significance. The natural heritage resources associated with this site are:

<i>Lampsilis radiata</i>	Eastern lampmussel	G5/S2S3/NL/NL
<i>Glyptemys insculpta</i>	Wood turtle	G3/S2/NL/LT

The Eastern lampmussel is a freshwater mussel which inhabits river systems in areas with substrates composed of silt, sand, cobble, gravel and exposed bedrock (NatureServe, 2009). This species has a wide range, from eastern Canada west to Ontario and Quebec and south to South Carolina (NatureServe, 2009). In Virginia, there are records from the Chowan and York River drainages.

Considered good indicators of the health of aquatic ecosystems, freshwater mussels are dependent on good water quality, good physical habitat conditions, and an environment that will support populations of host fish species (Williams et al., 1993). Because mussels are sedentary organisms, they are sensitive to water quality degradation related to increased sedimentation and pollution. They are also sensitive to habitat destruction through dam construction, channelization, and dredging, and the invasion of exotic mollusk species.

The Wood turtle ranges from southeastern Canada, south to the Great Lake states and New England. In Virginia, it is known from northern counties within the Potomac River drainage (NatureServe, 2009). The Wood turtle inhabits areas with clear streams with adjacent forested floodplains and nearby fields, wet meadows, and farmlands (Buhlmann et al., 2008; Mitchell, 1994). Since this species overwinters on the bottoms of creeks and streams, a primary habitat requirement is the presence of water (Mitchell, 1994).

Threats to the wood turtle include habitat fragmentation, urbanization, and automobile or farm machinery mortality (Buhlmann et al., 2008). Please note that the Wood turtle is currently classified as threatened by the Virginia Department of Game and Inland Fisheries (VDGIF).

In addition, the Unnamed Tributary to Dogue Creek, which has been designated by the Virginia Department of Game and Inland Fisheries (VDGIF) as a "Threatened and Endangered Species Water" for the Wood turtle is within 2 miles of the project area.

The Accotink Wetlands Conservation Site is also located downstream from the project site. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. Accotink Wetlands Conservation Site has been given a biodiversity significance ranking of B3, which represents a site of high significance. The natural heritage resources of concern at this site are:

<i>Lathyrus palustris</i>	Marsh pea	G5/S1/NL/NL
<i>Bolboschoenus fluviatilis</i>	River bulrush	G5/S2/NL/NL
<i>Ranunculus ambigens</i>	Water-plantain crowfoot	G4/S1/NL/NL
Tidal Freshwater Marsh	(Mixed High Marsh Type)	GNR/S4?/NL/NL

Marsh pea is a state rare perennial with erect to sprawling stems and leaves with well-developed, branched tendrils and 4 - 10 leaflets. It occupies calcareous fens and marshes in the western part of Virginia and freshwater tidal marshes in the eastern part of the state. It is known from only a few sites in the northern Coastal Plain and Ridge and Valley (Weakley, et al).

River bulrush, a state-rare plant species, inhabits fresh tidal marshes of the coastal plain of Virginia. This species forms predominantly sterile colonies that spread by rhizomes. Water pollution and sedimentation, sea level rise, and invasive species such as *Phragmites australis* pose the greatest threats to populations of this sedge. Nine populations of river bulrush are believed to be extant in Virginia.

Water-plantain crowfoot, water plantain spearwort is a perennial wetland herb in the buttercup family (Ranunculaceae). The global distribution of water-plantain crowfoot includes the eastern, midwestern, and southern U.S. and Ontario, Canada. Although apparently globally secure, is regionally rare to historical or extirpated, particularly in some eastern states (Kartesz 1999). In Virginia, it has been documented in scattered locations in the Coastal Plain, Piedmont, and Ridge and Valley. Many Virginia occurrences are historical, but more recent occurrences include those in Fairfax, Charlotte, and Lee counties. The lower stem of this relatively stout herb may recline, producing roots from the nodes, then become ascending to erect and extending sometimes to over 3 feet long. Leaves are lance-shaped, with margins smooth to finely-toothed. Yellow-petaled flowers bloom from April-July and can be solitary or in a branching inflorescence; the round to oval fruiting head is composed of numerous, small, 1-seeded, fruits (Godfrey and Wooten 1981). Habitat in Virginia occurrences includes a variety of wetlands: freshwater marshes, both tidal and non-tidal; a spring seep within a clearcut; wet soil within a floodplain; a muddy stream

bottom; ditches; and very wet, mucky ground in a small pastured wetland. Threats include habitat degradation or destruction, and competition from invasive alien plant species.

Tidal Freshwater Marsh (Mixed High Marsh Type) (*Impatiens capensis-Peltandra virginica-Polygonum arifolium-Schoenoplectus fluviatilis-Typha angustifolia* Tidal Herbaceous Vegetation) occupies the higher elevation zone of freshwater to slightly oligohaline marshes on the Atlantic Coast from Maine to Virginia. From Delaware to northern Virginia, this is the principal mixed freshwater tidal marsh community and forms extensive patches along many tidal rivers. This community is composed of mixed, dense, and often diverse marsh vegetation with highly variable species composition and patch dominance. The soils are highly variable, varying from silts and silty mucks to peats and sands across the range (NatureServe, 2010). In Virginia, this community occurs most extensively in estuarine reaches of the Potomac River drainage, but has also been documented along the Rappahannock, Pamunkey, Mattaponi, and James Rivers.

Freshwater tidal marshes are naturally dynamic systems that are best developed where there is a major input of freshwater, daily tidal range of at least 0.5 m, and a geomorphology that tends to constrict and magnify tidal influence in the upper reaches of the estuary. These marshes are subject to diurnal flooding by tides and river discharge (NatureServe, 2010). Principal threats include chronic sea-level rise leading to increasing upstream salinity, pollutants, and invasive exotic plants such as marsh dewflower (*Murdannia keissak*) (Fleming et al. 2011).

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations. Due to the legal status of the Wood turtle, DCR recommends coordination with Virginia's regulatory authority for the management and protection of this species, the VDGIF, to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570).

Finally, DCR recommends that trees to be removed should be evaluated for potential bat habitat. If suitable habitat is documented, DCR recommends coordination with the VDGIF and the US Fish and Wildlife Service for evaluation of impacts to currently listed and proposed listed species. Additionally, to avoid impacts to important bat colonies, remove trees in non-breeding season, Oct. 15 – March 31, to minimize impacts to maternity sites.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

New and updated information is continually added to Biotics. Please re-submit project information and map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

The Virginia Department of Game and Inland Fisheries (VDGIF) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from <http://vafwis.org/fwis/> or contact Ernie Aschenbach at 804-367-2733 or Ernie.Aschenbach@dgif.virginia.gov. According to the information currently in our files, an unnamed tributary to Dogue Creek, which has been designated by VDGIF as a "Threatened and Endangered Species Water" for the Wood turtle, is within 2 miles of the project area. Therefore, DCR recommends coordination with VDGIF, Virginia's regulatory authority for the

management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570).

The remaining DCR divisions have no comments regarding the scope of this project. Thank you for the opportunity to comment.

Cc: Amy Ewing, VDGIF

Literature Cited

- Buhlmann, K, T. Tuberville, and W. Gibbons. 2008. *Turtles of the southeast*. University of Georgia Press. Athens, GA. 252 pp.
- Fleming, G.P., K.D. Patterson, K. Taverna, and P.P. Coulling. 2011. *The natural communities of Virginia: classification of ecological community groups. Second approximation. Version 2.4*. Virginia Department of Conservation and Recreation, Division of Natural Heritage, Richmond, VA.
- Godfrey, R.K. and J.W. Wooten. 1981. *Aquatic and Wetland Plants of the Southeastern United States*. The University of Georgia Press, Athens, GA. 933 pp.
- Kartesz, J.T. 1999. *A Synonymized Checklist and Atlas with Biological Attributes for the Vascular Flora of the United States, Canada, and Greenland. First Edition*. In: Kartesz, J.T. and C.A. Meacham. *Synthesis of the North American Flora, Version 1.0*. North Carolina Botanical Garden, Chapel Hill, NC.
- Mitchell, J. C. 1994. *Reptiles of Virginia*. Smithsonian Institution Press, Washington. pp. 88-91.
- NatureServe. 2010. *NatureServe Explorer: An online encyclopedia of life [web application]*. Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: December 13, 2011).
- NatureServe. 2009. *NatureServe Explorer: An online encyclopedia of life [web application]*. Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: April 8, 2010).
- Weakley, A.S., J.C. Ludwig and J.F. Townsend. 2012. *Flora of Virginia*. Botanical Research Institute of Texas Press, Fort Worth. p. 322.
- Williams, J.D., M.L. Warren, Jr., K.S. Cummings, J.L. Harris, and R.J. Neves. 1993. Conservation status of freshwater mussels of the United States and Canada. *Fisheries* 18: 6-9.



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029**

July 22, 2016

Mr. Felix M. Mariani
Fort Belvoir DPW
Environmental and Natural Resources Division
Building 1442
9430 Jackson Loop
Fort Belvoir, VA 22060

Re: Davison Army Airfield Hazardous Tree Removal Environmental Assessment, Fort Belvoir, Virginia

Dear Mr. Mariani:

In accordance with the National Environmental Policy Act (NEPA) of 1969, Section 309 of the Clean Air Act and the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR 1500-1508), the U.S. Environmental Protection Agency (EPA) has reviewed the Environmental Assessment (EA) for the Davison Army Airfield (DAA or DAAF) Hazardous Tree Removal, Fort Belvoir in Virginia.

The purpose of the Proposed Action is to create a less hazardous airspace to ensure pilot safety while balancing the needs of sensitive environmental resources and the surrounding human environment. The proposed action is needed to ensure compliance with FAR Part 77 and UFC 3-260-01; it was determined that DAAF was not in compliance with regulatory guidance due to trees that penetrate the imaginary surfaces and are obstructions that create a hazard to aviation operations around the airfield.

The EA evaluated the No Action Alternative and the Proposed Action Alternative. The Proposed Action would remove trees from five sections of DAAF by topping or cutting: 24 trees in the Northeast Section, 8 trees in the West Section, 2.5 acres of tree removal in the Northwest Section, 9.2 acres of tree removal in the Southwest Section, and 4.7 acres of tree removal in the Southeast Section.

EPA understands the purpose and need for the Proposed Action. However, as a result of our review of the EA, EPA developed comments and questions (presented in the enclosed Technical Comments) to better assess the potential impacts from the Proposed Action. Specific comments address vegetation, wetlands, Chesapeake Bay Resource Preservation Areas (RPA)

and cumulative effects. Thank you for the opportunity to review this project. If you have questions regarding these comments, the staff contact for this project is Karen DelGrosso; she can be reached at 215-814-2765 or delgrosso.karen@epa.gov.

Sincerely,

/s/

Barbara Rudnick
NEPA Team Leader
Office of Environmental Programs

Technical Comments

Purpose and Need

Page ES-ii states, “During the 2012 Installation Management Command (IMCOM) Quality Assurance Evaluation, 2013 Airfield Certification and Safety Inspection, and 2014 United States Army Aeronautical Service Airfield Waiver Package review, it was determined that DAAF was not in compliance with regulatory guidance due to trees that penetrate the imaginary surfaces and are obstructions that create a hazard to aviation operations around the airfield.” Page, 1-1 states, “In accordance with UFC 3-260-01, trees that project into imaginary surfaces must be removed or lowered to a distance that does not violate airfield and airspace criteria.”

It is assumed that these evaluations are part of an action plan to assess that the air space is clear of obstruction. It is understood that when trees move into the imaginary air space that a potential hazard exists. What is the timeframe for these assessments (every 5 years, etc)? As noted in the previous paragraph, it appears that evaluations were conducted in 2012, 2013, and 2014 and in 2016 the trees are still intruding in the air space. As a result of this time lapse, is there the possibility that more trees than discussed may be removed? 19

EPA understands the purpose and need of the Proposed Action which is to create clear air space zones (areas free of trees and other obstructions) to meet safety requirements for the runways and helicopter landing pads. Hopefully, in the four years since the first evaluation in 2012, there has not been accidents attributable to visibility. Is there accident data or bird strikes data that supports the need for the project and would guide succession planning? What is the likelihood of additional tree removal and an increase in wetlands impact to occur in the next evaluation? The EA did not discuss if this activity occurred in the past and what the impact was and the potential impact in the future. Please address. 20

In addition, were pilots interviewed to assess visibility from a practical perspective? This may have been done, but it was not addressed in the EA. It would be prudent to evaluate and compile data from users to ensure that the proposal is the most practical means to address the objectives of the Proposed Action. In addition, is there a standard in place that determines when trees reach a specified height then topping or removal would be in order (in addition to tree height entering the imaginary air space). Please identify action plan and on-going plan to keep the air space clear. 21

Hazardous Materials and Wastes/Greenhouse Gas Emissions and Climate Change

Page 3-4 (Hazardous Materials and Wastes), references EO 13423, *Strengthening Federal Environmental, Energy and Transportation Management* stating that Fort Belvoir complies with EO 13423 by promoting the use of products to reduce solid and hazardous waste. EPA would like to bring to your attention that EO 13423 (2007) was revoked as well as EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance* (2009) which superseded EO 13423. Both EO 13423 and EO 13514 were revoked by EO 13693, *Planning for Federal Sustainability in the Next Decade* which is mentioned on page 3-7 (Regulatory Climate) 23

of the EA. It is important to note that greenhouse gas emissions (GHG) are discussed in terms of only the tree removal activity (page 3-8). What are the impacts as a result of tree/vegetation loss? Please discuss the GHG impacts from the long-term effect of tree/vegetation loss.

24

Vegetation, Wetlands, Chesapeake Bay Preservation Areas

Page 3-18 state, “A total of 1.31 acres of PFO wetlands would be permanently converted to PEM wetlands to include 1.234 acres in the northwest section and 0.072 acres in the southeast section. Minor temporary impacts from placing deck mats in the wetlands, considered fill, would be anticipated, though the use of deck mats would minimize impacts of compaction and rutting from vehicles crossing into wetland areas during tree removal activity.” “Fort Belvoir would coordinate with USACE and the Commonwealth of Virginia through the Joint Permit Application process for an Individual Permit from USACE and Virginia to access the impacts of conversion of palustrine forested wetlands to palustrine emergent wetlands, and for tree removal activities within the RPA in the Northeast, Northwest and Southeast Sections. Mitigation for this permanent impact would be provided by the purchase of credits from a mitigation bank.” Will the mitigation occur within the same watershed? It is a preferred practice to provide mitigation within the same watershed where impact will occur. Please discuss.

25

In addition, as noted on page 3-19, “The tree removal areas within DAAF are mostly forested and some areas are located within the 100-year floodplain of Accotink Creek and non-tidal wetlands. Plant communities in the tree removal areas, listed by prominence, are floodplain hardwood forests, beech mixed oak forest and palustrine forested wetland.” Will mitigation consider the species lost and compensate with the same plant communities impacted?

26

Page 3-25 states that “...1.18 acres of palustrine emergent wetlands would be impacted as vehicles cross through to access the trees to be removed.” Will monitoring occur after tree removal activities are completed to ensure recovery of RPAs? If permanent damage of RPAs occurs, what recompense will DAA take to compensate for damage/loss?

27

Forested wetland systems act as a natural filter and sediment trap and absorb flood waters. They provide vital ecological functions that are critical to several wetland dependent animal and plant species. The EA did not specify wetland dependent animal and plant species to be impacted by tree removal. Please discuss (see below comment, *Wildlife and Wildlife Habitat*).

28

Wetland functional assessments are useful for documenting baseline conditions and establishing a point of reference for future mitigation actions. EPA recommends that an approved wetland functional assessment technique, such as a hydrogeomorphic method (HGM), be applied to aquatic resource impact areas. Information from this assessment can be used to help establish targets and success criteria for a compensatory mitigation package. Please discuss if an approved wetland functional assessment will be applied.

29

As noted in the Draft Finding of No Significant Impact, “Trees would be removed from five sections of DAAF by topping or cutting: 24 trees in the Northeast Section, 8 trees in the West Section, 2.5 acres of tree removal in the Northwest Section, 9.2 acres of tree removal in the

Southwest Section, and 4.7 acres of tree removal in the Southeast Section.” A portion of these trees are forested wetlands which will be mitigated for. Will there be mitigation for the 9.2 plus acres of upland forest that will be lost? Please discuss and identify the trees to be removed (i.e., kind, age).

30

Page 3-11 states, “Fort Belvoir recognizes the RPA designation but, being a federal entity, is not subject to the provisions of the Fairfax County ordinance. As a result, Fort Belvoir does not use RPA maps produced by Fairfax County; instead, the Army delineates the RPA on the installation. In addition to RPA areas, Fort Belvoir places a 35-foot buffer around all intermittent streams.” “The RPA extends from Accotink Creek through much of the northern portion of the DAAF, with a 100-foot buffer on each of the wetlands.” EPA understands that tree removal activities within the RPA in the Northeast, Northwest and Southeast Sections will be mitigated for in the purchase of credits from a mitigation bank. Please explain in the context of Executive Order 13508 (discussed below).

It should be noted that Executive Order 13508, *Chesapeake Bay Protection and Restoration*, must be addressed in terms of the Army’s obligation to consider the protection and restoration of the Chesapeake watershed in terms of meeting the goals, outcomes and objectives set out in the *Strategy for Protecting and Restoring the Chesapeake Bay Watershed*. This document not only sets goals/outcomes/objectives of the federal government, but encourages coordination with state, local, and nongovernmental partners to protect and restore the health of the Chesapeake Bay watershed. Although CO 13508 is mentioned in Section 1.6 Environmental Law and Regulations, it is not specifically addressed within the Affected Environment section of the EA. Please discuss the EO in terms of the previous paragraph to reassure that although county maps of RPAs are not used, there is coordination with local government and that federal goals are being met as determined in the *Strategy for Protecting and Restoring the Chesapeake Watershed*.

31

Floodplains

Page 3-18 states, “The Northeast, Northwest and Southeast areas of tree removal are all located within the 100-year floodplain. The Proposed Action would not result in an impact to the floodplain with regard to water storage capacity or elevation.” With the removal of 24 trees in the Northeast Section, the conversion of 1.234 acres of palustrine forested wetlands to palustrine emergent wetlands in the Northwest Section and the removal of 9.2 acres of trees in the Southwest Section all located with the 100-year floodplain, there will be an encroachment on the floodplain. Floodplain encroachments must be evaluated and coordinated with the Federal Emergency Management Agency (FEMA). Has Fort Belvoir coordinated with FEMA on this project? Has FEMA been given an opportunity to review this EA? Please address.

32

Wildlife and Wildlife Habitat

Page 3-19 states, “A number of aquatic species and their habitat exist in the streams, creeks, and wetlands within or near the proposed project. A full listing of species and habitat are found in the installation’s Integrated Natural Resources Management Plan (USAG Fort Belvoir, 2001).” It is worth noting that this document was not included in the Appendix. It is important

33

to indicate the wildlife and wildlife habitat impacted by the tree removal activity and the wetland impact. Please discuss in terms of wildlife resources impacted directly by the Proposed Action.

34

Noise

Page 3-2 states, “In addition, noise created by the Proposed Action would be below current day-night average noise levels experienced by persons on the ground underneath the flight patterns of aircraft approaching or taking off from DAAF. No long-term impacts from the Proposed Alternative are anticipated to the noise environment at Fort Belvoir. Therefore, noise impacts are not analyzed in this EA.” Has there been consideration to the attenuation of noise that the trees provide and the loss of this attenuation once the trees are removed? How will this loss of attenuation affect those working on the airfield and surrounding areas? Please discuss.

35

Environmental Justice (EJ)

Page 3-3 states, “Local residents may include low-income populations, but these populations would not be particularly or disproportionately affected by the Proposed Action, as it would be limited to within DAAF.” Where are the low-income populations located in relation to the Proposed Action? Will the noise level increase near these populations as a result of tree loss? Even if there is no anticipated impact to minority and low-income populations, the EA should identify these populations and show proximity to the Proposed Action. This information is necessary and should be provided in the EA. Please discuss if any out-reach to the community was planned and if potential EJ populations were considered. Special-designed effort for effective out-reach might be appropriate.

36

Environmental Laws and Regulations

Section 1.6 (Environmental Laws and Regulations) should include EO 13693, *Planning for Federal Sustainability in the Next Decade*.

37

Cumulative Effects

The discussion of Cumulative Effects on page 3-23 as well as Table 3-4, Projects Near DAAF, lack a clear description of the impacts to resources that may have resulted or are yet to result from projects. Of particular interest is the cumulative impacts to resources (wetlands, vegetation, wildlife habitat, etc.) that may have been removed/affected by other projects. It would be helpful to present the proximity of the past, present and future projects in relation to the Proposed Action.

38

**Comment Response Matrix
EA and Draft FNSI
DAAF Hazardous Tree Removal**

Name/Agency	Comment Number	Section	Category	Comment	Response
Department of Environmental Quality	1	Appendix C	Federal Consistency Pursuant to the Coastal Zone Management Act	According to the FCD, the project is consistent with the enforceable policies of the Virginia Coastal Zone Management (CZM) Program to the maximum extent practicable. According to the EA, the proposed action would not cause significant impacts. However, best management practices would be implemented to reduce or minimize impacts. Adverse impacts to wetland resources would be minimized through use of deck mats, which are a temporary impact but would prevent compaction and rutting, and permanent impacts would be mitigated through purchase of wetland mitigation credits.	Comment noted
Department of Environmental Quality	2	Appendix C	Federal Consistency Pursuant to the Coastal Zone Management Act	Pursuant to the Coastal Zone Management Act of 1972, as amended, activities both within and outside of the Commonwealth's designated coastal zone with reasonably foreseeable effects on any coastal uses or resources resulting from a Federal agency activity (15 CFR Part 930, Subpart C) or Federal license or permit activity (15 CFR Part 930, Subpart D) must be consistent with	Comment noted.

Name/Agency	Comment Number	Section	Category	Comment	Response
				Virginia's Coastal Zone Management (CZM) Program. DEQ coordinates the review of FCDs and federal consistency certifications (FCCs) with agencies administering the enforceable policies of the Virginia CZM Program.	
Department of Environmental Quality	3	NA	Public Participation	In accordance with 15 CFR §930.2, a public notice of this proposed action was published in OEIR's Program Newsletter and on the DEQ website from July 29, 2016 to August 11, 2016. No public comments were received in response to the notice.	Comment noted
Department of Environmental Quality	4	Appendix C	Federal Consistency Concurrence	Based on the review of the FCD and the comments submitted by agencies administering the enforceable policies of the Virginia CZM Program, DEQ concurs that the proposed project is consistent with the Virginia CZM Program provided all applicable permits and approvals are obtained as described. However, other state approvals which may apply to this project are not included in this concurrence. Therefore, the responsible agent must also ensure that this project is constructed and operated in accordance with all applicable federal, state and local laws and regulations.	Comment noted.

Name/Agency	Comment Number	Section	Category	Comment	Response
Department of Environmental Quality and Virginia Marine Resources Commission	5	Page 3-11	Wetlands and Water Quality	<p>1) The DEQ Northern Regional Office (NRO) states that according to the application, the project as proposed, will impact surface waters and DEQ issued a VWP permit, WP4-16-0862, that became effective 7/8/2016 and expires on 7/31/2021, for the project. The project manager is reminded if the scope of the project's impacts change, coordination with DEQ is required and the revised project proposal will be reviewed in accordance with the VWPP permit program regulations and current VWP permit program guidance. The project must comply with the VWP permit, WP4-16-0862, that became effective 7/8/2016 and expires on 7/31/2021. Provided the project meets the requirements of the VWP permit, WP4-16-0862, the project would be consistent with the wetlands management enforceable policy of the Virginia CZM Program.</p> <p>2) VMRC states that no permit will be required for the proposed project.</p>	<p>1) Added reference to WP4-16-0862 to section 3.4.2.3</p> <p>2) Comment noted.</p>

Name/Agency	Comment Number	Section	Category	Comment	Response
Department of Environmental Quality - Division of Environmental Quality	6	Page 3-8	Air Quality	<p>According to the DEQ Air Division, the project site is located in an ozone nonattainment area and an emission control area for volatile organic compounds (VOCs) and oxides of nitrogen (NOx), which are contributors to ozone pollution.</p> <p>During land-disturbing activities, fugitive dust must be kept to a minimum by using control methods outlined in 9VAC5-50-60 et seq. of the Regulations for the Control and Abatement of Air Pollution. These precautions include, but are not limited to, the following:</p> <ul style="list-style-type: none"> •Use, where possible, water or suitable chemicals for dust control during the proposed demolition and construction operations and from material stockpiles; •Install and use of hoods, fans and fabric filters to enclose and vent the handling of dusty materials; •Cover open equipment for conveying materials; and •Promptly remove spilled or tracked dirt or other materials from paved streets and dried sediments resulting from soil erosion. <p>If project activities include the burning of vegetative debris or use of special incineration devices in the disposal of land clearing debris, this activity must meet the requirements under 9VAC5-</p>	Comment noted, text added to section 3.3.1

Name/Agency	Comment Number	Section	Category	Comment	Response
				<p>130 et seq. and 9VAC5-80-1100 et seq. of the regulations for open burning, and it may require a permit and Permits for fuel-burning equipment. The regulations provide for, but do not require, the local adoption of a model ordinance concerning open burning. Contact officials with the appropriate locality to determine what local requirements, if any, exist.</p> <p>DEQ recommends that all precautions be taken to restrict the emissions of VOCs and NOx during construction.</p>	
Department of Environmental Quality - Office of Stormwater Management	7	Page 3-17	Erosion and Sediment Control and Stormwater Management	<p>According to the EA (page 3-17), the project will implement erosion and sediment controls and stormwater management methods. The DEQ OSM did not respond to a request for comments. Guidance on regulatory requirements is listed below.</p> <p>The applicant and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with VESCL&R and VSMA, including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act- Section 313). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities,</p>	<p>Per § 62.1-44.15:34, the proposed action will not require a construction general permit and ESC plan because it is a maintenance project that is being performed to maintain the original construction of the airfield.</p> <p>Per a Phone conversation on September 6th with VADEQ (see Appendix A: Agency Coordination), it was discussed that any areas that would be disturbed due to the Proposed Action would not require a Construction General Permit if stumps remain in place. During the tree removal process the contractor selected should be prepared to stabilize areas if bare soils are exposed. Bare soils in wetland areas should be seeded, or if trees are chipped</p>

Name/Agency	Comment Number	Section	Category	Comment	Response
				<p>borrow areas, soil stockpiles, and related land-disturbing activities that result in the total land disturbance of equal to or greater than 10, 000 square feet or 2, 500 square feet on lands analogous to Chesapeake Bay Preservation Areas would be regulated by VESCL&R. Accordingly, the applicant must prepare and implement an erosion and sediment control (ESC) plan to ensure compliance with state law and regulations. The ESC plan is submitted to the DEQ regional office that serves the area where the project is located for review for compliance. The applicant is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy (Reference: VESCL 62. 1-44. 15 et seq.). The operator or owner of a construction project involving land-disturbing activities equal to or greater than one acre is required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project-specific stormwater pollution prevention plan (SWPPP). The SWPPP must be prepared prior to submission of the registration</p>	<p>in place, the woodchips should remain in place as additional stabilization.</p>

Name/Agency	Comment Number	Section	Category	Comment	Response
				<p>statement for coverage under the general permit and the SWPPP must address water quality and quantity in accordance with the VSMP Permit Regulations. General information and registration forms for the General Permit are available on DEQ's website at http://www.deq.virginia.gov/Programs/Water/Stormwater Management WSMP Permits/Construction General Permit.aspx (Reference: VSWML 62.1-44.15 et seq. ; VSMP Permit Regulations 9VAC 25-870-1 Outset.). Provided the project is consistent with the above-referenced requirements, the project would be consistent with the nonpoint pollution control enforceable policy of the Virginia CZM Program.</p>	

Name/Agency	Comment Number	Section	Category	Comment	Response
Department of Environmental Quality - Division of Land Protection and Revitalization	8	page 3-4 (Hazardous Materials and Wastes)	Solid and Hazardous Waste Management	<p>The EA (page 3-4) states it is anticipated that effects from the proposed action would be temporary and minimal and therefore are not analyzed in this EA in detail.</p> <ul style="list-style-type: none"> • Any soil/sediment that is suspected of contamination or wastes that are generated during construction-related activities must be tested and disposed of in accordance with applicable federal, state, and local laws and regulations. • Consider the nature and extent of the identified waste sites to determine their impact to the proposed project. <p>DEQ encourages all projects to implement pollution prevention principles, including:</p> <ul style="list-style-type: none"> • the reduction, reuse and recycling of all solid wastes generated; and • the minimization and proper handling of generated hazardous wastes. 	Comment Noted, text added to the EA to the hazardous materials and wastes section.

Name/Agency	Comment Number	Section	Category	Comment	Response
Department of Conservation and Recreation	9	page 3-19	Natural Heritage Resources	<p>DCR states that the current activity will not affect any documented state-listed plant and insect species. There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.</p> <ul style="list-style-type: none"> • Contact DCR DNH to re-submit project information and a map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized. • Implement and strictly adhere to applicable state and local erosion and sediment control and stormwater management laws and regulations to minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities. • DCR recommends that trees to be removed should be evaluated for potential bat habitat. If suitable habitat is documented, DCR recommends coordination with the U.S. Fish and Wildlife Service for evaluation of impacts to currently listed and proposed listed species. • Additionally, to avoid impacts to important bat colonies, remove trees in nonbreeding season, October 15 - March 31, to minimize impacts to maternity sites. 	Comment noted, if the scope of the project changes all proper local, state and federal agencies will be notified and consulted.

Name/Agency	Comment Number	Section	Category	Comment	Response
Department of Historic Resources	10	page 3-2	Historic Structures and Architectural Resources	The EA (page 3-2) states that the Army has been in consultation with the Department of Historic Resources (DHR). Section 106 of the National Historic Preservation Act requires federal agencies to consider the effects of federal projects on properties that are listed or eligible for listing on the National Register of Historic Places. The Army at Fort Belvoir has consulted with DHR on this project pursuant to Section 106 of the National Historic Preservation Act, as amended, and its implementing regulation 36 CFR Part 800. DHR concurred with the Army that no historic properties will be affected by this undertaking.	Comment noted.
Virginia Department of Health Office of Drinking Water	11	NA	Water Supply	The EA does not address water supply impacts. VDH ODW finds that there may be impacts to public drinking water sources due to this project if the mitigation efforts identified below are not implemented. There are no public groundwater wells within a 1-mile radius of the project site. Implement best management practices, including erosion and sediment controls as well as spill prevention controls and countermeasures. Care should be taken while transporting materials in and out of the project site to prevent impacts to surface water intakes within 5 miles.	Noted, the proposed action will adhere to all local, state, and federal mandates pertaining to water supply impacts.

Name/Agency	Comment Number	Section	Category	Comment	Response
				<p>Contact VDH (Roy Soto at Roy.Soto@vdh. Virginia. gov) for additional information if necessary.</p>	
	12	page C-3	Fisheries Management	<p>The EA (FCD, page C-3) states that the proposed project would have no effect on commercial or recreational fisheries. VDH and VMRC did not indicate resources under their jurisdictions would be affected. DGIF states that Accotink Creek has been designated a Confirmed Anadromous Fish Use Area. It appears tree removal immediately adjacent to Accotink Creek is proposed. Naturally vegetated riparian buffers, particularly wooded buffers, are important to aquatic systems. Such buffers provide instream temperature control, bank stability, nutrient treatment, and habitat to the system. The removal of a stable, intact riparian buffer may result in degradation of the Accotink Creek system which supports an important fishery. DGIF states that it understands the need for removal of line of site obstructions but has recommendations (see Item 8(c)). To protect the Accotink Creek system which supports an important fishery, DGIF recommends using select cuts, or other</p>	<p>Small patches of forest, within the suburban landscape of northern Virginia, would be converted to shrub or grassland which would abut the grassland of the existing airfield. These minor impacts are necessary due to federal and state aviation regulations which ensure the safety of aircraft at DAAF. Only trees that extend beyond the hazardous aerial surface would be removed, shrubs and understory would remain for habitat. Stumps would be left in place in order to provide slope and soil stabilization. During the tree removal process the contractor selected should be prepared to stabilize areas if bare soils are exposed. Bare soils in wetland areas should be seeded, or if trees are chipped in place, the woodchips should remain in place as additional stabilization.</p>

Name/Agency	Comment Number	Section	Category	Comment	Response
				<p>silvicultural prescriptions, that will minimize impacts upon the currently intact riparian buffer. If the riparian buffer must be removed, DGIF recommends that it be replanted with native shrubs and forbes that can replace some of the lost ecosystem functions provided by riparian buffers. Assuming adherence to erosion and sediment controls, DGIF finds this project consistent with the fisheries management enforceable policy of the Virginia CZM Program.</p>	
Department of Game and Inland Fisheries	13	page 3-21	Wildlife Resources	<p>The EA (page 3-21) states that minor adverse impacts are expected to wildlife habitat due to tree removal. The EA (page 3-22) states that the Army will implement conservation measures to protect the northern long-eared bat. DGIF documents state-listed endangered tri-colored bats and state-listed threatened wood turtles from the project area. However, based on the scope and location of the proposed work, DGIF does not anticipate adverse impacts upon these species to result from the proposed work. DGIF documents bald eagles from the project area. DGIF has the following recommendations about development activities:</p> <ul style="list-style-type: none"> • Ensure that this project is consistent 	Comment noted, time-of-year restrictions will be adhered to.

Name/Agency	Comment Number	Section	Category	Comment	Response
				<p>with state and federal guidelines for protection of bald eagles (http://www.dgif.virginia.gov/wpcontent/uploads/Virginia-bald-eagle-guidelines-for-landowners.pdf)and coordinate as indicated with the U. S. Fish and Wildlife Service regarding possible impacts upon bald eagles or the need for a federal bald eagle take permit.</p> <ul style="list-style-type: none"> • Adhere to a time-of-year restriction from March 15 through August 15 of any year for all tree removal and ground clearing to protect nesting resident and migratory songbirds. • Adhere to erosion and sediment controls during ground disturbance. • Adhere to the currently approved Integrated Natural Resources Management Plan (INRMP) for the installation. 	

Name/Agency	Comment Number	Section	Category	Comment	Response
Department of Environmental Quality - Office of Local Government Programs	14	page C-4	Costal Lands Management	<p>Under the Federal Consistency Regulations of the Coastal Zone Management Act of 1972, federal actions in Virginia must be conducted in a manner "consistent to the maximum extent practicable" with the enforceable policies of the Virginia Coastal Zone Management Program. The Coastal Lands Management enforceable policy is administered through the Chesapeake Bay Preservation Act and Regulations. Federal actions on installations located within Tidewater Virginia are required to be consistent with the performance criteria of the Regulations on lands analogous to locally designated RPAs and Resource Management Areas (RMAs), as provided in §9VAC25- 830-130 and 140 of the Regulations. The performance criteria include the requirement to minimize land disturbance (including access and staging areas), retain existing vegetation and minimize impervious cover as well as including compliance with the requirements of the Virginia Erosion and Sediment Control Handbook, and stormwater management criteria consistent with water quality protection provisions of the Virginia Stormwater Management Regulations. For land disturbance over 2,500 square feet, the</p>	<p>See response to Comment Number 8 for compliance with requirements of the Virginia Erosion and Sediment Control Handbook, and Virginia Stormwater Management Regulations. Per § 62.1-44.15:34, the proposed action will not require a general construction permit and ESC plan because it is a maintenance project. Tree stumps and surrounding vegetation will be left in place in areas of tree removal to satisfy the requirements of 9VAC25-830-140 5 as confirmed by the attached correspondence with DEQ on Page 45 of Appendix A of this document.</p>

Name/Agency	Comment Number	Section	Category	Comment	Response
				<p>project must comply with the requirements of the Virginia Erosion and Sediment Control Handbook. Per 9VAC25-830-140 5 of the Regulations, trees may be removed as necessary to provide for sight lines and vistas, provided that where removed, they shall be replaced with other vegetation that is equally effective in retarding runoff, preventing erosion, and filtering nonpoint source pollution from runoff.</p> <p>Provided adherence to the above-referenced requirements, the proposed activity would be consistent with the coastal lands management enforceable policy of the Virginia CZM Program.</p>	
Virginia Marine Resources Commission	15	Page C-3	Subaqueous Lands	<p>The EA (FCD, Page C-3) states that the project would not affect subaqueous lands. Based on a desktop review of the information provided, it appears that no permit will be required by the Marine Resources Commission for this project. As proposed, the project would be consistent with the subaqueous lands management enforceable policy of the Virginia CZM Program.</p>	Comment noted

Name/Agency	Comment Number	Section	Category	Comment	Response
Department of Environmental Quality	16	NA	Pollution Prevention	<p>We have several pollution prevention recommendations that may be helpful in constructing or operating this facility:</p> <ul style="list-style-type: none"> • Consider development of an effective Environmental Management System (EMS). An effective EMS will ensure that the proposed facility is committed to complying with environmental regulations, reducing risk, minimizing environmental impacts, setting environmental goals, and achieving improvements in its environmental performance. DEQ offers EMS development assistance and recognizes facilities with effective Environmental Management Systems through its Virginia Environmental Excellence Program (VEEP). VEEP provides recognition, annual permit fee discounts, and the possibility for alternative compliance methods. • Consider environmental attributes when purchasing materials. For example, the extent of recycled material content, toxicity level, and amount of packaging should be considered and can be specified in purchasing contracts. • Consider energy efficiency when choosing materials and products, like insulation, fixtures, and HVAC systems. • Consider contractors' commitment to the environment when choosing 	<p>Comment noted, pollution prevention recommendations will be taken into consideration and strictly adhered to where applicable.</p>

Name/Agency	Comment Number	Section	Category	Comment	Response
				<p>contractors. Specifications regarding raw materials and construction practices can be included in contract documents and requests for proposals.</p> <ul style="list-style-type: none"> • Choose sustainable materials and practices for building construction and design. • Integrate pollution prevention techniques into the facility maintenance and operation, to include inventory control for centralized storage of hazardous materials. Maintenance facilities should have sufficient and suitable space to allow for effective inventory control and preventive maintenance. DEQ's Office of Pollution Prevention provides information and technical assistance relating to pollution prevention techniques and EMS. 	
Department of Environmental Quality	17	NA	Pesticides and Herbicides	<p>In general, when pesticides or herbicides must be used, their use should be strictly in accordance with manufacturers' recommendations. In addition, to the extent feasible, DEQ recommends that the responsible agent for the project use the least toxic pesticides or herbicides effective in controlling the target species. For more information on pesticide or herbicide use, please contact the Virginia</p>	Comment noted

Name/Agency	Comment Number	Section	Category	Comment	Response
				Department of Agriculture and Consumer Services at (804) 786-3501.	
Department of Environmental Quality/Fairfax County	18	NA	Regional Comments	Fairfax County states that as noted in the EA, all trees removed would be chipped onsite or taken to landfills within the quarantine zone in compliance with Emerald Ash Borer quarantine requirements. The forested areas are to be converted to shrub habitat with replanting in those areas. This should provide some storm water management benefits and help to reduce potential erosion in these areas while also meeting the safety goals for the continued airfield operations. It appears that much of the proposed work will result in some temporary impacts while no significant long-term impacts would be anticipated. Fairfax County is inclined to agree with the findings of the Draft EA. See Item 10(b) for other findings.	Comment noted.
EPA	19	Page 1-1	Purpose and Need	What is the timeframe for these assessments (every 5 years, etc)? As noted in the previous paragraph, it appears that evaluations were conducted in 2012, 2013, and 2014 and in 2016 the trees are still intruding in the air space. As a result of this time lapse,	The proposed action was developed using a conservative estimate of the height and quantity of trees to be removed to ensure sustained airfield operations without hazard obstruction for the reasonably foreseeable future. The airfield will continue to undergo annual certification and safety inspections. While IMCOM,

Name/Agency	Comment Number	Section	Category	Comment	Response
				is there the possibility that more trees than discussed may be removed?	USACE, and FAA inspections initially drove the requirements for the work, additional surveys performed by DPW and project contractors over the past two years have further refined those numbers in order to derive up-to-date estimates. The last tree survey for the project was performed on 3-Dec-2015.
EPA	20	Page 1-1	Purpose and Need	Is there accident data or bird strikes data that supports the need for the project and would guide succession planning?	The Proposed Action is federally mandated and required for safety purposes, further justification of the purpose and need is not necessary. Although DAAF has identified compliance issues with UFC 3-260-01 and FAR Part 77, the airfield has been operating under waivers issued by the U.S. Army Aeronautical Service. While reviewing the 2014 waiver package, it was determined that deteriorating conditions at the airfield would complicate obtaining waivers in the near term and therefore action must be taken to ensure continued accident free operations. In addition, the Wildlife Hazard Management Plan (WHMP) for Davison Army Airfield (2015) establishes procedures for reporting hazardous bird/wildlife activity and assists with guiding succession planning.

Name/Agency	Comment Number	Section	Category	Comment	Response
EPA	21	Page 1-1	Purpose and Need	<p>What is the likelihood of additional tree removal and an increase in wetlands impact to occur in the next evaluation? The EA did not discuss if this activity occurred in the past and what the impact was and the potential impact in the future. Please address.</p>	<p>The proposed action was developed using a conservative estimate of the height and quantity of trees to be removed to ensure sustained airfield operations without hazard obstruction for the reasonably foreseeable future. The airfield will continue to undergo annual certification and safety inspections. Any additional obstructions would be handled on a tree by tree basis as the hazards develop and would not require tree removal operations at the level analyzed in this EA.</p>
EPA	22	NA		<p>Were pilots interviewed to assess visibility from a practical perspective? This may have been done, but it was not addressed in the EA. It would be prudent to evaluate and compile data from users to ensure that the proposal is the most practical means to address the objectives of the Proposed Action. In addition, is there a standard in place that determines when trees reach a specified height then topping or removal would be in order (in addition to tree height entering the imaginary air space). Please identify action plan and on-going plan to keep the air space clear.</p>	<p>Pilots were not interviewed to assess visibility. The applicable regulations and proposed action have been developed to ensure safety during all aspects of airfield operation and are not limited to visibility complications. The airfield must clear hazard obstructions from the primary surface, the approach-departure clearance surface, the transitional surface, the taxiway clearance, and apron clearance safety areas to ensure pilot safety and comply with regulatory guidance under UFC 3-260-01 and FAR Part 77. The airfield will continue to undergo annual certification and safety inspections. Any additional obstructions would be handled on a tree by tree basis</p>

Name/Agency	Comment Number	Section	Category	Comment	Response
					as the hazards develop and would not require tree removal operations at the level analyzed in this EA.
EPA	23	Page 3-4	Affected Environment	Update Regulations	Updated regulations added to text
EPA	24	Page 3-8	Air Quality	It is important to note that greenhouse gas emissions (GHG) are discussed in terms of only the tree removal activity. Please discuss the GHG impacts from the long term effect of tree/vegetation lost.	Text added: Long term impacts on GHG due to the removal of vegetation may be anticipated if tree removal is extensive; however, the proposed action is limited to the Davidson Air field and is not expected to have long term negative impacts on GHGs.
EPA	25	3.4.2 Page 3-18	Water Resources	Will the mitigation occur within the same watershed?	Wetland credits will be purchased from the watershed HUC (Hydrologic Unit Code) in which the impact was taken. In the case that credits are unavailable in the same watershed, credits will be purchased in a neighboring watershed after approval by US Army Corps of Engineers.
EPA	26	Page 3-19 3.5.1.1	Biological Resources	Will mitigation consider the species lost and compensate with the same plant communities impacted?	Section 3.5.2.3 addresses impacts to vegetation from the proposed action. Minor adverse vegetation impacts would be expected from the removal of trees in the project area. These minor impacts are necessary due to federal and state

Name/Agency	Comment Number	Section	Category	Comment	Response
					<p>aviation regulations which ensure the safety of aircraft at DAAF. No measures are warranted to mitigate minor adverse impacts to vegetation.</p> <p>The mitigation for wetlands impacts will take into account plant communities. For example, if a project impacts 1 acre of palustrine forested wetlands, the mitigation for that impact would account for 1 credit (or 1 acre) of palustrine forested wetland. The idea behind mitigation is to replace the ecosystem that has been removed. So the exact species may not be replaced but a similar ecosystem with similar values and functions will. This is also why it is typically a requirement to have mitigation bought within in the same or a nearby hydrologic unit code. This decreases the chance that the ecosystem will be different to what was lost and at the same time continues to provide services to the area.</p>

Name/Agency	Comment Number	Section	Category	Comment	Response
EPA	27	Page 4-1	Water Resources	Will monitoring occur after tree removal activates are completed to ensure recovery of RPAs? If permanent damage of RPAs occurs, what recompense will DAA take to compensate for damage/loss?	Due to the nature of the project, the RPA will not be permanently removed. The wetland type will be changed to a palustrine emergent system in order to maintain safety requirements and minimize wetland impacts. Tree stumps will remain to prevent erosion and allow for stump sprout regeneration. As such, there is no current plan for compensation of the RPA. The Virginia DEQ Virginia Water Protection Permit and US Army Corps of Engineers permit does not specify mitigation for RPAs for this project.
EPA	28	NA	Biological Resources	The EA did not specify wetland dependent animal and plant species to be impacted by tree removal. Please discuss	Section 3.5.1 provides a discussion of potentially affected biological resources within the study area which includes both wetland dependent and non-wetland dependent animal and plant species. During the permitting process, impacts to wetland dependent animal and plant species are considered by the use of a wetlands functions and values assessment. Projects that have greater than 1 acre of wetlands impacts are required by the Virginia DEQ to perform a Wetlands Functions and Values Assessment. Fort Belvoir, utilizes the Fort Belvoir Wetland Function and Value Score sheet which meets this requirement by using a numerical scale addressing 14

Name/Agency	Comment Number	Section	Category	Comment	Response
					types of wetland functions and values. The Fort Belvoir Wetland Function and Value Score sheet is utilized by the regulators to help assess wetland dependent plant and animal species. Additionally, threatened and endangered species are reviewed in order to obtain a wetland permit which can include wetland dependent plant and animal species.
EPA	29	NA	Water Resources	Information from this assessment can be used to help establish targets and success criteria for a compensatory mitigation package. Please discuss if an approved wetland functional assessment will be applied.	Comment noted. Please see response to previous question. A Wetland Function and Value Score sheet will be used for the project and is an approved wetland functional assessment that will be utilized.
EPA	30	FSNI	FNSI	Will there be mitigation for the 9.2 plus acres of upland forest that will be lost? Please discuss and identify the trees to be removed (i.e., kind age)	The upland forest is primarily comprised of Loblolly pines. Mitigation for tree removal in this area is not anticipated as the Proposed Action is federally mandated maintenance and required for safety purposes.

Name/Agency	Comment Number	Section	Category	Comment	Response
EPA	31	Page 3-12	Water Resources	Although CO 13508 is mentioned in Section 1.6 Environmental Law and Regulations, it is not specifically addressed within the Affected Environment section of the EA. Please discuss the EO in terms of the previous paragraph to reassure that although county maps of RPAs are not used, there is coordination with local government and that federal goals are being met as determined in the Strategy for Protecting and Restoring the Chesapeake Watershed.	Text added: It should be noted that Executive Order 13508, Chesapeake Bay Protection and Restoration, must be addressed in terms of the Army's obligation to consider the protection and restoration of the Chesapeake watershed in terms of meeting the goals, outcomes and objectives set out in the Strategy for Protecting and Restoring the Chesapeake Bay Watershed. This document not only sets goals/outcomes/objectives of the federal government, but encourages coordination with state, local, and nongovernmental partners to protect and restore the health of the Chesapeake Bay watershed.
EPA	32	Page 3-12	Water Resources	Floodplain encroachments must be evaluated and coordinated with the Federal Emergency Management Agency (FEMA). Has Fort Belvoir coordinated with FEMA on this project? Has FEMA been given an opportunity to review this EA? Please address.	Coordination with FEMA is not necessary due to the fact that there are no changes in the elevation of the flood plain. Trees will be cut down to the stumps which will aid in erosion hindrance. The Proposed Action is not anticipated to change the LOD or ROI elevation and is therefore not impacting the floodplain.

Name/Agency	Comment Number	Section	Category	Comment	Response
EPA	33	NA	References	It is worth noting that the installation's Integrated Natural Resources Management Plan (USAG Fort Belvoir, 2001) was not included in the Appendix	<p>The INRMP is a document that consists of over 500 pages and would encumber an EA of this size. A reference to its posting online has been added to the references.</p> <p>http://www.belvoir.army.mil/docs/enviro_ndocs/inrmp_4_web.pdf</p>
EPA	34	Page 3-19	Biological Resources	Indicate the wildlife and wildlife habitat impacted by the tree removal activity and the wetland impact.	Page 3-19 states: A full listing of species and habitat are found in the installation's Integrated Natural Resources Management Plan (USAG Fort Belvoir, 2001). Fort Belvoir has an extensive list of wetland dependent animal and plant species that would encumber and Environmental Assessment of this size. Federally listed and State listed Species are discussed in section 3.5.1.3.
EPA	35	Page 3-2	Resources Not Evaluated	Has there been consideration to the attenuation of noise that the trees provide and the loss of this attenuation once the trees are removed? How will this loss of attenuation affect those working on the airfield and surrounding areas?	Text Added: The trees being removed may offer a slight sound buffer to areas in close proximity to DAAF, but it is predicted that the removal of the noise buffer would not have a detectable effect with the approach of aircraft on DAAF.

Name/Agency	Comment Number	Section	Category	Comment	Response
EPA	36	Page 3-3	Resources Not Evaluated	Where are the low-income populations located in relation to the Proposed Action?	Text on page 3-3 has been revised to reflect no low-income populations present within the vicinity of the DAAF. No offsite populations would be adversely impacted by the proposed tree removal. Therefore, no minority or low-income populations would be disproportionately affected.
EPA	37	Page 1-5	Environmental Laws	Section 1.6 (Environmental Laws and Regulations) should include EO 13693, Planning for Federal Sustainability in the Next Decade.	Regulation has been added.
EPA	38	3.7	3-23, Table 3-4	Lack a clear description of the impacts to resources that may have resulted or are yet to result from projects	The Cumulative Impact Table has been updated to include approximate distances of projects to better determine the results of cumulative effects.

**Notice of Availability of an Environmental Assessment and Draft Finding of
No Significant Impact for
Davidson Army Airfield Hazardous Tree Removal
Fort Belvoir, Virginia**

Interested parties are hereby notified that the U.S. Army Garrison Fort Belvoir has prepared an Environmental Assessment (EA) and a Draft Finding of No Significant Impact (FNSI) in accordance with the National Environmental Policy Act (NEPA) of 1969, and regulations implementing the procedural provisions of the NEPA, 40 Code of Federal Regulations (CFR) 1500-1508, and Environmental Analysis of Army Actions, 32 CFR 651. The EA analyzed the potential environmental impacts that may occur as a result of the proposed removal of trees on Davidson Army Airfield airfield proper that violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas to ensure pilot safety and to comply with regulatory guidance outlined in Unified Facilities Criteria 3-260-01, Airfield and Heliport Planning Design, and Federal Aviation Regulation Part 77.

The EA is incorporated by reference in the Draft FNSI. Based on the EA, the Army has determined that implementation of the Proposed Action would have no significant adverse direct, indirect, or cumulative effects on the quality of the human or natural environment. Therefore, an Environmental Impact Statement will not be prepared.

A copy of the EA and Draft FNSI are available for review and comment at the following libraries: Fort Belvoir Van Noy Library, Lorton Branch, Sherwood Regional Branch, and Kingstowne Branch. The documents are also available at: <http://www.belvoir.army.mil/environdocssection2.asp>. Comments on the EA and Draft FNSI should be submitted to Mr. Felix Mariani, Fort Belvoir DPW Environmental and Natural Resources Division, Building 1442, 9430 Jackson Loop, Fort Belvoir, VA 22060, or usarmy.belvoir.imcom-atlantic.mbx.enrd@mail.mil. Comments must be received no later than 30 days after publication of this Notice of Availability.

Davison Army Airfield Hazardous Tree Removal Environmental Assessment Distribution List

Name	Mailing Address	Salutation	Type	Position
Ms. Valerie Fulcher	Executive Secretary Senior Office of Environmental Impact Review Virginia Department of Environmental Quality P.O. Box 1105 Richmond, Virginia 23218	Ms. Fulcher	State Agency	Executive Secretary Senior, Office of Environmental Impact Review, Virginia Department of Environmental Quality
Mr. John Bricker	State Conservationist USDA, Natural Resources Conservation Service 1606 Santa Rosa Road, Suite 209 Richmond, Virginia 23229-5014	Mr. Bricker	Federal Agency	State Conservationist, USDA, National Resource Conservation Service
Ms. Kimberly Damon-Randall	Greater Atlantic Region Fisheries Office National Marine Fisheries Service Protected Resources 55 Great Republic Drive Gloucester, Massachusetts 01930	Ms. Damon-Randall	Federal Agency	Assistant Regional Administrator for Protected Resources, NOAA Fisheries Greater Atlantic Region
Mr. Peyton Robertson	Director, Chesapeake Bay Program Office National Marine Fisheries Service 410 Severn Avenue, Suite 107-A Annapolis, MD 21403	Mr. Robertson	Regional Agency	Director, NOAA, National Marine Fisheries Service, Chesapeake Bay Office
Ms. Genevieve LaRouche	Field Supervisor, Annapolis Field Office U.S. Fish and Wildlife Service 177 Admiral Cochrane Drive Annapolis, Maryland 21401-7307	Mr. Wolfli	Federal Agency	Field Supervisor, Annapolis Field Office, USFWS
Ms. Mary Josie Blanchard	Director U. S. Department of the Interior Office of Environmental Policy and Compliance 1849 C Street, NW, MS 2462 Washington, DC 20240	Ms. Blanchard	Federal Agency	Acting Director, U.S. Department of the Interior, Office of Environmental Policy and Compliance
Ms. Pat Montanio	National Oceanic Atmospheric Administration National Marine Fisheries Service Habitat Conservation Division 1315 East-West Highway SSMC3, 14th Floor F/HC Silver Spring, Maryland 20910	Ms. Montanio	Federal Agency	Director, NOAA, National Marine Fisheries Program, Office of Habitat Conservation
Ms. Laura McKay	Virginia Department of Environmental Quality Coastal Zone Management Program 629 East Main Street Richmond, Virginia 23219	Ms. McKay	State Agency	Manager, Coastal Zone Management Program, Virginia Department of Environmental Quality
Ms. Barbara Rudnick	NEPA Team Leader Office of Environmental Programs (3EA30) U.S. Environmental Protection Agency Region 3 1650 Arch Street Philadelphia, PA 19106	Ms. Rudnick	Federal Agency	NEPA Team Leader, Office of Environmental Programs, EPA Region 3
Mr. Marc Holma	Virginia Department of Historic Resources 2801 Kensington Ave. Richmond, Virginia 23221	Mr. Holma	State Agency	Architectural Historian, Division of Review and Compliance (SHPO)
Mr. Troy M. Anderson	Conservation Planning Assistance Supervisor U. S. Fish and Wildlife Service Virginia Field Office 6669 Short Lane Gloucester, Virginia 23061-4410	Mr. Anderson	Federal Agency	USFWS, Region 5, Virginia Field Office, Conservation Planning Assistance Supervisor
Mr. Harold Peaks	U. S. Department of Transportation Federal Highway Administration 1200 New Jersey Ave, SE, HEPE-30 Washington, DC 20590-0001	Mr. Peaks	Federal Agency	Project Development Team Leader, U.S. DOT, Federal Highway Administration
Ms. Elizabeth Crowell	Fairfax County Cultural Resources Management and Protection Branch James Lee Center 2855 Annandale Road Fairfax, Virginia 22042	Ms. Crowell	Historical and Cultural Agencies and Properties	Branch Manager, Fairfax County Cultural Resources Management and Protection
Ms. Barbara Rice - Branch Manager Fairfax County Public Library	Kingstowne Branch 6500 Landsdowne Centre Alexandria, Virginia 22315-5100	Ms. Rice	Library	
Ms. Gari Plehal - Branch Manager Fairfax County Public Library	Lorton Branch 9520 Richmond Highway Lorton, Virginia 22079-2124	Mr. Plehal	Library	
Ms. Linda Schlekau - Branch Manager Fairfax County Public Library	Sherwood Regional Branch 2501 Sherwood Hall Lane Alexandria, Virginia 22306-2799	Ms. Schlekau	Library	
Ms. Nilya Carrato - Director Van Noy Library	5966 12th St. Building 1024 Fort Belvoir, Virginia 22060	Mr. Sadowitz	Library	



MEMORANDUM

TO: Julia Wellman, DEQ/EIR Environmental Program Planner

FROM: Katy Dacey, Division of Land Protection & Revitalization Review Coordinator

DATE: June 29, 2016

COPIES: Sanjay Thirunagari, Division of Land Protection & Revitalization Review Manager; file

SUBJECT: Environmental Impact Review: EIR Proj No 16-149F Davison Army Airfield Hazardous Tree Removal, Fairfax County, VA

The Division of Land Protection & Revitalization (DLPR) has completed its cursory review of the Davison Army Airfield Hazardous Tree Removal located approximately Fort Belvoir at 6970 Britton Drive in Ft. Belvoir, VA 22060

Project Scope: removal of several trees that obstruct airfield pathways

Solid and hazardous waste issues were addressed in the submittal. The submittal did not indicate that a search of Federal or State environmental databases was conducted. DLPR staff conducted a cursory search (500 feet radius) of solid and hazardous waste databases for waste sites in close proximity to the project area, and did identify eleven waste sites in close proximity which might impact the project activity. Additionally, no waste sites of possible concern were located within the same zip code, 22060. The DEQ DLPR staff has reviewed the submittal and offers the following comments concerning possible waste issues associated with this proposed project:

Hazardous Waste/RCRA Facilities –seven in close proximity to the project site

VAR000512715	FORT BELVOIR RESIDENTIAL COMMUNITIES LLC	FORT BELVOIR, VA
VA7213720082	US ARMY GARRISON FORT BELVOIR	FORT BELVOIR, VA
VA1210000914	US VAARNG-ARMORY-FT BELVOIR 170TH	FT BELVOIR, VA
VAD988228730	VA ARNG ARMORY FT BELVOIR	FORT BELVOIR, VA
VAD988228722	VA ARNG ARMORY FT BELVOIR 170TH	FT BELVOIR, VA

VA5210020082	VA ARNG-ARMORY-FT BELVOIR	FORT BELVOIR, VA
VAD982677841	VAARNG-OMS13	FT BELVOIR, VA

The *hazardous wastes/RCRA* information can be accessed from EPA's websites at <https://www3.epa.gov/enviro/> and <https://rcrainfopreprod.epa.gov/rcrainfoweb/action/main-menu/view>

CERCLA Sites – none in zip code of the project site

FUDS – none

Solid Waste – none

VRP – none

Petroleum Releases – four in close proximity to project site

PC#19920905, Fort Belvoir – Building 3118, Telegraph Rd & Potomac River, Fort Belvoir, VA 22060. Release Date: 11/14/1991. Status: Closed

PC#19922217, Fort Belvoir – Building 03140, Telegraph Rd & Potomac River, Fort Belvoir, VA 22060. Release Date: 06/26/1992. Status: Closed

PC#20023026, Fort Belvoir – Building 03146, Telegraph Rd & Potomac River, Fort Belvoir, VA 22060. Release Date: 07/06/2001. Status: Closed

PC#19993355, Fort Belvoir – Building 03138, Telegraph Rd & Potomac River, Fort Belvoir, VA 22060. Release Date: 05/07/1999. Status: Closed

Please note that the DEQ's PC case files of the PC Case numbers are identified above and these petroleum releases should be evaluated by the project engineer or manager to establish the exact location of the release and the nature and extent of the petroleum release and the potential to impact the proposed project. The project engineer or manager should contact the DEQ's Northern Virginia Regional Office at 703-583-3800 (Tanks Program) for further information and the administrative records of the PC cases which are in close proximity to the proposed project.

GENERAL COMMENTS

Soil, Sediment, and Waste Management

Any soil that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-81); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable

regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 CFR Part 107.

Pollution Prevention – Reuse - Recycling

Please note that DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

If you have any questions or need further information, please contact Katy Dacey at (804) 698-4274.

Wellman, Julia (DEQ)

From: Burstein, Daniel (DEQ)
Sent: Thursday, August 18, 2016 12:27 PM
To: Wellman, Julia (DEQ)
Subject: Re: DOD/Department of the Army/Fort Belvoir - Davison Army Airfield Hazardous Tree Removal, DEQ #16-149F - Review

NRO comments regarding the Draft Environmental Assessment for the **DOD/Department of the Army/Fort Belvoir: Davison Army Airfield Hazardous Tree Removal, located in Fairfax County, Virginia** are as follows:

Land Protection Division – The project manager is reminded that if any solid or hazardous waste is generated/encountered during construction, the Department of the Army would follow applicable federal, state, and county regulations for their disposal.

Air Compliance/Permitting - The project manager is reminded that during the construction phases that occur with this project; the project is subject to the Fugitive Dust/Fugitive Emissions Rule 9 VAC 5-50-60 through 9 VAC 5-50-120. In addition, should any open burning or use of special incineration devices be employed in the disposal of land clearing debris during demolition and construction, the operation would be subject to the Open Burning Regulation 9 VAC 5-130-10 through 9 VAC 5-130-60 and 9 VAC 5-130-100.

Virginia Water Protection Permit (VWPP) Program – According to the application, the project as proposed, will impact surface waters and DEQ issued an VWP permit, WP4-16-0862, effective 7/8/2016, expires 7/31/2021. The project manager is reminded if the scope of the project's impacts change, coordination with DEQ is required and the revised project proposal will be reviewed in accordance with the VWP permit program regulations and current VWP permit program guidance.

Water Permitting/VPDES Program/Stormwater: The project manager is reminded to follow all applicable regulations related to stormwater management and erosion and sediment controls.

Daniel Burstein
Regional Enforcement Specialist, Senior II
Virginia Department of Environmental Quality
Northern Virginia Regional Office
13901 Crown Court
Woodbridge, VA 22193
Phone: (703) 583-3904
daniel.burstein@deq.virginia.gov

Wellman, Julia (DEQ)

From: Eversole, Mark (MRC)
Sent: Wednesday, July 20, 2016 1:24 PM
To: Wellman, Julia (DEQ)
Subject: FW: NEW PROJECT Army Davison Army 16-149F

Julia, based on a desktop review of the information provided, it appears that NO permit will be required by the Marine Resources Commission for this project.

Thanks for the opportunity to provide comments on this proposal.

Mark Eversole
Virginia Marine Resources Commission
2600 Washington Avenue, 3rd Floor
Newport News, Virginia 23607
Office: (757)-247-8028
email: mark.eversole@mrc.virginia.gov

From: Fulcher, Valerie (DEQ)
Sent: Friday, June 24, 2016 2:06 PM
To: dgif-ESS Projects (DGIF); Tignor, Keith (VDACS); Rhur, Robbie (DCR); odwreview (VDH); Dacey, Katy (DEQ); Narasimhan, Kotur (DEQ); Gavan, Larry (DEQ); Moore, Daniel (DEQ); Sepety, Holly (DEQ); Burstein, Daniel (DEQ); Kirchen, Roger (DHR); Evans, Gregory (DOF); Watkinson, Tony (MRC); gmg@novaregion.org; Denise.James@fairfaxcounty.gov; Harrington, Rusty N. (DOAV)
Cc: Wellman, Julia (DEQ)
Subject: NEW PROJECT Army Davison Army 16-149F

Good afternoon - this is a new OEIR review request/project:

Document Type: Draft Environmental Assessment
Project Sponsor: DOD/Department of the Army/Fort Belvoir
Project Title: Davison Army Airfield Hazardous Tree Removal
Location: Fairfax County
Project Number: DEQ #16-149F

The document is available at www.deq.virginia.gov/filesshare/oeir in the **ARMY** folder.

The due date for comments is **JULY 18, 2016**. You can send your comments either directly to Julia by email (Julia.Wellman@deq.virginia.gov), or you can send your comments by regular interagency/U.S. mail to the Department of Environmental Quality, Office of Environmental Impact Review, 629 E. Main St., 6th Floor, Richmond, VA 23219.

NOTE: WE RECEIVED LESS THAN 30 DAYS TO REVIEW THIS PROJECT.

If you cannot meet the deadline, please notify the project coordinator prior to the comment due date. Arrangements may be made to extend the deadline for comments if possible. An agency will be considered to have no concerns if comments are not received (or contact is made) within the review period. However, it is important that agencies consistently participate in accordance with Virginia Code Section 10.1-1192.

REVIEW INSTRUCTIONS:

- A. Please review the document carefully. If the proposal has been previously reviewed (e.g. as a draft EIS or a Part 1 EIR), please consider whether your earlier comments have been adequately addressed.
- B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency (agency stationary or email) and include the project number on all correspondence.

If you have any questions, please email Julia.

Thanks!

Valerie

Valerie A. Fulcher, CAP-OM, Environmental Program Specialist
Department of Environmental Quality
Environmental Enhancement - Office of Environmental Impact Review
629 E. Main St., 6th Floor
Richmond, VA 23219
804/698-4330
804/698-4319 (Fax)
email: Valerie.Fulcher@deq.virginia.gov
<http://www.deq.virginia.gov/Programs/EnvironmentallImpactReview.aspx>

For program updates and public notices please subscribe to the [OEIR News Feed](#)

Wellman, Julia (DEQ)

From: Holma, Marc (DHR)
Sent: Monday, June 27, 2016 10:16 AM
To: Wellman, Julia (DEQ)
Subject: RE: NEW PROJECT Army Davison Army 16-149F

Julia,

The Army at Fort Belvoir has consulted with DHR on this project pursuant to Section 106 of the National Historic Preservation Act, as amended, and its implementing regulation 36 CFR Part 800. We concurred with the Army that no historic properties will be affected by this undertaking.

Sincerely,

Marc Holma

From: Fulcher, Valerie (DEQ)
Sent: Friday, June 24, 2016 2:06 PM
To: dgif-ESS Projects (DGIF); Tignor, Keith (VDACS); Rhur, Robbie (DCR); odwreview (VDH); Dacey, Katy (DEQ); Narasimhan, Kotur (DEQ); Gavan, Larry (DEQ); Moore, Daniel (DEQ); Sepety, Holly (DEQ); Burstein, Daniel (DEQ); Kirchen, Roger (DHR); Evans, Gregory (DOF); Watkinson, Tony (MRC); gmg@novaregion.org; Denise.James@fairfaxcounty.gov; Harrington, Rusty N. (DOAV)
Cc: Wellman, Julia (DEQ)
Subject: NEW PROJECT Army Davison Army 16-149F

Good afternoon - this is a new OEIR review request/project:

Document Type: Draft Environmental Assessment
Project Sponsor: DOD/Department of the Army/Fort Belvoir
Project Title: Davison Army Airfield Hazardous Tree Removal
Location: Fairfax County
Project Number: DEQ #16-149F

The document is available at www.deq.virginia.gov/files/oeir in the **ARMY** folder.

The due date for comments is **JULY 18, 2016**. You can send your comments either directly to Julia by email (Julia.Wellman@deq.virginia.gov), or you can send your comments by regular interagency/U.S. mail to the Department of Environmental Quality, Office of Environmental Impact Review, 629 E. Main St., 6th Floor, Richmond, VA 23219.

NOTE: WE RECEIVED LESS THAN 30 DAYS TO REVIEW THIS PROJECT.

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REVIEW INSTRUCTIONS:

- A. Please review the document carefully. If the proposal has been previously reviewed (e.g. as a draft EIS or a Part 1 EIR), please consider whether your earlier comments have been adequately addressed.**
- B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency (agency stationary or email) and include the project number on all correspondence.**

If you have any questions, please email Julia.

Thanks!

Valerie

**Valerie A. Fulcher, CAP-OM, Environmental Program Specialist
Department of Environmental Quality
Environmental Enhancement - Office of Environmental Impact Review
629 E. Main St., 6th Floor
Richmond, VA 23219
804/698-4330
804/698-4319 (Fax)
email: Valerie.Fulcher@deq.virginia.gov
<http://www.deq.virginia.gov/Programs/EnvironmentalImpactReview.aspx>**

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County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

July 18, 2016

Julia Wellman
Environmental Impact Review Coordinator
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, Virginia 23219

Dear Ms. Wellman:

Thank you for the opportunity to provide comments on Davison Army Airfield Hazardous Tree Removal Draft Environmental Assessment (DEQ Project #16-149F) to remove trees which adversely impact the primary surface, approach and departure areas, transitional surface, taxiway clearance and apron safety areas which are critical to pilot safety and to comply with regulatory guidance set forth by Federal Aviation Regulations. This site is located on a portion of Fort Belvoir in an area located generally between the Fairfax County Parkway, Telegraph Road and Richmond Highway. As noted above, the purpose of the project is to remove trees which may interfere with the safe operation of aircraft within the boundaries of the existing airfield.

This project involves the removal of hazardous trees in the immediate vicinity of the airfield as individual trees or stands of trees. The total area of tree removal is approximately 16.5 acres spread around the site. As noted in the assessment, all trees removed would be chipped onsite or taken to landfills within the quarantine zone in compliance with Emerald Ash Borer quarantine requirements. The forested areas are to be converted to shrub habitat with replanting in those areas. This should provide some stormwater management benefits and help to reduce potential erosion in these areas while also meeting the safety goals for the continued airfield operations. The EA also notes temporary impacts to some small forested and emergent wetland areas within the project envelope. However, these wetlands have no direct connection by surface flow to nearby streams and would not be classified as Resource Protection Area (RPA) under the Fairfax County Chesapeake Bay Preservation Ordinance. Any further commentary regarding impacts to these non-tidal wetland areas would be subject to review by the Army Corps of Engineers.

The Draft EA concludes that the proposed tree removal would result in a Finding of No Significant Impact (FONSI). It appears that much of the proposed work will result in some temporary impacts while no significant long-term impacts would be anticipated. Fairfax County staff are inclined to agree with the findings of the Draft EA.

Julia Wellman
Department of Environmental Quality
July 18, 2016
Page 2

Thank you for the opportunity to comment on the draft environmental assessment documentation for this project. If you have any questions, please do not hesitate to contact John Bell of my staff at 703-324-1380.

Sincerely,


Marianne R. Gardner, Director, Planning Division
Department of Planning and Zoning

MRG: JRB

Attachment

Cc:

Board of Supervisors

Edward L. Long, Jr., County Executive

Robert A. Stalzer, Deputy County Executive

Fred R. Selden, Director, DPZ

Denise M. James, Chief, Environment and Development Review, DPZ

John R. Bell, DPZ

-----Original Message-----

From: Michaelson, Daniel (DEQ) [mailto:Daniel.Michaelson@deq.virginia.gov]
Sent: Thursday, September 08, 2016 3:45 PM
To: Couch, Pamela J CIV (US) <pamela.j.couch2.civ@mail.mil>
Cc: Vanover, Kelly (DEQ) <Kelly.Vanover@deq.virginia.gov>; Quigley, Margaret (DEQ) <Margaret.Quigley@deq.virginia.gov>; Mariani, Felix M CIV USARMY IMCOM ATLANTIC (US) <felix.m.mariani3.civ@mail.mil>; Harback, Wilamena G CIV USARMY IMCOM ATLANTIC (US) <wilamena.g.harback.civ@mail.mil>; Bartley, Brice C CIV USARMY (US) <brice.c.bartley.civ@mail.mil>
Subject: [Non-DoD Source] RE: Maintenance of Glide Slope for Airfield

Pam,

As we discussed on the phone, an ESC plan is not required as long as you are not grubbing stumps. I know there is a VWP permit in this area which may place limitations on where the clearing occurs and or where the trees are pulled out. Besides VWP considerations, the information you have conveyed indicates that there should not be a problem with the maintenance activity.

Regards,

Daniel E. Michaelson | Stormwater Plan Reviewer | DEQ-NRO | 703 583 3830 |
daniel.michaelson@deq.virginia.gov

-----Original Message-----

From: Couch, Pamela J CIV (US) [mailto:pamela.j.couch2.civ@mail.mil]
Sent: Tuesday, September 06, 2016 3:10 PM
To: Michaelson, Daniel (DEQ)
Cc: Vanover, Kelly (DEQ); Quigley, Margaret (DEQ); Mariani, Felix M CIV USARMY IMCOM ATLANTIC (US); Harback, Wilamena G CIV USARMY IMCOM ATLANTIC (US); Bartley, Brice C CIV USARMY (US)
Subject: Maintenance of Glide Slope for Airfield

Daniel,

As discussed earlier today, I have attached a map with the following work description for maintenance of the airfield glide slope.

Per the Environmental Assessment that was put out for public review and comment on June 24, 2016, the Proposed Action entails the removal of trees on DAAF airfield proper that violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas to ensure pilot safety and to comply with regulatory guidance outlined in UFC 3-260-01, Airfield and Heliport Planning Design, and FAR Part 77.

In accordance with UFC 3-260-01, trees that project into imaginary surfaces must be removed or lowered to a distance that does not violate airfield and airspace criteria. Fort Belvoir would remove trees that encroach the imaginary surface creating a hazardous condition. Imaginary surfaces are surfaces in space established around airfields in relation to runway(s), helipad(s), or helicopter runway(s) that are designed to define the obstacle free airspace around the airfield. The imaginary surfaces for DOD airfields are the primary surface, the approach-departure clearance surface, the transitional surface, the inner horizontal surface, the conical surface, and the outer horizontal surface.

Trees would be removed from five sections of DAAF by topping or cutting: 24 trees in the Northeast Section, 8 trees in the West Section, 2.5 acres of tree removal in the Northwest Section, 9.2 acres of tree removal in the Southwest Section, and 4.7 acres of tree removal in the Southeast Section. The stumps would be left in place. In compliance with the Federal Emerald Ash Borer quarantine (7 CFR 301.53), all trees removed for this project would be chipped or taken to landfills within the quarantine zone.

Fort Belvoir believes that per § 62.1-44.15:34 this project will not require a CGP because it is a maintenance project that is being performed to maintain the original construction of the airfield. The trees referenced in this project would be dragged (both vehicle and tree movement) across the ground during removal. In regards to this activity, could you provide your concurrence as to the level of ESC plan that would be required (VADEQ approval or local Fort Belvoir approval)? As per our phone conversation this morning, any areas that have been disturbed due to this activity would need to have some form of stabilization to prevent sediment transport into any wetlands and/or stormwater conveyance channels. Please advise if you concur with our assessment. Thanks!

Very Respectfully,

Pam Couch

MS4 Permit Compliance

Environmental Natural Resources Division Directorate of Public Works Mailing

address: 9430 Jackson Loop, Building

1442 Fort Belvoir, VA 22060-5116

(703) 806-3406

Bryk-Lucy, Alexis L NAB

From: Fleming, Gregory W CIV (US) <gregory.w.fleming.civ@mail.mil>
Sent: Thursday, August 25, 2016 10:37 AM
To: Yesmant, Christopher K CTR USARMY IMCOM ATLANTIC (US)
Subject: FW: Davison Army Airfield Tree Removal EA CZMA comment

-----Original Message-----

From: Moore, Daniel (DEQ) [mailto:Daniel.Moore@deq.virginia.gov]
Sent: Wednesday, August 24, 2016 8:37 AM
To: Fleming, Gregory W CIV (US) <gregory.w.fleming.civ@mail.mil>
Subject: [Non-DoD Source] RE: Davison Army Airfield Tree Removal EA CZMA comment

Yes.

-----Original Message-----

From: Fleming, Gregory W CIV (US) [mailto:gregory.w.fleming.civ@mail.mil]
Sent: Tuesday, August 23, 2016 4:48 PM
To: Moore, Daniel (DEQ)
Subject: Davison Army Airfield Tree Removal EA CZMA comment

Hi Daniel,

Regarding your RPA re-vegetation comment in the Davison Army Airfield Tree Removal EA CZMA. If we leave the stumps and surrounding vegetation in place and only remove the identified trees would this be acceptable to meet the requirements you referenced in the comment document?

V/R,

Gregory W. Fleming
Natural Resource Specialist
US Army Garrison Fort Belvoir
9430 Jackson Loop, Bldg 1442, Suite 227
Fort Belvoir, VA 22060-5116
703-806-3408



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Ecological Services
6669 Short Lane
Gloucester, Virginia 23061

Date: 30 September 2015

Online Project Review Certification Letter

Project Name: US Army Fort Belvoir Davison Army Airfield Hazard Tree Removal

Dear Applicant:

Thank you for using the U.S. Fish and Wildlife Service (Service) Virginia Field Office online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the referenced project in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA), and the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c, 54 Stat. 250), as amended (Eagle Act). This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

The species conclusions table in the enclosed project review package summarizes your ESA and Eagle Act conclusions. These conclusions resulted in “no effect” and/or “not likely to adversely affect” determinations for listed species and critical habitat and/or “no Eagle Act permit required” determinations for eagles regarding potential effects of your proposed project. We certify that the use of the online project review process in strict accordance with the instructions provided as documented in the enclosed project review package results in reaching the appropriate determinations. Therefore, we concur with the “no effect” and “not likely to adversely affect” determinations for listed species and critical habitat and “no Eagle Act permit required” determinations for eagles. Additional coordination with this office is not needed.

Candidate species are not legally protected pursuant to the ESA. However, the Service encourages consideration of these species by avoiding adverse impacts to them. Please contact this office for additional coordination if your project action area contains candidate species.

Should project plans change or if additional information on the distribution of listed species, critical habitat, or bald eagles becomes available, this determination may be reconsidered. This certification letter is valid for one year.

Applicant

Page 2

Information about the online project review process including instructions and use, species information, and other information regarding project reviews within Virginia is available at our website http://www.fws.gov/northeast/virginiafield/endspecies/project_reviews.html. If you have any questions, please contact Kimberly Smith of this office at (804) 693-6694, extension 124.

Sincerely,

/s/ Cynthia A. Schulz

Cindy Schulz
Supervisor
Virginia Field Office

Enclosures - project review package

Species Conclusions Table

Project Name: US Army Fort Belvoir Davison Army Airfield Hazard Tree Removal

Date: 30 September 2015

Species / Resource Name	Conclusion	ESA Section 7 / Eagle Act Determination	Notes / Documentation
Small whorled pogonia	No suitable habitat present on project site (Davison Army Airfield).	No effect.	A small whorled pogonia survey done in March 2015 did not identify any suitable habitat for this species at the project site. This species is known to be present at only one location on Fort Belvoir North Area, which is more than a mile from Davison Army Airfield.
Northern long-eared bat	Suitable habitat present on project site (Davison Army Airfield).	Not likely to adversely affect.	Surveys to date have not located species on site (Davison Army Airfield). Acoustic monitoring recorded a potential call at a location more than ½ mile to the east of the Airfield. Tree removal will be prohibited during the active season (i.e., trees will not be removed from April 15 through September 15).
Sensitive joint vetch	Suitable habitat is not present on project site (Davison Army Airfield)	No effect.	Surveys of mudflats elsewhere on Fort Belvoir in 2012 and 2013 did not identify this species.
Critical habitat	No critical habitat is present on Fort Belvoir.	No effect.	
Bald eagle	Unlikely to disturb bald eagles. No eagle nests are on project site (Davison Army Airfield).	No eagle permit required.	Nearest eagle nest is more than one mile from project site (Davison Army Airfield).
Bald eagle	Unlikely to disturb Eagle Concentration Area. Project site is not within designated Eagle Concentration Area.	No eagle permit required.	Nearest Eagle Concentration Area is more than one mile from the project site (Davison Army Airfield).

From: mary_morrison@fws.gov on behalf of [Virginia Field Office, FW5](#)
To: [Pilcicki, John L CIV USARMY IMCOM \(US\)](#)
Cc: [Keough, Dorothy E CIV USARMY IMCOM ATLANTIC \(US\)](#); [Sumalee Hoskin](#)
Subject: [Non-DoD Source] Fort Belvoir Davison Army Airfield Hazardous Tree Removal
Date: Wednesday, December 09, 2015 3:48:02 PM

Good afternoon John,

We have reviewed the project package received on October 23, 2015 for the referenced project. The following comments are provided under provisions of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended, and Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c, 54 Stat. 250), as amended.

We concur with the determinations provided in the Species Conclusion Table dated September 30, 2015 and have no further comments. Should project plans change or if additional information on the distribution of listed species or critical habitat becomes available, this determination may be reconsidered. If you have any questions, please contact me.

Best,

Mary Anne



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

FEB 09 2016

Directorate of Public Works

SUBJECT: Section 106 Consultation, Davison Army Airfield Tree Removal, Fort Belvoir, Virginia

Mr. Marc Holma
Architectural Historian
Department of Historic Resources
2801 Kensington Avenue
Richmond, Virginia 23221

Dear Mr. Holma:

Fort Belvoir proposes to remove trees and shrubs on Davison Army Airfield (DAAF) proper that violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas to comply with regulatory guidance outlined in UFC 3-260-01. The Area of Potential Effect (APE) for this undertaking is defined as the disturbance for the tree removal activities (map enclosed).

Fort Belvoir has undertaken historic property identification efforts within and adjacent to the APE. No historic properties or archaeological resources were identified adjacent to or within the APE. Fort Belvoir evaluated DAAF for National Register eligibility and determined the facility was ineligible (Virginia Department of Historic Resources No. 029-5623).

Fort Belvoir has determined that no historic properties will be affected by the proposed DAAF tree removal [36 CFR § 800.4]. Please provide comment on our determination of no historic properties affected in accordance with 36 CFR § 800.4(d). If we do not receive your comments within the required 30 days, we will assume no comment and proceed with the project as planned. A letter concerning the DAAF tree removal has been sent to the Catawba Indian Nation, Eastern Band of Cherokee-Indians, Pamunkey Indian Tribe, Tuscarora Nation of New York, and United Keetoowah Band of Cherokee Indians in Oklahoma.

Fort Belvoir's points of contact are Bill Sanders, Director of Public Works, at 703-806-3017 and Ms. Alison Talbot, Cultural Resources Manager, at 703-806-3759 or alison.s.talbot.civ@mail.mil.

Sincerely,


for *Michelle D. Mitchell*
Michelle D. Mitchell
Colonel, U.S. Army
Commanding

Enclosures

“LEADERS IN EXCELLENCE”

US Army Garrison Fort Belvoir

Section 106 Consultation, Davison Army Airfield Tree Removal, Fort Belvoir, Virginia

VDHR File #: 2016-0188

VDHR has reviewed the above referenced project and concurs with the Army's determination of No Historic Properties Affected.



Marc Holma, Architectural Historian
Office of Review and Compliance
Virginia Department of Historic Resources

4 MARCH 16
Date



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

FEB 09 2016

Directorate of Public Works

SUBJECT: Section 106 Consultation, Davison Army Airfield Tree Removal, Fort Belvoir, Virginia

Chief William Harris
Catawba Indian Nation
996 Avenue of the Nations
Rock Hill, South Carolina 29730

Dear Chief Harris:

Fort Belvoir proposes to remove trees and shrubs on Davison Army Airfield (DAAF) proper that violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas to comply with regulatory guidance outlined in UFC 3-260-01. The Area of Potential Effect (APE) for this undertaking is defined as the disturbance for the tree removal activities (map enclosed).

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Fort Belvoir has determined that no historic properties will be affected by the proposed DAAF tree removal [36 CFR § 800.4]. Please provide comment on our determination of no historic properties affected in accordance with 36 CFR § 800.4(d). If we do not receive your comments within the required 30 days, we will assume no comment and proceed with the project as planned. A letter concerning the DAAF tree removal has been sent to the Virginia Department of Historic Resources, Eastern Band of Cherokee Indians, Pamunkey Indian Tribe, Tuscarora Nation of New York, and United Keetoowah Band of Cherokee Indians of Oklahoma.

Fort Belvoir's points of contact are Bill Sanders, Director of Public Works, at 703-806-3017 and Ms. Alison Talbot, Cultural Resources Manager, at 703-806-3759 or alison.s.talbot.civ@mail.mil.

Sincerely,


Michelle D. Mitchell
Colonel, U.S. Army
Commanding

Enclosures

“LEADERS IN EXCELLENCE”



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

FEB 09 2016

Directorate of Public Works

SUBJECT: Section 106 Consultation, Davison Army Airfield Tree Clearing, Fort Belvoir, Virginia

Principal Chief Michell Hicks
Eastern Band of Cherokee Indians
P.O. Box 455
Cherokee, North Carolina 28719

Dear Principal Chief Hicks:

Fort Belvoir proposes to remove trees and shrubs on Davison Army Airfield (DAAF) proper that violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas to comply with regulatory guidance outlined in UFC 3-260-01. The Area of Potential Effect (APE) for this undertaking is defined as the disturbance for the tree removal activities (map enclosed).

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Fort Belvoir's points of contact are Bill Sanders, Director of Public Works, at 703-806-3017 and Ms. Alison Talbot, Cultural Resources Manager, at 703-806-3759 or alison.s.talbot.civ@mail.mil.

Sincerely,


Michelle D. Mitchell
Colonel, U.S. Army
Commanding

Enclosures

“LEADERS IN EXCELLENCE”



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
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FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

FEB 09 2016

Directorate of Public Works

SUBJECT: Section 106 Consultation, Davison Army Airfield Tree Clearing, Fort Belvoir, Virginia

Chief Robert Gray
Pamunkey Indian Tribe
64 Lay Landing Road
King William, Virginia 23086

Dear Chief Gray:

Fort Belvoir proposes to remove trees and shrubs on Davison Army Airfield (DAAF) proper that violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas to comply with regulatory guidance outlined in UFC 3-260-01. The Area of Potential Effect (APE) for this undertaking is defined as the disturbance for the tree removal activities (map enclosed).

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Fort Belvoir's points of contact are Bill Sanders, Director of Public Works, at 703-806-3017 and Ms. Alison Talbot, Cultural Resources Manager, at 703-806-3759 or alison.s.talbot.civ@mail.mil.

Sincerely,


Michelle D. Mitchell
Colonel, U.S. Army
Commanding

Enclosures

“LEADERS IN EXCELLENCE”



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
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9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

FEB 09 2016

Directorate of Public Works

SUBJECT: Section 106 Consultation, Davison Army Airfield Tree Clearing, Fort Belvoir, Virginia

Chief Leo R. Henry
Tuscarora Nation of New York
2006 Mt. Hope Road
Lewistown, New York 14092

Dear Chief Henry:

Fort Belvoir proposes to remove trees and shrubs on Davison Army Airfield (DAAF) proper that violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas to comply with regulatory guidance outlined in UFC 3-260-01. The Area of Potential Effect (APE) for this undertaking is defined as the disturbance for the tree removal activities (map enclosed).

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Fort Belvoir's points of contact are Bill Sanders, Director of Public Works, at 703-806-3017 and Ms. Alison Talbot, Cultural Resources Manager, at 703-806-3759 or alison.s.talbot.civ@mail.mil.

Sincerely,


Michelle D. Mitchell
Colonel, U.S. Army
Commanding

Enclosures

“LEADERS IN EXCELLENCE”



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

FEB 09 2016

Directorate of Public Works

SUBJECT: Section 106 Consultation, Davison Army Airfield Tree Clearing, Fort Belvoir, Virginia

Chief George Wickliffe
United Keetoowah Band of Cherokee Indians
in Oklahoma
P.O. Box 746
Tahlequah, Oklahoma 74465

Dear Chief Wickliffe:

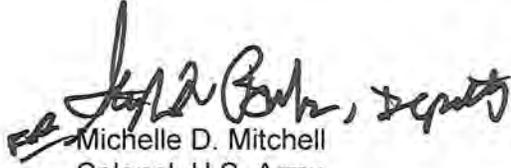
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Fort Belvoir's points of contact are Bill Sanders, Director of Public Works, at 703-806-3017 and Ms. Alison Talbot, Cultural Resources Manager, at 703-806-3759 or alison.s.talbot.civ@mail.mil.

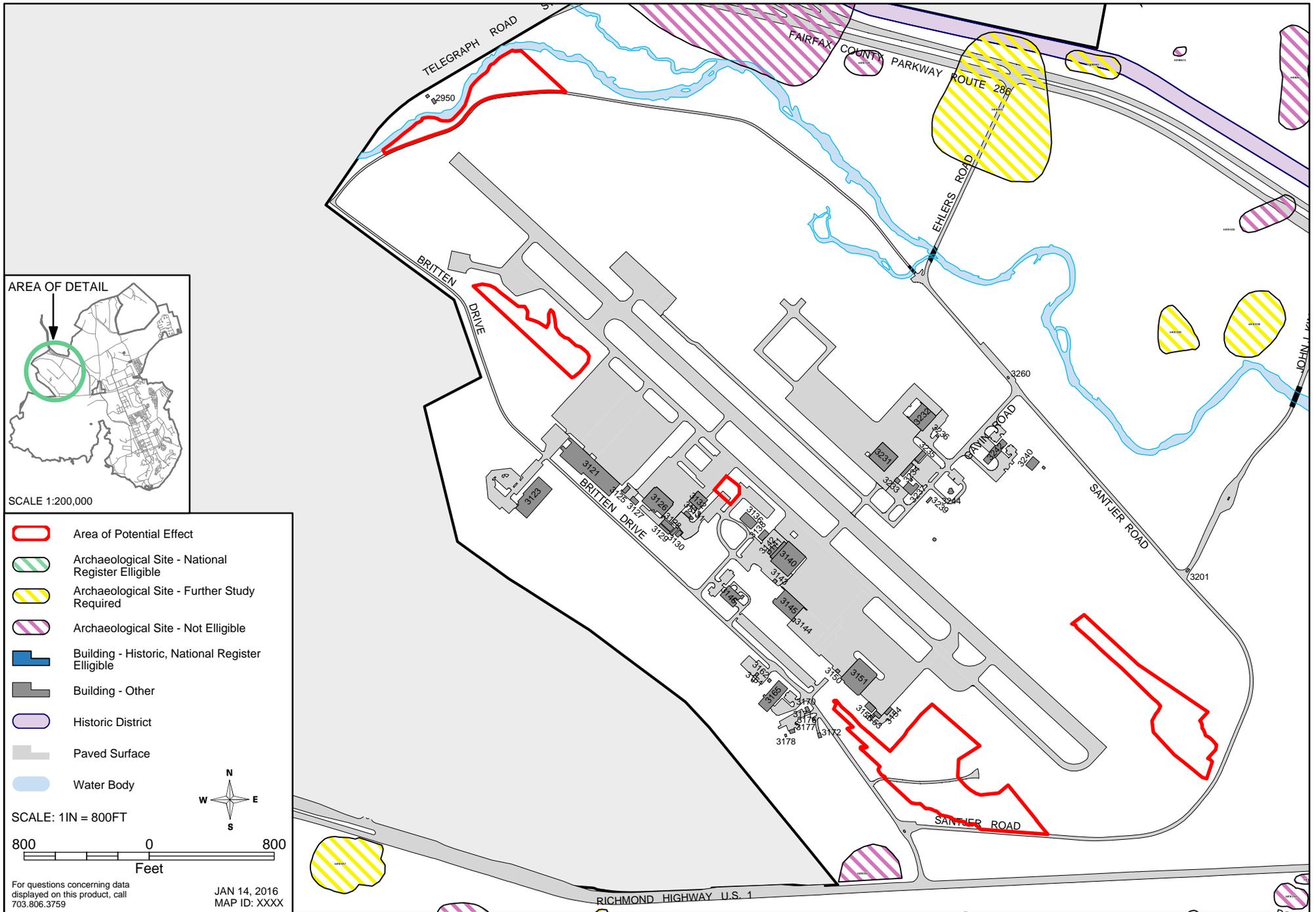
Sincerely,


Michelle D. Mitchell
Colonel, U.S. Army
Commanding

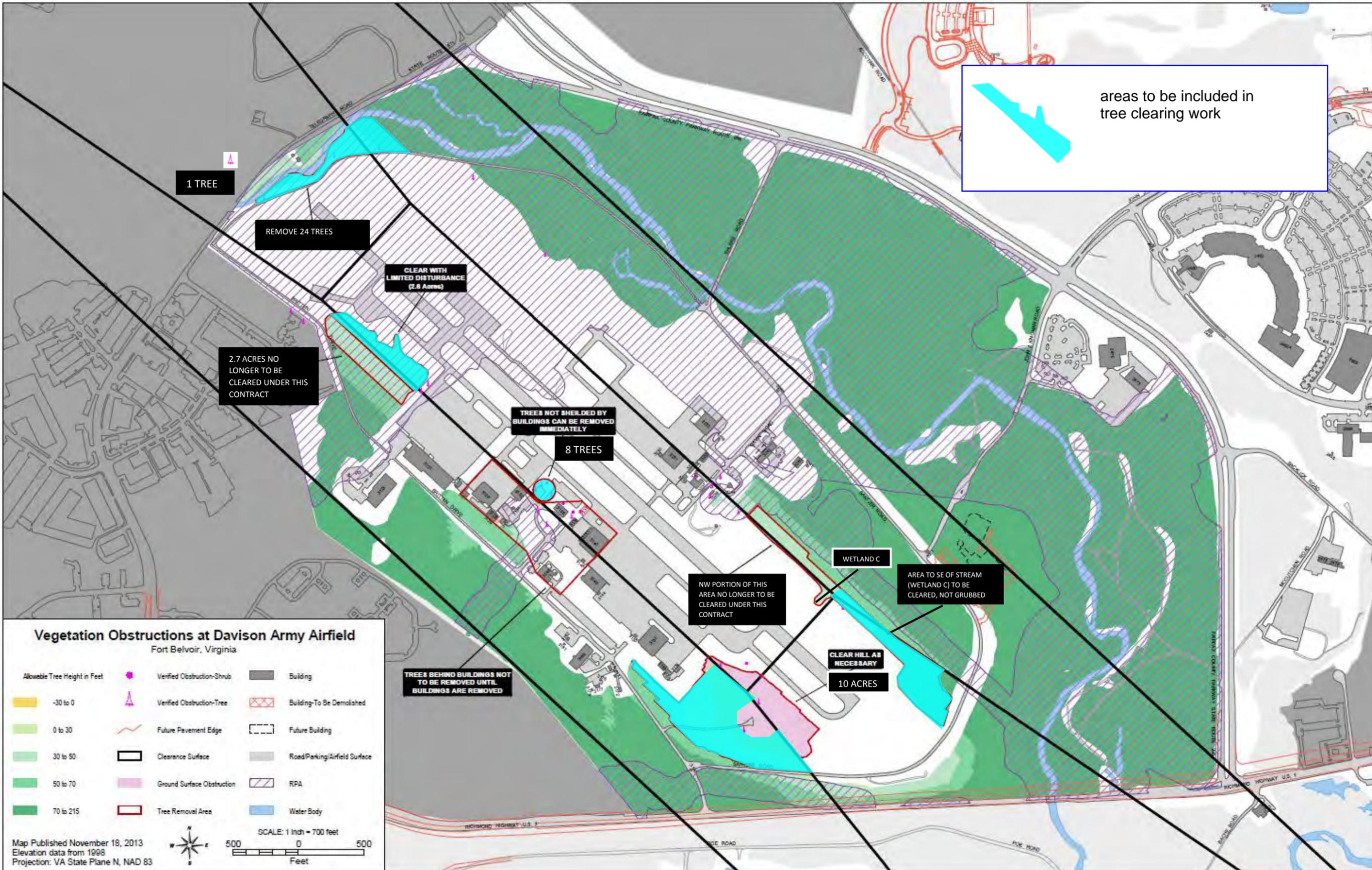
Enclosures

“LEADERS IN EXCELLENCE”

Area of Potential Effect for DAAF Tree Work



areas to be included in tree clearing work



1 TREE

REMOVE 24 TREES

CLEAR WITH LIMITED DISTURBANCE (2.8 Acres)

2.7 ACRES NO LONGER TO BE CLEARED UNDER THIS CONTRACT

TREES NOT SHIELDED BY BUILDINGS CAN BE REMOVED IMMEDIATELY

8 TREES

NW PORTION OF THIS AREA NO LONGER TO BE CLEARED UNDER THIS CONTRACT

WETLAND C

AREA TO SE OF STREAM (WETLAND C) TO BE CLEARED, NOT GRUBBED

TREES BEHIND BUILDINGS NOT TO BE REMOVED UNTIL BUILDINGS ARE REMOVED

CLEAR HILL AS NECESSARY

10 ACRES

APPENDIX B – AIR QUALITY RECORD OF NON-APPLICABILITY

GENERAL CONFORMITY – RECORD OF NON-APPLICABILITY

Project/Action Name: Davison Army Airfield Hazardous Tree Removal

Project/Action Point of Contact: Jay Stotzky, Fort Belvoir

Begin Date (Anticipated): 2016 **End Date (Anticipated):** Five weeks after commencement

General Conformity under the Clean Air Act, Section 176 has been evaluated for the project described above according to the requirements of 40 CFR 93, Subpart B. The requirements of this rule are not applicable to this project/action because the total project emissions (presented as tons per year) which occur in less than a year have been estimated to be:

Total Project Emissions

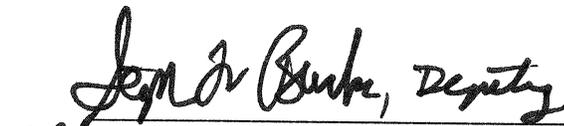
Volatile Organic Compounds (VOC)	0.47 tons per year (tpy)
Nitrogen Oxides (NO _x)	1.92 tpy
Sulfur Oxides (SO _x)	0.001 tpy
Carbon Monoxide (CO)	1.44 tpy
Particulate Matter Less than 2.5 μm (PM _{2.5})	0.15 tpy

These emission rates, including any combination of PM_{2.5} and its potential precursors (i.e., NO_x, SO_x, and VOC), are below the conformity threshold values established at 40 CFR 93.153(b):

Conformity Threshold Rate

VOC	50 tpy
NO _x	100 tpy
SO _x	100 tpy
CO	100 tpy
PM _{2.5}	100 tpy

Supporting documentation and emissions estimates are attached.


MICHELLE D. MITCHELL
Colonel, AG
Commanding

SUPPORTING DOCUMENTATION

Description of Project/Action:

The Proposed Action entails the removal of trees on DAAF airfield proper that violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas to ensure pilot safety and to comply with regulatory guidance outlined in Unified Facilities Criteria (UFC) 3-260-01, Airfield and Heliport Planning Design, and Federal Aviation Regulation (FAR) Part 77.

In accordance with UFC 3-260-01, Airfield and Heliport Planning Design, trees that project into imaginary surfaces must be removed or lowered to a distance that does not violate airfield and airspace criteria. Imaginary surfaces are surfaces in space established around airfields in relation to runway(s), helipad(s), or helicopter runway(s) that are designed to define the obstacle free airspace around the airfield. The imaginary surfaces for Department of Defense (DOD) airfields are the primary surface, the approach-departure clearance surface, the transitional surface, the inner horizontal surface, the conical surface, and the outer horizontal surface. Under the Proposed Action, Fort Belvoir would remove trees that encroach the imaginary surface creating a hazardous condition.

The Proposed Action is needed for safety and compliance purposes. During the 2012 Installation Management Command (IMCOM) Quality Assurance Evaluation, 2013 Airfield Certification and Safety Inspection, and 2014 United States Army Aeronautical Service Airfield Waiver Package review, it was determined that DAAF was not in compliance with regulatory guidance due to trees that penetrate the imaginary surfaces and create hazardous obstructions to aviation operations around the airfield.

Trees would be removed from five sections of DAAF by topping or cutting. The stumps would be left in place. In compliance with the Federal Emerald Ash Borer quarantine (7 Code of Federal Regulations [CFR] 301.53), all trees removed for this project would be chipped or taken to landfills within the quarantine zone.

Analysis Methodology:

Analysis was performed of expected air emissions associated with equipment to be used in planned tree removal activities. Published emission rates for representative equipment were obtained from EPA sources and incorporated into an Excel spreadsheet developed for this analysis. Emission estimation methodology and information was obtained from the following three sources: (1) *Exhaust Emission Factors for Nonroad Engine Modeling – Spark Ignition*, US EPA, Report Number EPA-420-R-10-019, NR-010f, July 2010; (2) *Nonroad Evaporative Emission Rates*, US EPA, Report Number EPA-420-R-10-021, NR-012d, July 2010, and (3) AP-

42, *Compilation of Air Pollutant Emission Factors, Section 3-3 Gasoline and Diesel Industrial Engines (10/96)*. The spreadsheet quantifies emissions from the operation of the equipment used for cutting and removal of the trees from the site. The emissions were then compared to the applicable regulatory thresholds.

Input Parameters and Assumptions:

Below are the project-specific parameters entered for the proposed project, which includes the following related activities:

Project Duration and Equipment on Site

- Tree removal crew on site for an estimated 10 weeks, five days per week
- Chainsaw operations are expected to operate the equivalent of one chainsaw operating five hours per day
- Wood chipper expected to operate on average five hours per day
- Material Handler/Loader will be used to move logs, load heavy truck also operating five hours per day
- Heavy Truck will remove logs from site; they will be onsite with engine running up to five hours per day
- Equipment sizes were estimated based on typical sizes used for tree removal operations and communications with the removal contractor

Air Emissions from Site Activities

- Chainsaws use – emissions estimated for evaporative gasoline use and fuel combustion
- Wood chipper, Material Handler, and Heavy Truck support units with diesel engines – emissions limited to fuel combustion
- Fugitive dust emissions due to land disturbance will be negligible and were not quantified.

The following assumptions were made for this project:

- Trees will be selectively harvested based on height requirements for Davison Army Air Field. This will minimize the extent the terrain is disturbed which otherwise might cause soil and ground materials to become airborne particulate matter. On this basis the analysis concluded there will be negligible fugitive emissions leaving the site.
- PM_{2.5} will be a fraction of the PM₁₀ emissions; to be conservative, it was assumed that PM₁₀ is equal to PM_{2.5}. Therefore, through if application of the emission factors available for PM₁₀ indicates the predicted PM₁₀ emissions do not exceed regulatory thresholds, then neither will PM_{2.5} emissions.

Results

Estimated Calculations

The below emission estimates are from the Excel spreadsheet developed for this project.

Emissions Summary	VOC	NO _x	SO _x	CO	PM ₁₀ /PM _{2.5}
TOTAL Tons	0.47	1.92	0.001	1.44	0.15

ESTIMATED AIR EMISSIONS FOR DAVISON ARMY AIR FIELD TREE REMOVAL PROJECT

Pollutant - Lbs	CO	NOx	PM10/PM2.5	SO2	VOC	CO2
Chainsaws	2,059.6	3.8	30.6	0.7	635.0	3,268
Support Equipment	825.0	3,828.5	271.7	1.5	310.1	142,025
TOTAL, Lbs for project	2,884.6	3,832.3	302.3	2.2	945.1	145,293.3

Pollutant - Tons	CO	NOx	PM10/PM2.5	SO2	VOC	CO2
Chainsaws	1.03	0.002	0.02	0.0003	0.32	1.63
Support Equipment	0.41	1.91	0.14	0.001	0.16	71.01
TOTAL, tons for project	1.44	1.92	0.15	0.001	0.47	72.6

Metric Tons 66.0

Diesel Engine Exhaust Emissions

Equipment supporting the tree removal process:

1. Wood chipper - estimated at 150 hp diesel engine, operating 5 hours per day
2. Material Loader - Caterpillar 279 Loader (or similar) for moving logs and loading truck; 74 hp diesel engine operating 5 hours per day
3. Heavy Truck - Ford 750 diesel power truck (or similar) for receipt and transfer of logs from site; assumed 270 hp diesel engine operating onsite 5 hours per day

Emission Factors

Emission estimates based on EPA's AP-42 Compilation of Air Pollutant Emission Factors, Chapter 3.3 Gasoline and Diesel Industrial Engines (10/1996).

Unit		Pollutants	CO	NOx	PM10/PM2.5	SO2	VOC	CO2
	HP	Emission Rate lb/hp-hr	0.01	0.03	0.0022	0.00001	0.0025	1.15
Chipper	150		1.00	4.65	0.33	0.002	0.38	172.5
Loader	74	Emissions lbs/hour	0.49	2.29	0.16	0.0009	0.19	85.1
Truck	270		1.80	8.37	0.59	0.003	0.68	310.5
	Hours/day							
Chipper	5		5.0	23.3	1.7	0.009	1.9	862.5
Loader	5	Emissions lbs/day	2.5	11.5	0.8	0.004	0.9	425.5
Truck	5		9.0	41.9	3.0	0.02	3.4	1552.5
TOTAL			16.5	76.6	5.4	0.03	6.2	2840.5
		Days						
Project Support Equipment TOTAL		50	825.0	3,828.5	271.7	1.5	310.1	142,025.0

Emission Estimates for Chain Saws

Exhaust Emissions

0

References:

(1) *Exhaust Emission Factors for Nonroad Engine Modeling - Spark-Ignition* ; EPA Report No. EPA-420-R-10-019, NR-010f, July 2010

(2) *Nonroad Evaporative Emission Rates* ; EPA Report No. EPA-420-R-10-021, NR-012d, July 2010

Source

Chainsaw Size 91.1 cc bHp 7.2 Tank Size oz. 27.9 equiv. gal 0.22
 SCC 226007005 Chain Saws > 6 Hp

Operating Scenario

Tree removal crew onsite operating three saws intermittently during daily 8 hour shift over ten week period, five days per week. Equivalent operation estimated to be equivalent to 5 hours per day for single saw for a total of 250 hours of individual saw operation.

Saw Operating Days 50 Chainsaw onsite days (3/day) 150
 Saw Operating Hours 250 Chainsaw onsite hours (3/day, 8 hr/day each) 1,200

Exhaust Emissions

Emission Factors	HC	CO	NOx	PM	BSFC (lbs/hp-hr)	CO2	SO2	Source
gm/hp-hr	159.58	519.02	0.97	7.7	0.921	823.6	0.167	Ref 1, Table 3 (page 6) and CO2 and SO2 calculations on pages 16 - 17
gm/hour	1149	3737	7	55		5930	1.20	
lbs/hour	2.53	8.24	0.02	0.12	6.63	13.07	0.003	
Lbs Total	633.3	2,059.6	3.8	30.6	1,657.8	3,268.3	0.7	

$CO_2 = [BSFC \times 453.6 \text{ gm/lb} - HC \text{ (gm/hp-hr)}] \times 0.87 \text{ CMF} \times 44 \text{ lbs } CO_2 / 12 \text{ lb carbon}$
 $SO_2 = [BSFC \times 453.6 \text{ gm/lb} \times (1 - SOXCNF) - HC] \times 0.01 \times SOXBAS \times 2$
 BSFC = Brake-specific fuel consumption rate
 CMF = carbon mass fraction for gasoline and diesel fuels of 0.87
 SOXCNF = fraction of sulfur converted to particulate matter, 0.03 for gasoline
 SOXBAS = sulfur content in the fuel, 0.0339 for gasoline

Evaporative Emissions

Evaporative emissions are associated with hydrocarbons released by evaporation from equipment. EPA has developed methodologies to estimate emissions that result from the diurnal changes in temperature during equipment use, the permeation through the tank and hose in the fuel system, running losses from the heating due to equipment operation, and hot soak conditions after the equipment is shutdown. These conditions are considered applicable to chainsaw use and would apply to all the saws on site.

Emission Factors

Diurnal Emissions

From daily temperature changes causing in expansion and contraction of fuel volumes (i.e., breathing losses).
Calculated based on application of Wade Equations from Reference 2 (Appendix B).

$\text{Vapor space (ft}^3\text{)} = [(1.15 - \text{tank fill}) \times \text{tank size}] / 7.481 \text{ gal/ft.}^3$ <p>where:</p> <p>Tank fill: 0.5 (assume 50%)</p> <p>Tank size: 0.22 gallons</p> <p>Vapor space = 0.019 ft.³</p>	Equation B-1
$T1(^{\circ}\text{F}) = (T_{\text{max}} - T_{\text{min}}) \times 0.922 + T_{\text{min}}$ <p>where:</p> <p>T_{max}: maximum expected diurnal temperature (°F) assume 95</p> <p>T_{min}: minimum expected diurnal temperature (°F) assume 65</p> <p>T1(°F) = 92.7 (°F)</p>	Equation B-2
$V_{100} \text{ (psi)} = 1.0223 \times \text{RVP} + [(0.0357 \times \text{RVP}) / (1 - 0.0368 \times \text{RVP})]$ <p>where:</p> <p>V₁₀₀ (psi) calculated vapor pressure at 100°F</p> <p>RVP Reid Vapor Pressure of the fuel for gasoline, assume 7.8</p> <p>V₁₀₀ = 8.365 psi</p>	Equation B-3
$E_{100} \text{ (\%)} = 66.401 - 12.718 \times V_{100} + 1.3067 \times v_{100}^2 - 0.077934 \times V_{100}^3 + 0.0018407 \times V_{100}^4$ <p>where:</p> <p>E₁₀₀ (%) = percent fuel evaporated at 100°F</p> <p>E₁₀₀ (%) = 14.8</p>	Equation B-4

$D_{\min} (\%) = E_{100} + [(262 / (0.1667 \times E_{100} + 560) - 0.113) \times (100 - T_{\min})]$		Equation B-5a
$D_{\max} (\%) = E_{100} + [(262 / (0.1667 \times E_{100} + 560) - 0.113) \times (100 - T_1)]$		Equation B-5b
<p>where:</p> <p>$D_{\min/\max}$ = distillation percent at the maximum and minimum temperatures in the fuel tank</p> <p>Dmin = 26.5</p> <p>Dmax = 17.3</p>		
$P_i (\text{psi}) = 14.697 - 0.53089 \times D_{\min} + 0.0077215 \times D_{\min}^2 - 0.000055631 \times D_{\min}^3 + 0.0000001769 \times D_{\min}^4$		Equations B-6a & B-6b
$P_f (\text{psi}) = 14.697 - 0.53089 \times D_{\max} + 0.0077215 \times D_{\max}^2 - 0.000055631 \times D_{\max}^3 + 0.0000001769 \times D_{\max}^4$		
<p>where:</p> <p>$P_{i/f}$ (psi) = initial and final pressures</p> <p>P_i = 5.10 psi</p> <p>P_f = 7.55 psi</p>		
<p>Density (lbs/gallon) = 6.386 - 0.0186 x RVP</p> <p>RVP = 7.8</p> <p>Density = 6.241 lbs/gallon</p>		
$\text{MW (lb/lb mole)} = (73.23 - 1.274 \times \text{RVP}) + [0.5 \times (T_{\min} + T_1) - 60] \times 0.059$		Equation B-8
<p>where:</p> <p>MW = calculated molecular weight based on RVP</p> <p>MW = 64.4 lb/lb mole</p>		
$\text{Diurnal Emissions (grams)} = \frac{\text{vapor space} \times 454 \times \text{density} \times [520 / (690 - 4 \times \text{MW})] \times 0.5 \times [P_i / (14.7 - P_i) + P_f / (14.7 - P_f)]}{[(14.7 - P_i) / (T_{\min} + 460) - (14.7 - P_f) / (T_1 + 460)]}$		Equation B-9
<p>Diurnal Emissions = 0.27 grams/day</p>		
<p>Total Diurnal Emissions = 0.0006 lbs/day saw days 150</p>		0.09 lbs Diurnal Emissions
Permeation Emissions	<p>Emissions estimated for vapor released as a result of permeation through tank and hose.</p> <p>Tank permeation rate from Reference 2, Table 2 (page 12) for nylon tanks used by chainsaws</p> <p>Gms/m²/day 1.25</p> <p>Tank Surface Area, m² 0.1 based on Reference 2, Table E1 for 0.22 gallon tank</p> <p>Tank Perm. Emissions 0.125 gms/day</p>	

	Hose permeation rate from Reference 2, Table 7 (page 17) and temperature adjustment (page 16)					
	Rate, Gms/m ² /day	140				
	Temperature Correction Factor (TCF)	TCF = 0.06014 x EXP (0.0385 x T _{ave})				
	T _{ave} °F	Ave temp.	assume	80	TCF	1.31
	Hose Dimensions, m.	0.061	length	0.006354	diameter	Ref. (2), Table A3 (page A30)
	Hose Surface Area, m ²	π x Length x Diam.		0.001218	m ²	
	Hose Perm. Emissions = rate x TCF x Area					
	Hose Perm. Emissions	0.22	gms/day			
	Tank and Hose Permeation Emissions	0.35	gms/day			
	Total Permeation Emissions =	0.0008	lbs/day	saw days	150	0.12 lbs Permeation Emissions
Running Emissions	Emissions estimated for vapor released as a result of heating caused by the running of the engine. Running emission rate from Reference 2, Table 11 (page 25) for Trimmer/Edger. Factor for Trimmer/Edger recommended for applicability to Chainsaws in Appendix G, Table G6 (page G7)					
	Rate, gm/hour	0.58				
	Running Emissions	4.64	gms/day			
	Total Running Emissions =	0.010	lbs/day	saw days	150	1.53 lbs Running Emissions
Hot Soak Emissions	Hot soak emissions occur when the engines are shutdown for sufficient time and allowed to cool					
	Hot soak emissions rate from Reference 2, Table 13 (page 27)					
	Rate, gms per start	0.27				
	Starts hour of Use	0.25	From Reference 2, Table H5 (H6)			
	Hot Soak Emissions	0.0675	gms/operating hour			
	Total Hot Soak Emissions =	0.00015	lbs/op. hour	saw op. hour	250	0.04 lbs Hot Soak Emissions

Total Evaporative Emissions

1.78	Lbs Evaporative VOC Emissions
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Total Chain Saw Emissions	HC	CO	NOx	PM	CO2	SO2
Exhaust, lbs	633.3	2,059.6	3.8	30.6	3,268.3	0.7
Evaporative, Lbs	1.8	-	-	-	-	-
TOTAL, lbs	635.0	2,059.6	3.8	30.6	3,268.3	0.7

APPENDIX C – COASTAL ZONE FEDERAL CONSISTENCY DETERMINATION

APPENDIX C

Determination of Consistency with Virginia's Coastal Resources Management Program

This document provides the Commonwealth of Virginia with the Fort Belvoir Consistency Determination under the Coastal Zone Management Act Section 307(c)(1) and 15 CFR Part 930, Subpart C, for the Davison Army Airfield (DAAF) Hazardous Tree Removal. The information in this Consistency Determination is provided pursuant to 15 CFR §930.39.

This document represents an analysis of project activities in light of established Virginia Coastal Resources Management Program (CRMP) Enforceable Policies and Programs. Furthermore, submission of this consistency determination reflects the commitment of the U.S. Department of the Army (Army) to comply with those Enforceable Policies and Programs. The proposed action would be implemented in a manner that is consistent with the Virginia CRMP. The Army has determined that the removal of trees which pose an immediate hazard to safety of flight for aircraft in the vicinity of DAAF would have a negligible impact on any land and water uses or natural resources of the Commonwealth of Virginia's coastal zone.

C1 Description of Proposed Action

The Proposed Action takes place entirely within the boundaries of Fort Belvoir (Figure 1-1). The Proposed Action entails the removal of trees and shrubs on DAAF airfield proper that violate the primary surface, approach-departure clearance surface, transitional surface, taxiway clearance, and apron clearance safety areas to comply with regulatory guidance outlined in UFC 3-260-01 (Figure 2-1). Trees would be removed from five sections of DAAF that are described below:

1. Southeast Section

All trees would be cleared within the Southeast Section of the airfield, within upland and wetland areas. The tree removal in this section would result in permanent conversion of 0.072 acres of palustrine forested wetlands to palustrine emergent wetlands. The area will be flagged to distinguish clearing areas and prevent incidental impacts. Tree trunks and crowns would need to be cut with care and caution, and all tree cuttings in the wetland area would need to be removed from the site. No cut trees, including limbs, can be placed or left in the wetland, and no grubbing nor grading are permissible in this area. When using heavy equipment, deck mats would be necessary to prevent equipment from sinking on the site and causing compaction and rutting in the wetland areas. Stumps will be left in place. Following clearing, at an appropriate time of year, wetlands seed mix would be spread. The Southeast Section is approximately 4.7 acres.

2. Northeast Section

The Northeast Section is approximately 3.5 acres and is within the area along the Accotink Creek, adjacent to the Northeast corner of the runway, the 24 tallest trees would be selectively removed from the upland area. Stumps would be left in place.

3. Northwest Section

Within the easternmost section of this area, all trees would be removed from a palustrine forested wetland. The tree removal in this section would result in permanent conversion of 1.234 acres of palustrine forested wetlands to palustrine emergent wetlands. The area will be flagged to distinguish clearing areas and prevent incidental impacts. Tree trunks and crowns would need to be cut with care and caution, and all tree cuttings in the wetland area would need to be removed from the site. No cut trees, including limbs, can be placed or left in the wetland, and no grubbing nor grading are permissible in this area. When using heavy equipment, deck mats would be necessary to prevent equipment from sinking on the site and causing compaction and rutting in the wetland areas. Stumps will be left in place. Following clearing, at an appropriate time of year, wetlands seed mix would be spread. The Northwest Section is approximately 2.5 acres.

4. West Section:

Approximately eight trees would be removed that are not shielded by buildings in the developed area west of DAAF runway.

5. Southwest Section:

On the hill located in the southwest section of the runway, all trees would be cleared. The Southwest Section is approximately 9.2 acres.

In compliance with the Federal Emerald Ash Borer quarantine (7 CFR 301.53), all trees removed for this project would be chipped or taken to landfills within the quarantine zone.

C2 Assessment of Probable Effects

Fort Belvoir has prepared a Draft Environmental Assessment (EA) to evaluate the potential environmental impacts from the DAAF Hazardous Tree Removal in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code 4321-4347), and 32 Code of Federal Regulations (CFR) Part 651, Environmental Analysis of Army Actions.

The Army intends to obtain all applicable permits required for implementation of the Proposed Action alternative. A review of the permits and/or approvals required under the enforceable policies is being conducted. The Army has evaluated the removal of trees which pose an immediate hazard to safety of flight for aircraft in the vicinity of DAAF for its foreseeable effects on the following enforceable policies:

Fisheries – The Proposed Action alternative has no foreseeable impacts on fish or shellfish resources and would not affect the promotion of, or access to, commercial or recreational fisheries. The proposed site is located approximately 3.3 miles northwest of the Potomac River and 1.5 miles from Accotink Bay. The closest water features are on-site non-tidal wetlands located in the northern and southern portions of the site. These wetlands drain to Accotink Creek, which flows around the northern and eastern boundary of the site, and drains to the Potomac River. Compliance with the installation's Municipal Separate Storm Sewer System (MS4) Permit and the Virginia Erosion and Sediment Control regulations would minimize the risk of sediment being transported off the site to the Potomac River Fishery. Best management practices recommended by the Virginia Departments of Conservation and Recreation (DCR) and Forestry (DOF) would be employed, such as the use of marsh mats or timber mats when using heavy equipment in wetland areas.

Subaqueous Lands Management – The Virginia Marine Resources Commission (VMRC), pursuant to Virginia Administrative Code (VAC) Section 28.2-1204, has jurisdiction over encroachments in, on, or over any State-owned rivers, streams and creeks. The project would have no foreseeable impact on subaqueous resources.

Tidal and Non-tidal Wetlands Management – The Proposed Action alternative would involve minor effects on non-tidal wetlands. The Army anticipates that the Proposed Action alternative would permanently impact 1.31 acres of palustrine forested wetlands and temporarily impact 1.31 acres of palustrine emergent wetlands. The permanent wetland impacts result from permanent conversion of PFO wetlands to PEM, while the temporary impacts result from the placement of deck mats in the wetlands to prevent compaction and rutting from accessing the trees to be cleared through the PEM wetland. The Army would obtain permits from the U.S. Army Corps of Engineers (USACE) and the Virginia Department of Environmental Quality (DEQ) prior to work. The Army would provide compensation as required by the USACE and the DEQ for unavoidable impacts through the purchase of wetland mitigation bank credits. Following clearing, wetland seed mix will be spread, at the appropriate time of year, to stabilize soils.

Dunes Management – The Proposed Action alternative would not affect any coastal primary sand dunes.

Non-Point Source Water Pollution Control – Typically, a Proposed Action that is greater than one acre, would require an ESC plan and a stormwater management plan to be developed. The ESC plan would include temporary erosion and sediment control measures. The ESC plan and stormwater management plan would be prepared utilizing the requirements for water quality and quantity found in the Virginia Technical Criteria Part IIB (9VAC25-870-62 through 9VAC25-870-92). The Proposed Action is larger than one acre; however per § 62.1-44.15:34 the proposed action will not require a Construction General Permit (CGP) and ESC plan because it is a maintenance project that is being performed to maintain the original construction of the airfield. Per a Phone conversation on September 6th with VADEQ (see Appendix A: Agency Coordination), it was discussed that any areas that would be disturbed due to the Proposed Action would not require a CGP and ESC if stumps remain in place. During the tree removal process the contractor selected should be prepared to stabilize areas if bare soils are exposed. Bare soils in

wetland areas should be seeded, or if trees are chipped in place, the woodchips should remain in place as additional stabilization. Minor adverse impacts would occur from the Proposed Action on surface water with regard to water quantity and water quality. Appropriate temporary erosion and sediment control measures or permanent stormwater Best Management Practices (BMP) will be employed to minimize impacts to water quality from disturbance during tree removal and potential increase in stormwater runoff. Monitoring of the outfalls would occur to ensure water quality is maintained during and after the tree removal activity.

Point Source Water Pollution Control – The Proposed Action would not result in point source water discharge.

Shoreline Sanitation – The Proposed Action is not located on or near a shoreline. The Proposed Action alternative would therefore have no impact on shoreline sanitation.

Air Pollution Control – The proposed site is located within an ozone and PM_{2.5} non-attainment area, triggering the need to analyze emissions and determine the applicability of General Conformity Rule under the Clean Air Act (CAA). A construction emissions estimate indicates that the tree removal activity would not generate sufficient emissions to trigger a need for a full General Conformity Analysis. No changes to the Fort Belvoir's Title V air permit would be required.

The estimated emissions associated with the tree removal project are very low, a small fraction of what was reported for Fort Belvoir for each pollutant in 2014. The temporary impacts to air quality would be minor temporary impacts that are not regionally or locally significant.

Coastal Lands Management – There are designated Chesapeake Bay Resource Protection Areas (RPA's) located within the proposed project area. The RPA's are associated with Accotink Creek and its unnamed tributaries and wetlands. The tree removal would have no direct impacts to Accotink Creek or its unnamed tributaries (Figure 3-1). However, minor impacts to wetlands associated with Accotink Creek and within the RPA will occur. Within the Northwest Section of tree removal, one area of wetland will be converted from a palustrine forested to a palustrine emergent. All trees would be removed from the palustrine forested wetland. Tree trunks and crowns will be cut and all parts of the trees, excluding the stumps, will be removed from the site. No cut trees, including limbs, will be placed or left in the wetland, and grubbing is not permissible in this area. Marsh or timber mats will be used to prevent equipment from compacting soils or becoming embedded. Following clearing, at an appropriate time of year, wetlands seed mix would be spread. Fort Belvoir would coordinate with USACE and the State of Virginia through the Joint Permit Application process for an Individual Permit from USACE and Virginia to assess the impacts of conversion of palustrine forested wetlands to palustrine emergent wetlands, and for tree removal activities within the RPA in the Northeast, Northwest and Southeast Sections. Mitigation for this permanent impact would be provided by the purchase of credits from a mitigation bank. Tree removal within the other sections would not impact wetlands nor the RPA, as there are none present in those areas.

C3 Summary of Findings

Based on the above analysis, which is elaborated on in the EA, Fort Belvoir personnel would: (1) ensure that the construction contractor uses and maintains appropriate temporary erosion and sediment controls and permanent stormwater BMPs; and (2) obtain the requisite permits and approvals. Fort Belvoir finds that the proposed DAAF Hazardous Tree Removal is fully consistent to the maximum extent practicable with the federally approved enforceable provisions of Virginia CRMP, pursuant to the Coastal Zone Management Act of 1972, as amended and in accordance with 15 CFR 930.30.

Pursuant to 15 CFR Part 930.41, the Virginia Coastal Resources Management Program has 60 days from receipt of this letter in which to concur with or object to this Consistency Determination, or to request an extension, in writing, under 15 CFR Part 930.41(b). Virginia's concurrence will be presumed if its response is not received by Fort Belvoir on the 60th day from receipt of this determination. The state's response should be sent to U.S. Army Garrison Fort Belvoir, 9430 Jackson Loop, Suite 200, Fort Belvoir, VA 22060-5116.


MICHAEL J. D. MITCHELL
Colonel, AG
Commanding