

**Final
Environmental Assessment
for
Airfield and Drainage Projects at
Joint Base Langley-Eustis
Hampton, Virginia**



Prepared for:

**DEPARTMENT OF THE AIR FORCE
Joint Base Langley-Eustis
Hampton, Virginia**

February 2021

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**FINDING OF NO SIGNIFICANT IMPACT (FONSI)
AND FINDING OF NO PRACTICABLE ALTERNATIVE (FONPA)**

**Environmental Assessment for Airfield and Drainage Projects
at Joint Base Langley-Eustis, Langley AFB, Virginia**

Pursuant to provisions of the National Environmental Policy Act (NEPA), Title 42, United States Code (USC) Sections 4321 to 4347, implemented by Council on Environmental Quality (CEQ) Regulations, Title 40, Code of Federal Regulations (CFR) Parts 1500-1508 and 32 CFR Part 989, Environmental Impact Analysis Process, the U.S. Air Force (Air Force) assessed the potential environmental consequences associated with performing airfield drainage projects and stream restoration on a stormwater drainage ditch in the vicinity of the Bethel Housing area at Joint Base Langley Eustis, Langley Air Force Base (JBLE-Langley), Hampton, Virginia.

The purpose of projects is to address safety, security, and drainage deficiencies at JBLE-Langley. Project specific purposes and needs are identified below.

Airfield Storm Drainage and Grading Project: The proposed action of the airfield storm drainage and grading project is to grade and fill areas of the airfield, including wetlands, and to reconstruct drainage structures, including installing new or repairing existing drain pipes, ditches, and culverts. The purpose of this project is to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. The airfield storm drainage and grading project is needed to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding.

Recreational Vehicle Storage Lot Project: This proposed action is to construct a new RV storage lot at a single, secure location. The purpose of the RV lot project is to provide JBLE-Langley service members with a single, secure location that will accommodate approximately 250 RVs, trailers, and boats, including the RVs currently on the Durand Loop RV storage lot. The RV lot project is needed to improve security for valuable personally owned vehicles (POVs); reduce the risk of flooding damage to RVs stored at JBLE-Langley; and improve parking efficiency and nighttime operations.

Bethel Housing Area Drainage Improvement Project: The proposed action of restoring a stormwater drainage ditch near the Bethel Housing Area is to reduce flooding, improve wetland habitat, increase habitat diversity, improve stormwater flow, and reduce streambank erosion along the ditch. The purpose of the project is to improve water quality, flow, and habitat in and along the ditch. The restoration project is needed to eliminate fish becoming trapped and dying in upstream pools, reduce the presence of stagnant water where mosquitoes breed, eliminate open-ponded reaches that attract waterfowl, and help reduce total maximum daily loads (TMDLs) in the ditch in accordance with TMDL reduction requirements set to go into effect in 2023.

The Environmental Assessment (EA), incorporated by reference into this finding, analyzes the potential environmental consequences of activities associated with implementing the proposed projects and provides environmental protection measures to avoid or reduce adverse environmental impacts.

The EA considers all potential impacts of the following alternatives:

Preferred Alternative: Implement each project as described in the EA.

No Action Alternative: Do not implement each action. Taking no action would result in continued BASH risk, inefficient use of recreational vehicle storage space, and poor water quality in the Bethel Housing Area stormwater drainage ditch. The No Action Alternative would not meet the purpose of and need for the proposed action but is analyzed in the EA in accordance with Council on Environmental Quality regulations.

SUMMARY OF FINDINGS

The Proposed Actions would have no effect on geology, cultural resources, land use, or environmental justice. Short- and long-term minor adverse effects would be expected on the noise environment, air quality, water resources (surface waters, wetlands, and floodplains), vegetation and wildlife, soils, hazardous materials and wastes, the transportation system, and the protection of children. These effects would primarily occur as a result of construction activities and would cease upon completion of project implementation. Long-term minor beneficial effects would be expected on airspace, soils, surface waters and wetlands, biological resources, safety and occupational health, the protection of children, and visual resources. No significant effects, adverse or beneficial, would be expected on any resource area. Disproportionate impacts on minority or low-income populations would not be expected.

Approximately 20 acres of wetlands would be impacted. JBLE-Langley has obtained the necessary permits from the state of Virginia and the U.S. Army Corps of Engineers and will comply with permit mitigation requirements for the impact on wetlands.

The analyses of the affected environment and environmental consequences of implementing the Preferred Alternative presented in the EA concluded that by implementing environmental protection measures, JBLE-Langley would comply with applicable environmental regulations and requirements. Among these are Section 404 of the Clean Water Act, Section 106 of the National Historic Preservation Act and implementing regulations, Section 7 of the Endangered Species Act, the Migratory Bird Treaty Act, the Coastal Zone Management Act, and the reasonable and prudent measures stipulated by the United States Fish and Wildlife Service.

Environmental protection measures identified within the EA will be employed to lessen the adverse impacts of the Preferred Alternative.

PUBLIC REVIEW

An Early Public Notice was published in the *Daily Press* on December 20–21, 2019 announcing commencement of the EA detailing that the action would take place in a floodplain/wetland and seeking advanced public comment. No comments were received. A public notice was published in the *Daily Press* on October 30–31 and November 1, 2020 announcing the availability of the Draft EA and Draft FONSI/FONPA for public review and comment. The documents were available for review on the internet at <https://www.jble.af.mil/About-Us/Units/Air-Force/Langley-Environmental/>. Copies were also available for review at the Hampton Main Library, 4207 Victoria Blvd., Hampton, VA. The public comment period lasted for 30 days from the first publication of the public notice. Comments on the Draft EA and Draft FONSI/FONPA were received from the Commonwealth of Virginia and the U.S. Army Corps of

Engineers, Norfolk District. The Air Force reviewed and considered all comments received on the Draft EA and Draft FONSI/FONPA. No substantive comments on the Draft EA or Draft FONSI/FONPA that would necessitate a revision of the analysis or changes in the Preferred Alternative were received. Copies of scoping letters, published notices, and correspondence are in Appendix C of the EA.

FINDING OF NO PRACTICABLE ALTERNATIVE

To improve surface irregularities for aircraft takeoff and landing safety and to reduce the chance of a BASH event, the removal of wetlands from the airfield is necessary and that the proposed action includes all practicable measures to minimize harm to the wetlands from such use. As noted in the attached EA, there are no practicable alternatives to the Proposed Action that would avoid all impacts or further minimize impacts to wetlands because the objectives sought by this project preclude the selection of any practicable alternatives due to UFC requirements and flight safety objectives. Similarly, construction within the 100-year floodplain is unavoidable. Alternatives to the Preferred Alternative were reviewed during the EA development process under the requirements of NEPA but were eliminated from detailed analysis in the EA because they did not meet the stated purpose and need for the action, were not practicable, or would have led to greater overall environmental impact. The only practicable alternative is the Preferred Alternative.

Pursuant to Executive Order(s) 11988 and 11990, and considering all supporting information, I find there is no practicable alternative to the airfield, RV lot, and Bethel Housing drainage projects, which will impact floodplains and wetlands, as described in the attached EA. This finding fulfills both the requirements of the referenced Executive Orders and the EIAP regulation, 32 CFR Part 989.14 for a Finding of No Practicable Alternative.

FINDING OF NO SIGNIFICANT IMPACT

Based on my review of the facts and analyses contained in the attached EA, conducted under the provisions of NEPA, CEQ Regulations and 32 CFR Part 989, I conclude that the projects analyzed as part of the EA would not have a significant environmental impact, either individually or collectively with other projects at JBLE-Langley or within the Hampton, Virginia region. Accordingly, an Environmental Impact Statement is not required. The signing of this Finding of No Significant Impact completes the environmental impact analysis process.

DEE JAY KATZER, Colonel, USAF
Chief, Civil Engineer Division (ACC/A4C)

Date

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ACRONYMS AND ABBREVIATIONS

ACAM	Air Conformity Applicability Model
AFB	Air Force Base
AFI	Air Force Instruction
AFMAN	Air Force Manual
AFPAM	Air Force Pamphlet
BASH	Bird Aircraft Strike Hazard
BGEPA	Bald and Golden Eagle Protection Act
BMP	best management practice
CAA	Clean Air Act
CBPA	Chesapeake Bay Preservation Area
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CO	carbon monoxide
CO ₂	carbon dioxide
CO _{2e}	carbon dioxide equivalent
COA	Course of Action
CWA	Clean Water Act
CY	calendar year
CZMA	Coastal Zone Management Act
CZMP	Virginia Coastal Zone Management Program
dB	decibel
DNL	day-night sound level
DoD	Department of Defense
EA	Environmental Assessment
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ERP	Environmental Restoration Program
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FONPA	Finding of No Practicable Alternative
FONSI	Finding of No Significant Impact
FPPA	Farmland Policy Protection Act
ft	foot, feet
FW	Fighter Wing
GHG	greenhouse gas
HAZMART	Hazardous Materials Pharmacy
HAZMAT	hazardous materials
IPaC	Information for Planning and Conservation
IRP	Installation Restoration Program
JBLE	Joint Base Langley-Eustis
LaRC	Langley Research Center
L _{eq}	equivalent sound level
LUC	land-use control
µg/m ³	micrograms per cubic meter
MBTA	Migratory Bird Treaty Act
MC	munitions constituents

MEC	munitions and explosives of concern
mg/m ³	milligrams per cubic meter
MMRP	Military Munitions Response Program
MRS	Munitions Response Site
NAAQS	National Ambient Air Quality Standards
NASA	National Aeronautics and Space Administration
NEPA	National Environmental Policy Act
NFA	no further action
NHPA	National Historic Preservation Act
NLEB	northern long-eared bat
NO ₂	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
O ₃	ozone
OSHA	Occupational Safety and Health Administration
Pb	lead
PM _{2.5}	particulate matter equal to or less than 2.5 microns in aerodynamic diameter
PM ₁₀	particulate matter equal to or less than 10 microns in aerodynamic diameter
POV	personally owned vehicle
ppb	parts per billion
ppm	parts per million
RCRA	Resource Conservation and Recovery Act
RMA	Resource Management Area
ROD	Record of Decision
ROI	region of influence
RPA	Resource Protection Area
RV	recreational vehicle
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO ₂	sulfur dioxide
SWPPP	Stormwater Pollution Prevention Plan
TMDL	total maximum daily load
U.S.C.	United States Code
UFC	Unified Facilities Criteria
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tanks
UXO	unexploded ordnance
VARTF	Virginia Aquatic Resources Trust Fund
VCRMPP	Virginia Coastal Resources Management Program
VDCR	Virginia Department of Conservation and Recreation
VDEQ	Virginia Department of Environmental Quality
VMRC	Virginia Marine Resources Commission
VOC	volatile organic compound
VPDES	Virginia Pollutant Discharge Elimination System
VSMP	Virginia Stormwater Management Program

SECTION 1.0

PURPOSE, NEED, AND SCOPE

1.1 INTRODUCTION

Joint Base Langley-Eustis (JBLE) is a U.S. military facility near Hampton, Virginia (Figure 1-1). The Langley Air Force Base (AFB) portion of the facility—JBLE-Langley—occupies 3,152 acres of land between Hampton to the south, the National Aeronautics and Space Administration (NASA) Langley Research Center (LaRC) to the west, and the Northwest and Southwest branches of the Back River to the northeast and southeast (Figure 1-2).

The U.S. Air Force (Air Force) proposes to improve stormwater drainage on its airfield, construct a new recreational vehicle (RV) storage lot, and restore a stormwater drainage ditch. This Environmental Assessment (EA) presents background information relevant to the proposed actions and analyzes the environmental and socioeconomic effects of implementing the proposed actions and alternatives, including the no action alternative.

1.2 PURPOSE AND NEED

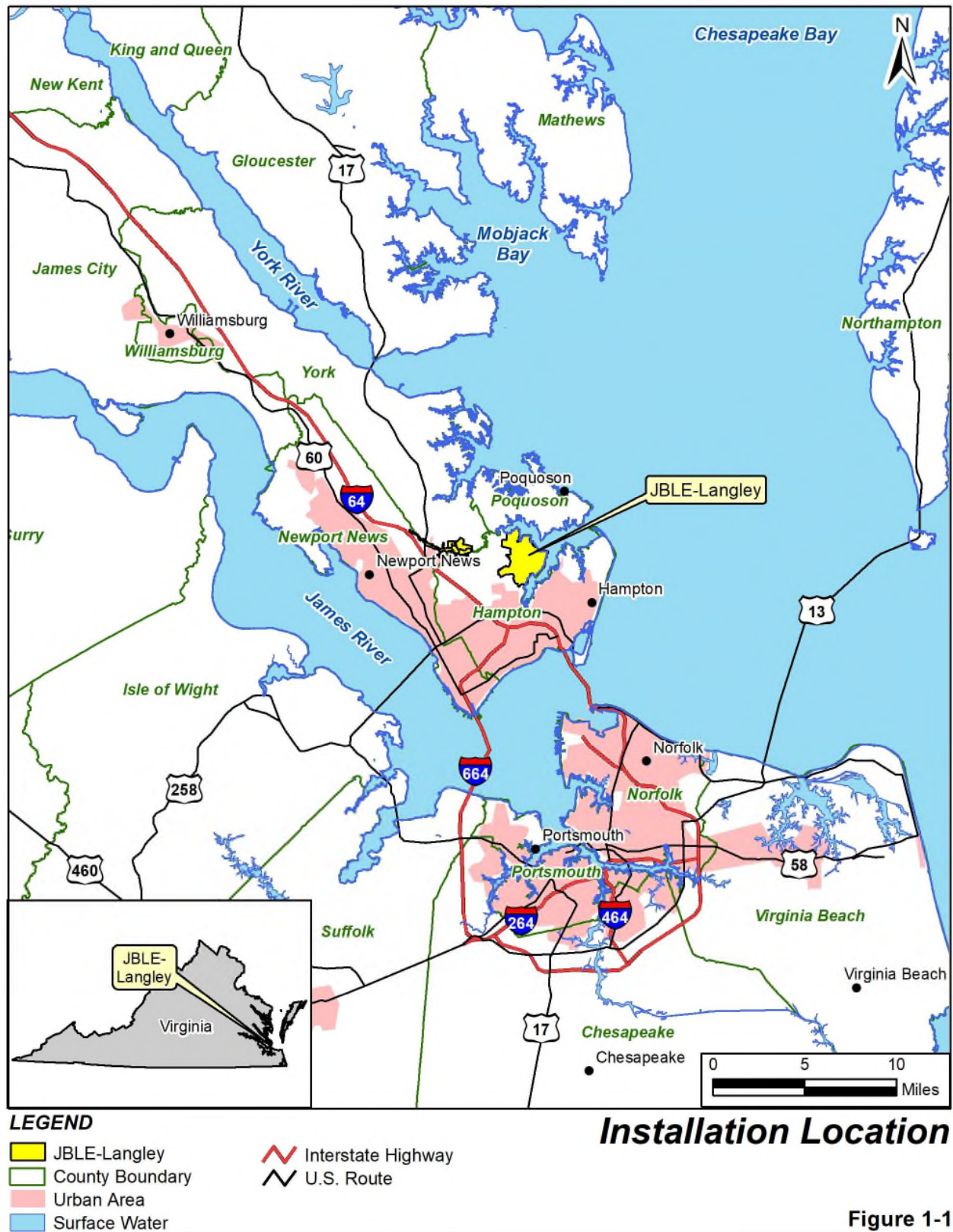
This section provides brief statements of the purpose of and need for each proposed action.

1.2.1 Airfield Storm Drainage and Grading Project

The proposed action of the airfield storm drainage and grading project is to grade and fill areas of the airfield, including wetlands, and to reconstruct drainage structures, including installing new or repairing existing drainpipes, ditches, and culverts. The purpose of this project is to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. A regraded and filled primary surface would eliminate wet areas on the airfield that attract wildlife and reduce the presence of uneven terrain. Those changes would reduce the risk of bird/aircraft strikes and resulting aircraft damage, protect the lives of military personnel in and around the airfield, and reduce wildlife mortality. The airfield storm drainage and grading project is needed to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding. The project is being implemented in two independent phases—phases II and III of an overall project for which Phase I has been completed.

1.2.2 Recreational Vehicle Storage Lot Project

This proposed action is to construct a new RV storage lot at a single, secure location. The purpose of the RV lot project is to provide JBLE-Langley service members with a single, secure location that will accommodate approximately 250 RVs, trailers, and boats, including the RVs currently on the Durand Loop RV storage lot. Removing the RVs from that lot would allow heavy equipment and snow preparation activities to be expanded and consolidated at the Civil Engineering compound. The proposed action would increase RV storage revenues, improve RV user service, and free up space needed for base mission requirements. The RV lot project is needed to improve security for valuable personally owned vehicles (POVs); reduce the risk of flooding damage to RVs stored at JBLE-Langley; and improve parking efficiency and nighttime operations.



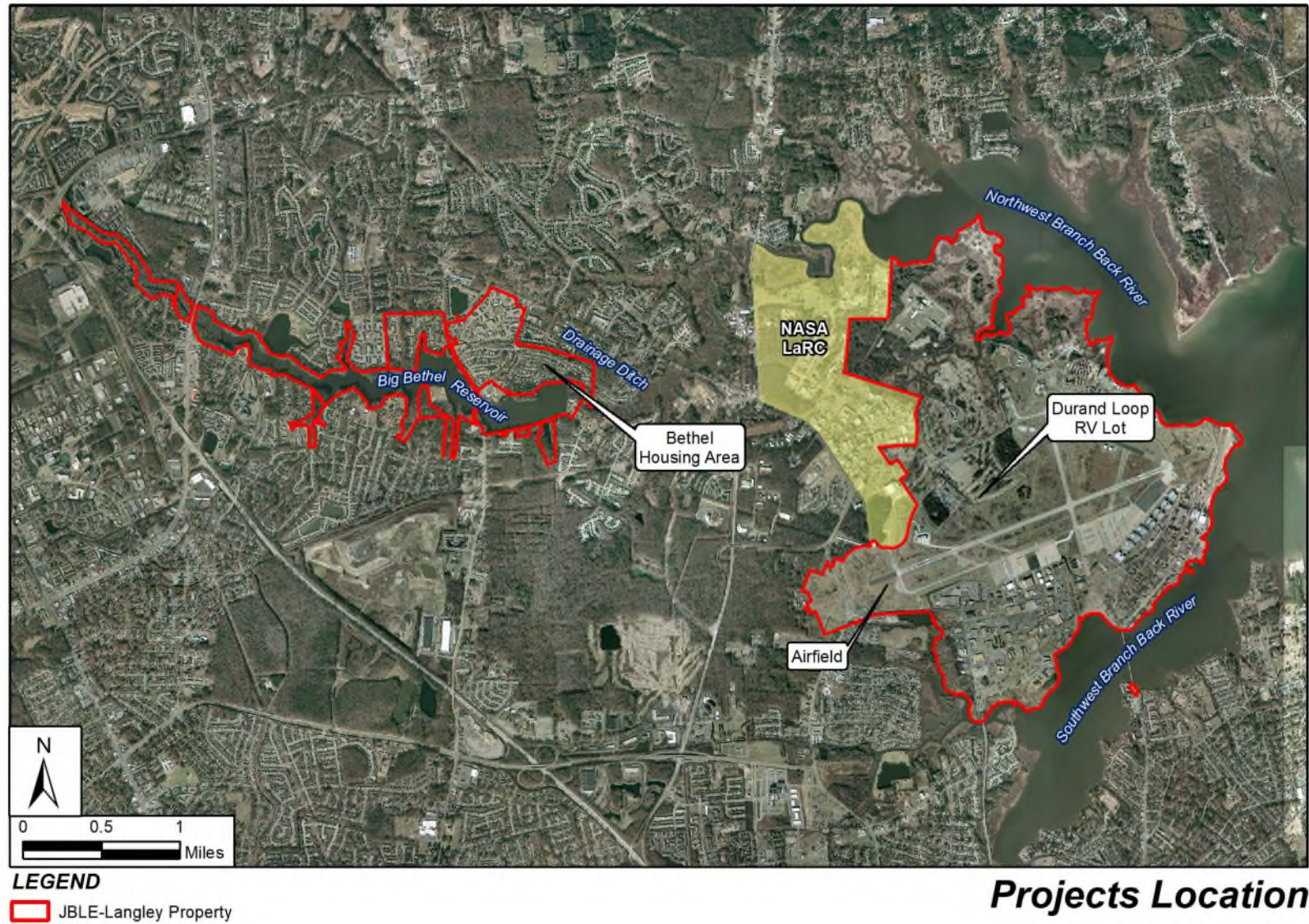


Figure 1-2

Source: JBLE-Langley GIS 2019.

1.2.3 Bethel Housing Drainage Improvement Project

The proposed action of restoring a stormwater drainage ditch near the Bethel Housing Area is to reduce flooding, improve wetland habitat, increase habitat diversity, improve stormwater flow, and reduce streambank erosion along the ditch. The purpose of the project is to improve water quality, flow, and habitat in and along the ditch. The restoration project is needed to eliminate fish becoming trapped and dying in upstream pools, reduce the presence of stagnant water where mosquitoes breed, eliminate open-ponded reaches that attract waterfowl, and help reduce total maximum daily loads (TMDLs) in the ditch in accordance with TMDL reduction requirements set to go into effect in 2023.

The Bethel Housing Area is about 2.5 miles northwest of JBLE-Langley at the southern end of York County, Virginia. A drainage ditch that runs from First Street east along the housing area boundary and then south to drain to Brick Kiln Creek has an incised channel, eroding banks, and stagnant pools of water during low-flow periods that lead to fish kills and an abundance of mosquitoes. The Air Force proposes to regrade the banks of the ditch to a proper slope, grade the path of the ditch to allow for proper water flow, remove invasive species of vegetation, and replant the streambanks with native vegetation.

1.3 DECISION TO BE MADE

This EA provides the Air Force with documentation of environmental impacts associated with implementing the proposed actions discussed in section 1.2. The decision to be made is to either:

- Approve a Finding of No Significant Impact (FONSI)/Finding of No Practicable Alternative (FONPA) based upon the proposed analysis contained in this document; or
- Determine a FONSI/FONPA is not applicable, resulting in the need for an Environmental Impact Statement (EIS) to be prepared.

1.4 COOPERATING AGENCY AND INTERGOVERNMENTAL COORDINATION/CONSULTATIONS

1.4.1 Cooperating Agencies

The Air Force is the lead agency for the proposed actions. No cooperating agencies are involved in this National Environmental Policy Act (NEPA) (Title 42 of the *United States Code* [U.S.C.] §§ 4321 *et seq.*) analysis.

1.4.2 Interagency and Intergovernmental Coordination and Consultations

The Intergovernmental Coordination Act and Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, require intergovernmental notifications before making any detailed statement of environmental impacts. To meet the requirement for intergovernmental notification, the proponent must notify concerned federal, state, and local agencies and allow them enough time to evaluate potential environmental impacts of a proposed action. Comments from those agencies are subsequently incorporated into the Air Force Environmental Impact Analysis Process (32 CFR Part 989) for the proposed actions. Copies of letters sent referencing the projects proposed in this EA and responses received will be provided in the final EA.

1.5 SCOPE OF ENVIRONMENTAL ASSESSMENT

This EA analyzes the potential environmental impacts associated with implementing the proposed actions discussed in section 1.2. It provides analyses of potential impacts on land use, airspace, noise, air quality, water resources, biological resources, geology and soils, hazardous materials (HAZMAT) and hazardous wastes, cultural resources, infrastructure and utilities, safety and occupational health, socioeconomic resources, and environmental justice.

1.6 APPLICABLE REGULATORY REQUIREMENTS

NEPA requires that federal agencies take into consideration the environmental consequences of proposed actions during the decision-making process. The intent of NEPA is to protect, restore, and enhance the environment through well-informed decision-making. The Council on Environmental Quality (CEQ) was established under NEPA to implement and oversee federal policy in that process. To this end, the CEQ issued regulations for implementing the procedural provisions of NEPA (Title 40 of the *Code of Federal Regulations* [CFR] parts 1500–1508). The Air Force has supplemented the CEQ NEPA regulations by promulgating its own NEPA regulations, which are found at 32 CFR Part 989.

The Air Force has considered applicable federal, state, and local regulations during analysis of the impacts to individual environmental and social resources evaluated as part of the EA. The following legislation has been given consideration:

- Clean Air Act (CAA) (42 U.S.C. § 7401–7671q)
- Clean Water Act (CWA) (33 U.S.C. § 1251)
- Endangered Species Act (ESA) (16 U.S.C. §§ 1531–1543)
- Migratory Bird Treaty Act (MBTA) (16 U.S.C. §§ 703–712)
- National Historic Preservation Act (NHPA) (54 U.S.C. § 300101 *et seq.*)
- Safe Drinking Water Act (SDWA) (42 U.S.C. § 300f *et seq.*)
- Stormwater requirements under section 438 of the Energy Independence and Security Act (EISA) (42 U.S.C. § 17094)
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. §§ 9601–9675)
- Resource Conservation and Recovery Act (RCRA) (42 U.S.C. § 6901)
- EO 11990, *Protection of Wetlands*
- EO 11998, *Floodplain Management*
- EO 13834, *Efficient Federal Operations*

The proposed actions also must comply with applicable Air Force manuals and instructions and security and design standards. These documents establish specifications and standards for airfield safety and security and facility design. They include the following:

- AFMAN 32-1084, *Facility Requirements*, 26 February 2016
- AFI 31-101, *Integrated Defense*
- Air Force Instruction (AFI) 91-212, *Bird/wildlife Aircraft Strike Hazard (BASH) Management Program*, 31 May 2018
- *Air Force Sustainable Design and Development (SDD) Implementing Guidance*, 2 June 2011

- UFC 4-010-0, *DoD Minimum Antiterrorism Standards for Buildings*, 12 December 2018

1.7 PUBLIC PARTICIPATION

The Air Force invites public participation in the NEPA process. Specifically, the Air Force urges all agencies, organizations, and members of the public with a potential interest in the proposed action—including minority, low-income, disadvantaged, and Native American groups—to participate in the decision-making process.

Because the Proposed Action areas coincide with wetlands and/or floodplains, the Proposed Action is subject to the requirements and objectives of EO 11990 and EO 11988. In accordance with AFMAN 32-7003 the Air Force published early notice that the Proposed Actions would occur in a floodplain/wetland in the *Daily Press* on December 20–21, 2019. The comment period for public and agency input on these projects lasted for 30 days. The notice identified state and Federal regulatory agencies with special expertise that had been contacted and solicited public comment on the Proposed Actions and any practicable alternatives. No comments were received.

Regulations in 32 CFR Part 989 guide opportunities for public participation with respect to this EA and decision-making on the proposed actions. The Air Force made the draft EA, along with the draft FONSI/FONPA, available to the public for 30 days, publishing a notice of availability of the EA in the *Daily Press* on October 30–31 and November 1, 2020. Interested parties were able to review the documents by accessing them on the official home page of JBLE-Langley at <https://www.jble.af.mil/About-Us/Units/Air-Force/Langley-Environmental/>. Copies were also available for review at the Hampton Main Library, 4207 Victoria Blvd., Hampton, VA. Comments on the Draft EA and Draft FONSI/FONPA were received from the Commonwealth of Virginia and the U.S. Army Corps of Engineers, Norfolk District. The Air Force considered all comments on the draft EA and draft FONSI/FONPA. No substantive comments on the draft EA or draft FONSI/FONPA that would necessitate a revision of the analysis or changes in the Preferred Alternative were received. Copies of scoping letters, published notices, and correspondence are in Appendix C of the EA.

SECTION 2.0

DESCRIPTION OF THE PROPOSED ACTIONS AND ALTERNATIVES

2.1 PROPOSED ACTIONS

This section presents details of each of the proposed actions.

2.1.1 Airfield Storm Drainage and Grading Project

From a permitting perspective, the overall project is split into three independent phases. Phase I has been completed and this EA covers phases II and III of the project.

The project would involve the following elements:

- Modeling the drainage basin.
- Designing drainage structures for the runway areas on the airfield primary surface to eliminate standing water in grassy areas and open ditches.
- Grading low areas in the airfield to eliminate obstructions and abrupt grade changes.
- Removing 11.56 acres of wetlands during Phase II, consisting of 1.36 acres of tidal emergent wetlands, 4.74 acres of tidal open water ditch, 5.27 acres of palustrine emergent wetlands, and 0.19 acres of nontidal open water ditch (Figure 2-1).
- Removing 8.82 acres of wetlands during Phase III, consisting of 8.29 acres of palustrine emergent wetlands and 0.53 acre of nontidal open water ditch.

2.1.2 Recreational Vehicle Storage Lot Project

The Air Force would relocate the Durand Loop RV storage lot to a location immediately to the east of the current lot and across Durand Loop from it (see area labeled “1” in Figure 2-2). Both the current lot and the proposed new location are approximately 3 acres. Relocation of the Durand Loop lot would make the current space available to facilitate expansion and consolidation of heavy equipment and snow preparation activities to improve the efficiency of storm event response.

The project would include the following elements:

- Clear the site of existing vegetation and grade it with unclassified fill to raise the lot elevation to protect against flooding events and to direct stormwater drainage onto adjacent pervious land areas.
- Install underground storm drainpipe to direct stormwater to impacted USACE-regulated ditch segments into the Durand Loop storm drain system and Back River.
- Install underground electrical service to and within the site.
- Install a security fence, pole-mounted lights, and motorized access gates.
- Mark all parking spaces clearly for safe and efficient traffic patterns, including numbering all RV stalls to facilitate lot navigation and management.

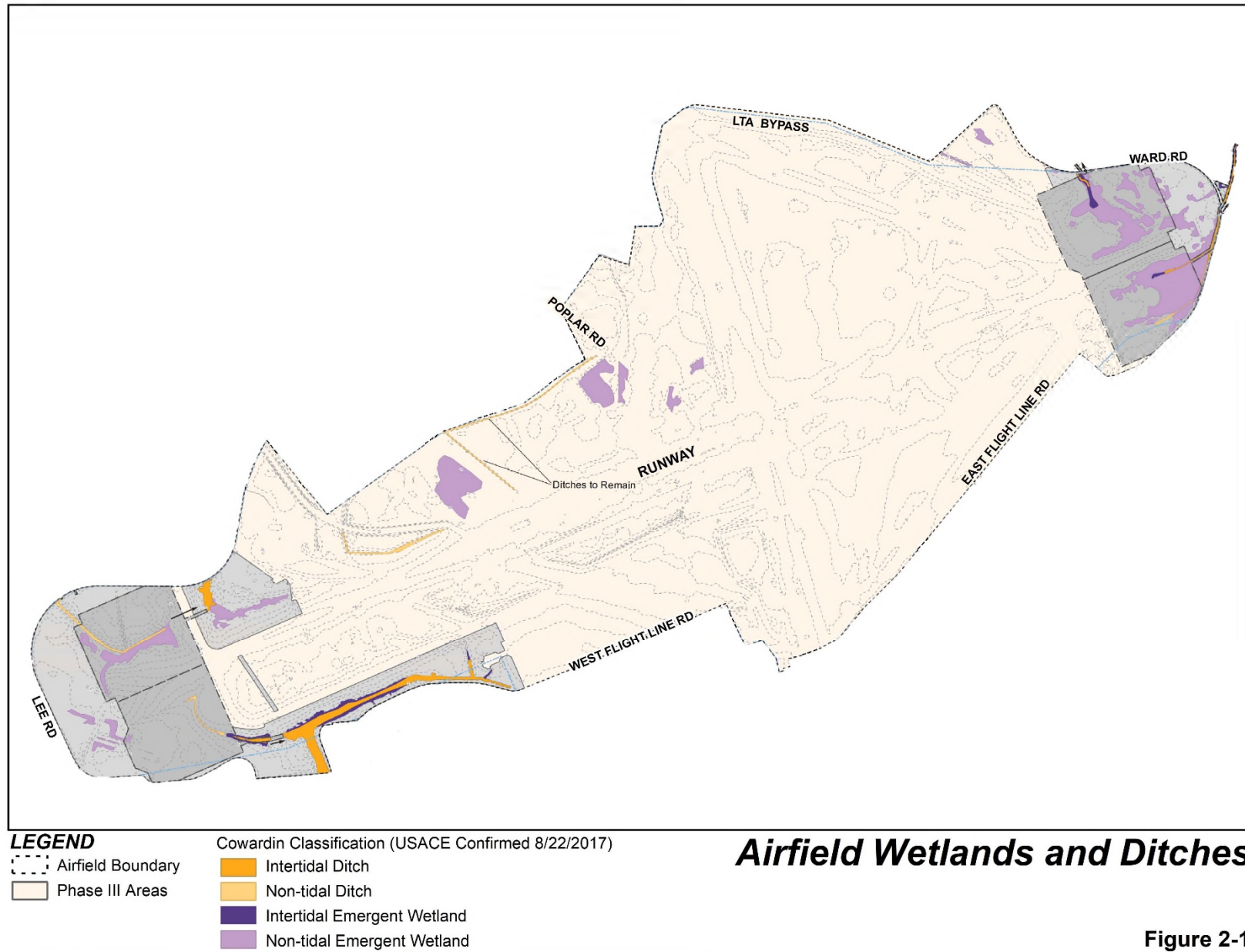
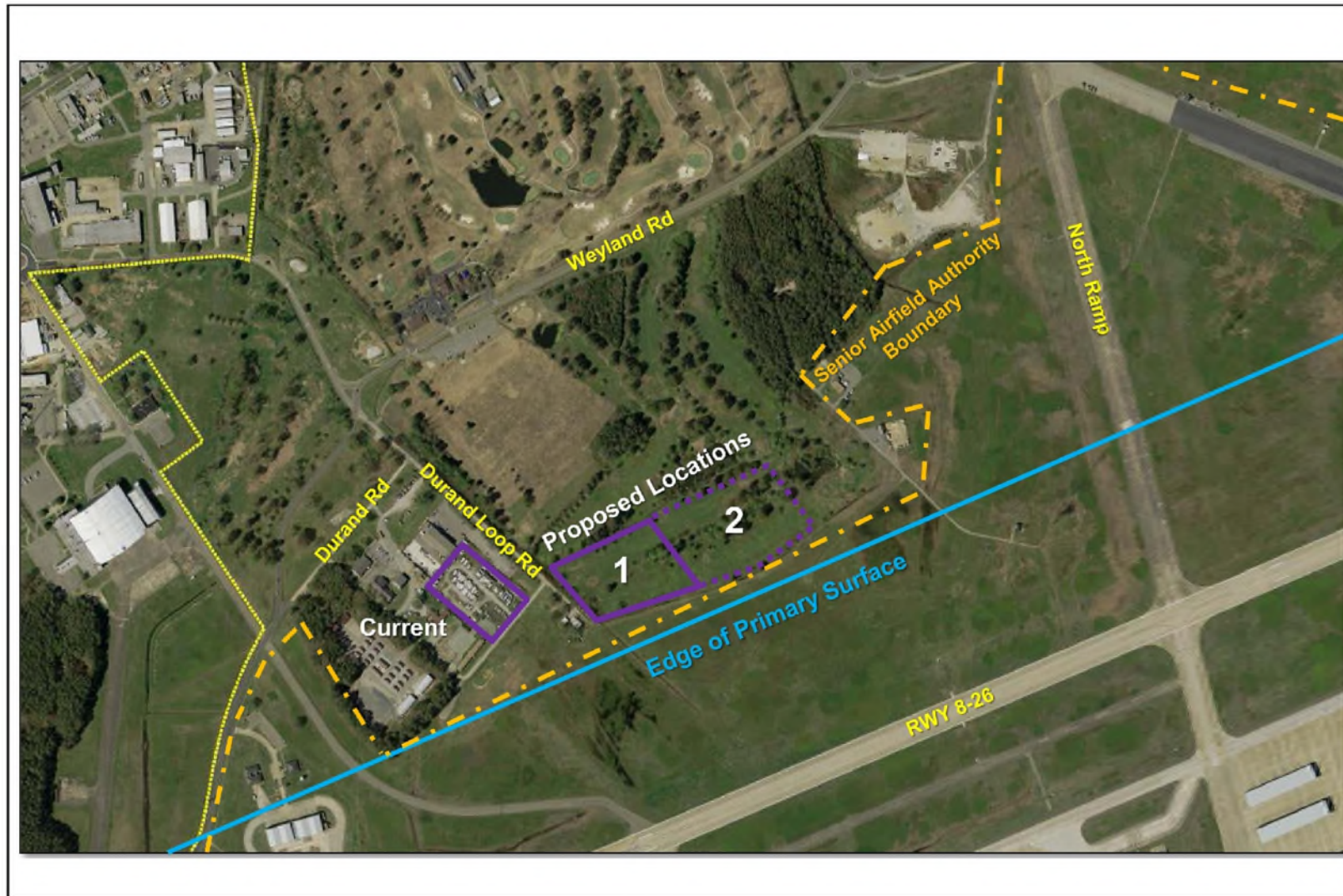


Figure 2-1



Durand Loop Recreational Vehicle Lot

Figure 2-2

2.1.3 Bethel Housing Drainage Improvement Project

The Bethel Housing drainage improvement project would involve modifications to the stream channel, floodplain areas, wetlands, and adjacent areas (Figure 2-3).

The project would involve the following elements:

- Stabilize existing drainage channels and control the grade of the stream, while maintaining the location and width of the existing stream channel.
- Install in-stream structures throughout the stream system to provide habitat diversity.
- Plant native riparian species and remove invasive plant species to enhance existing wetlands and create riparian wetland areas at locations along the streambanks.
- Improve locations of stormwater outfalls into the stream by enhancing preformed scour holes or installing vernal pools.
- Install a stormwater management pool at a downstream location to treat incoming stormwater from upstream locations and to serve as additional habitat for gizzard shad (*Dorosoma cepedianum*) and to replace the poor-quality ditch habitat at the upstream end of the system where the shad currently become trapped and die. Install a drop structure to discourage shad from moving upstream.
- Optionally, the Air Force would construct a small park with educational signage about the function of stream and wetland ecosystems near the downstream end. An existing graded roadway that runs parallel to the stream would serve as a greenway connection to the park. A trail and bridge across the stream from an existing sidewalk could be constructed to connect the Bethel Housing Area to the park.

2.2 SELECTION STANDARDS

Selection standards differed for each of the proposed projects, as discussed in this section.

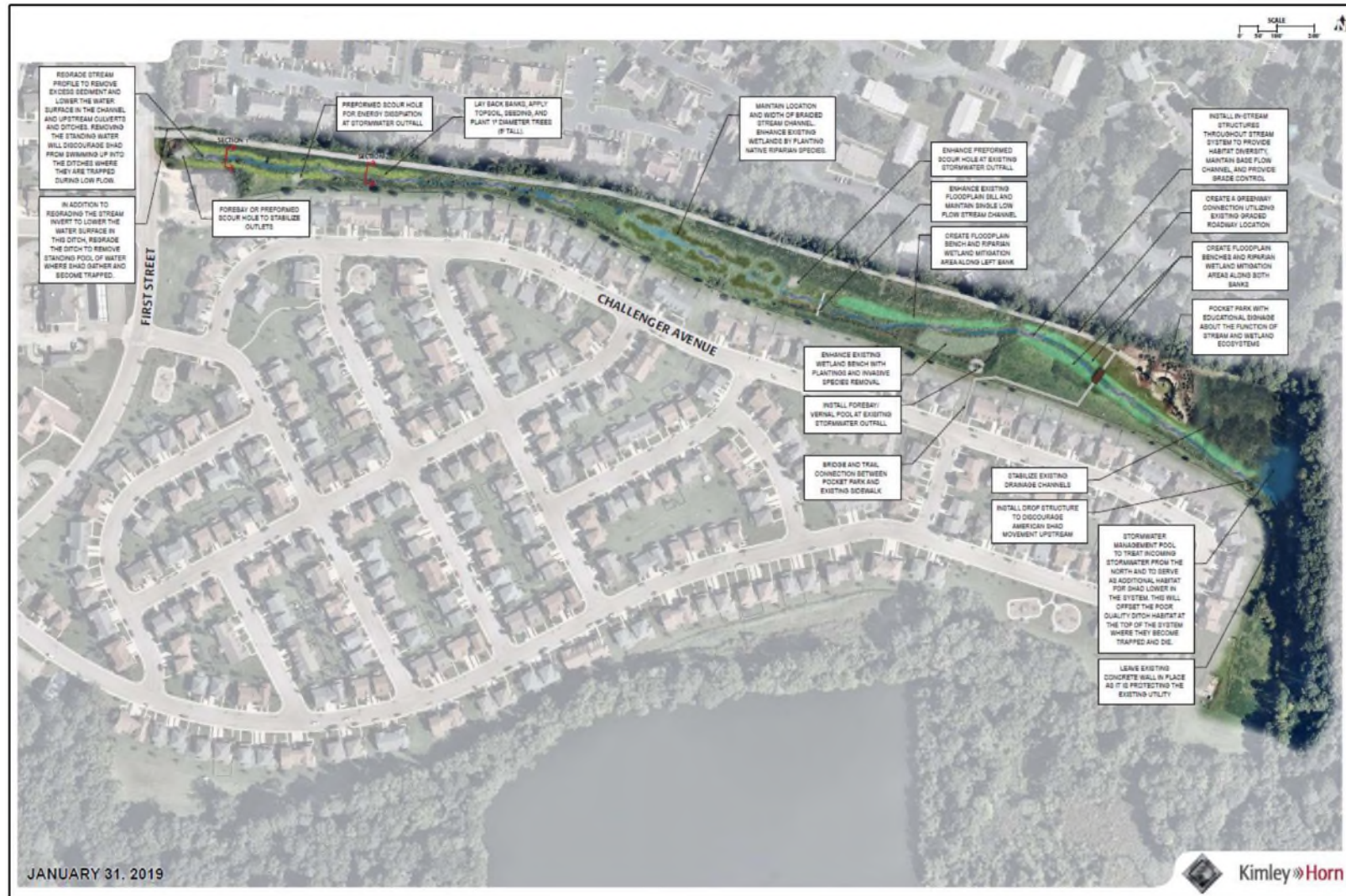
2.2.1 Airfield Storm Drainage and Grading Project

Selection criteria for determining how to improve airfield storm drainage are those in relevant UFC and the base BASH management plan. The airfield is required to comply with DoD UFC 3-260-01, *Airfield and Heliport Planning and Design* (4 February 2019). The UFC specifies acceptable grades on an airfield, and the JBLE-Langley airfield does not comply with those specifications. Also, in its current condition, the airfield does not comply with the AFI 91-212 requirement to minimize aircraft wildlife strikes. The standing water and flooded areas on and adjacent to the airfield attract birds and wildlife that create hazardous conditions for aircraft and air crews.

2.2.2 Recreational Vehicle Storage Lot Project

Selection criteria for the new RV lot location were the following:

- Enough space to accommodate 250 or more RVs, trailers, and boats.
- Availability of utility services.
- An area that is not subject to flooding or that can be protected from flooding.
- The new RV lot must not interfere with the base mission. Accessing the site must not create conflicts with the mission and no base mission could be impacted by implementing the project.



Bethel Housing Area Drainage Ditch Improvement

Figure 2-3

2.2.3 Bethel Housing drainage improvement project

Selection criteria for the Bethel Housing drainage improvement project were reduced flight risk, improved water quality, natural stream appearance and structure, and regulatory considerations.

- The channelized stream is incised to the bedrock, contributing to overall channel instability and causing failure of the streambanks, which leads to excessive sediment in the stream channel.
- Flooding occurs in a neighborhood adjacent to the ditch and improving drainage in the ditch should reduce flooding severity.
- The current condition of the ditch creates a flight hazard. Pooling in the stream attracts waterfowl, and dead fish in the upper stream attract vultures. The stream is under a portion of the base flight path, so these conditions are a safety issue.
- JBLE-Langley desired to improve stream appearance and functioning without adding extensive modifications that could create future excess maintenance needs.
- Under its municipal separate storm sewer system program, JBLE-Langley must achieve a 40 percent reduction in nutrient levels by 2023 to avoid a permit violation. The credits the base would gain through this program would help it achieve the required reduction.

2.3 SCREENING OF ALTERNATIVES

2.3.1 Airfield Storm Drainage and Grading Project

JBLE-Langley must regrade the airfield to be compliant with DoD and Air Force regulations and instructions. No alternatives to the proposed action for the airfield storm drainage were considered. There was some discussion between USACE, Norfolk District, the Virginia DEQ, and the base regarding which wetlands would need to be filled. The project as designed fills wetland areas determined to present an airfield hazard and retains wetland areas that wildlife management data indicate do not pose a safety hazard.

2.3.2 Recreational Vehicle Storage Lot Project

Two locations were considered for the RV lot—the proposed location on Durand Loop and a second location at the north end of the airfield that is used by the road and grounds crew for storage and contractor laydown. Only the Durand Loop site met the selection criteria. Use of the second location would have required relocation of the missions now located there or rearranging the space to accommodate the missions and the RV lot. Use of the Durand Loop site would require no mission relocation or rearrangement and accessing the Durand Loop location would not interfere with mission activities.

2.3.3 Bethel Housing Drainage Improvement Project

Two options for restoring the Bethel Housing stormwater drainage ditch were considered: course of action (COA) 1 and COA 2. COA 1 was chosen over COA 2 primarily because the scope of COA 2 included stream changes and enhancements beyond what was considered necessary to accomplish the overall goals of the project. JBLE-Langley judged the extra features included in COA 2 as being unnecessary and likely to involve more maintenance in the future beyond what COA 1 would require. Both COA 1 and COA 2 met the first three and last selection criteria, but COA 2 did not meet the fourth criterion. COA 1 was selected as the more reasonable option.

2.4 DETAILED DESCRIPTION OF THE ALTERNATIVES

This section discusses alternative implementation options for the proposed actions. To be considered a viable alternative for implementing a proposed action, an alternative must meet the purpose of and need for the proposed action and be reasonable. Reasonable alternatives include those that are practical or feasible from technical and economic standpoints.

The no action alternative for each proposed action is also discussed in this section. CEQ regulations require analysis of a no action alternative to provide a benchmark against which to compare the magnitude of the potential environmental effects of a proposed action and its alternatives (if applicable). The no action alternative is not required to be reasonable, nor does it need to meet the purpose and need of a proposed action.

2.4.1 Airfield Storm Drainage and Grading Project

Action Alternatives

JBLE-Langley identified no action alternative other than the airfield storm drainage and grading project as discussed in section 2.1.1.

No Action Alternative

Under the no action alternative, the Air Force would not regrade or eliminate wetlands from the airfield. Obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface would not be eliminated. The risk of damage to aircraft in the event of a mishap would not be reduced and airfield wildlife risks would remain inconsistent with the BASH Plan.

2.4.2 Recreational Vehicle Storage Lot Project

Action Alternatives

JBLE-Langley identified two locations for a new RV storage lot, but the implementation of the project would be the same at each location. That is, at either location the site would be cleared and graded as necessary; underground storm drain pipes would be installed; a paved lot to store approximately 250 RVs, trailers, and boats would be constructed; the site would be marked; underground electrical service would be installed to and within the site; and the site would be provided with a security fence, pole-mounted lights, and motorized access gates.

No Action Alternative

Under the no action alternative, the Air Force would not relocate the Durand Loop RV storage lot to a new location. Without the project, the base would continue to fail to meet servicemembers' needs for RV storage rentals and the 633 Force Support Squadron would lose crucial revenues. Valuable POVs would remain at risk from flooding and damage from difficult nighttime parking operations in areas where pavement markings and area lighting are missing. Disorganized, random vehicle placement would continue, resulting in inefficient use of available space.

2.4.3 Bethel Housing Drainage Improvement Project

Action Alternatives

One alternative to the proposed action for restoring the Bethel Housing stormwater drainage ditch was identified. The proposed action (COA 1) and COA 2 are similar in some respects and different in others. Table 2-1 lists the differences between the two COAs.

Table 2-1. Differences between Bethel Housing Drainage Improvement COAs 1 and 2

COA 1	COA 2
<i>Upstream</i>	
Proposed changes in the upstream section of the ditch are the same under COA 1 and COA 2.	
<i>Midstream</i>	<i>Midstream</i>
Maintain the location and width of braided channel.	Restore the ditch sinuosity.
Enhance existing floodplain sill and maintain single, low-flow stream channel.	Install a grade control structure and create a floodplain bench and wetlands.
Enhance existing wetlands by planting native riparian species.	
Create floodplain bench and riparian wetland mitigation area along left bank.	
<i>Downstream</i>	
Create floodplain benches and riparian wetland mitigation areas along both banks.	Create a stormwater wetland and/or wetland mitigation area.
Stabilize existing drainage channels.	Create a riparian wetland system with vernal pool areas to serve as additional habitat for shad lower in the system.
Install a drop structure to discourage shad movement upstream.	Remove the existing concrete wall.
Create a stormwater management pool to treat incoming stormwater from the north and to serve as additional habitat for shad lower in the system.	
Leave existing concrete wall in place; it protects the existing utility.	

No Action Alternative

Under the no action alternative, the Air Force would not restore the Bethel Housing stormwater drainage ditch to a more natural state. Consequences of not restoring the ditch would include the following:

- Shad would continue to become trapped and die in upstream locations.
- The banks of the ditch would continue to erode without the protection of a riparian buffer.
- Flow in the ditch would continue to incise the channel, especially during intense rain events.
- Habitat quality in the ditch would continue to lack runs and riffle-pool diversity.
- Points in the ditch at stormwater outfalls would continue to receive and pass sediment downstream.
- Ducks would continue to congregate where the ditch is ponded, depositing excessive nutrients into the water.

2.5 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

Alternatives to each of the proposed actions that were eliminated from further consideration are presented below.

- *Airfield Storm Drainage and Grading Project.* No alternative to the proposed action for airfield storm drainage and grading was identified. The project's need and design are driven by DoD and Air Force regulatory and safety requirements.
- *Recreational Vehicle Storage Lot Project.* An alternative to the proposed action was use of a site along the north boundary of the airfield that is used for roads and grounds crew activities and contractor laydown. The site was deemed less desirable than the Durand Loop location and was eliminated from further consideration. Reasons for rejecting the alternative site are discussed in section 2.4.3.
- *Bethel Housing Drainage Improvement Project.* The second COA for the Bethel Housing drainage improvement project was eliminated from further consideration for the reasons discussed above.

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SECTION 3.0

AFFECTED ENVIRONMENT

This EA focuses the analysis on the components of the environment that would be affected by the implementation of the proposed projects within the area known as the region of influence (ROI). The ROI for analysis, unless otherwise stated, is JBLE-Langley. The affected resources are airspace, noise, air quality, water resources (including wetlands, floodplains, and coastal zone management), biological and natural resources, geology and soils, HAZMAT and hazardous waste, cultural resources, land use, infrastructure and utilities, safety and occupational health, socioeconomic resources, environmental justice, and visual resources.

3.1 AIRSPACE

Controlled Class D airspace at JBLE-Langley extends upward from the surface up to and including 2,500 feet (ft) above ground level within a 4-nautical mile radius of the base. The ROI for airspace includes the JBLE-Langley airfield and environs.

The JBLE-Langley airfield and associated airspace is used by the 1st Fighter Wing (1 FW) and 192nd Wing (192 WG) for military training activities. Most operations at the base are conducted by the 1 FW and 192 WG, which have a large complement of F-22s and T-38A/Bs.

Many factors influence the annual level of operational activity at the JBLE-Langley airfield, including economics, national emergencies, and maintenance requirements. Operations consist of arrivals and departures (itinerant) by primarily military aircraft, with a lesser amount of traffic from NASA turboprop aircraft flights (Table 3-1).

Table 3-1. Annual Operations at Joint Base Langley-Eustis, Langley Air Force Base

Use	Approximate Annual Operations	Estimated Percentage of Use
1 FW / 192 WG	More than 38,000	92
NASA	More than 1,000	3
Transient	More than 2,000	5
Total	More than 42,000	100

3.2 NOISE

Noise (any undesirable sound) is expressed as sound levels in decibels (dB), and various weighted dB scales (i.e., A, B, and C) are used to approximate how people perceive different types of sounds. A-weighting accounts for the way the human ear perceives moderate sounds by accounting for low and very high frequencies not being well heard. A-weighted day-night sound level (DNL) was developed to average sound over a 24-hour period with a 10-dB penalty added to the nighttime levels (10 p.m. to 7 a.m.). It is a useful descriptor for noise because it averages ongoing yet intermittent noise and measures total sound energy over a 24-hour period. The DNL is the accepted measure of determining human noise impacts. In addition, Equivalent Sound Level (L_{eq}) is often used to describe the overall noise environment. L_{eq} is the average sound level in dB.

The ROI for analysis of potential noise-related impacts is 800 ft from project areas. This distance enables analysis of the area in which annoying noise levels would potentially occur.

The Noise Control Act of 1972 (Public Law [PL] 92-574) directs federal agencies to comply with applicable federal, state, and local noise control regulations. In 1974 the U.S. Environmental Protection Agency (EPA) provided information suggesting continuous and long-term noise levels in excess of DNL 65 dBA are normally unacceptable for noise-sensitive land uses such as residences, schools, churches, and hospitals.

Aircraft operations and maintenance activities are the primary source of noise at JBLE-Langley. The noise levels on and in the vicinity of JBLE-Langley range between 65 and 85 dBA DNL. Almost the entire base is located within the 70 dBA DNL contour and all proposed projects in this EA, except the Bethel Housing drainage improvement project, are within the 75 dBA DNL contour (Figure 3-1) (JBLE-Langley 2016). Daily operations of motor vehicles in and around JBLE-Langley is considered a minor source of noise, with typical noise levels ranging from 50 dBA DNL for light traffic to 80 dBA DNL for diesel trucks.

Construction and maintenance equipment noise is a common, ongoing occurrence on JBLE-Langley. Construction noise levels are governed primarily by the noisiest pieces of equipment (e.g., dump trucks, excavators, or graders). Typically, the sound level attenuates, or diminishes, at a rate of 6 dBA for each doubling of the distance from a point source (e.g., if the noise level is 85 dBA at 50 ft, it is 79 dBA at 100 ft) (JBLE-Langley 2016). Each decrease of 3 dB represents a halving of sound intensity, so a 6-dB decrease represents a quartering of the sound intensity.

The generalized noise environment along the Bethel Housing stormwater drainage ditch is typical of a residential area near an airport. Most noise is typical of residential areas, including general human activities and residential traffic, with occasional aircraft overflights. The ditch and adjacent housing areas are outside of the JBLE-Langley airfield's 65 dBA noise contour (Figure 3-1).

3.3 AIR QUALITY

EPA and VDEQ regulate air quality in the Commonwealth of Virginia. The CAA, as amended, gives EPA the responsibility for establishing the primary and secondary National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50) that set acceptable concentration levels for seven criteria pollutants. These standards represent the maximum allowable ambient concentrations for ground-level ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter (including particulate matter equal to or less than 10 microns in aerodynamic diameter [PM_{10}] and particulate matter equal to or less than 2.5 microns in aerodynamic diameter [$PM_{2.5}$]), and lead (Pb). Ground level O_3 is created through the reactions of volatile organic compounds (VOCs) and nitrogen oxides (NO_x) in the presence of sunlight. Short-term standards (i.e., for periods generally less than 24 hours) have been established for pollutants contributing to acute health effects, while long-term standards (i.e., for quarterly or annual averages) have been established for pollutants contributing to chronic health effects. Each state has the authority to adopt standards stricter than those established under the federal program; however, the Commonwealth of Virginia follows the federal standards for all pollutants that would be emitted under the proposed actions. Table 3-2 presents the EPA NAAQS for federally listed criteria pollutants and the additional state-only standards.

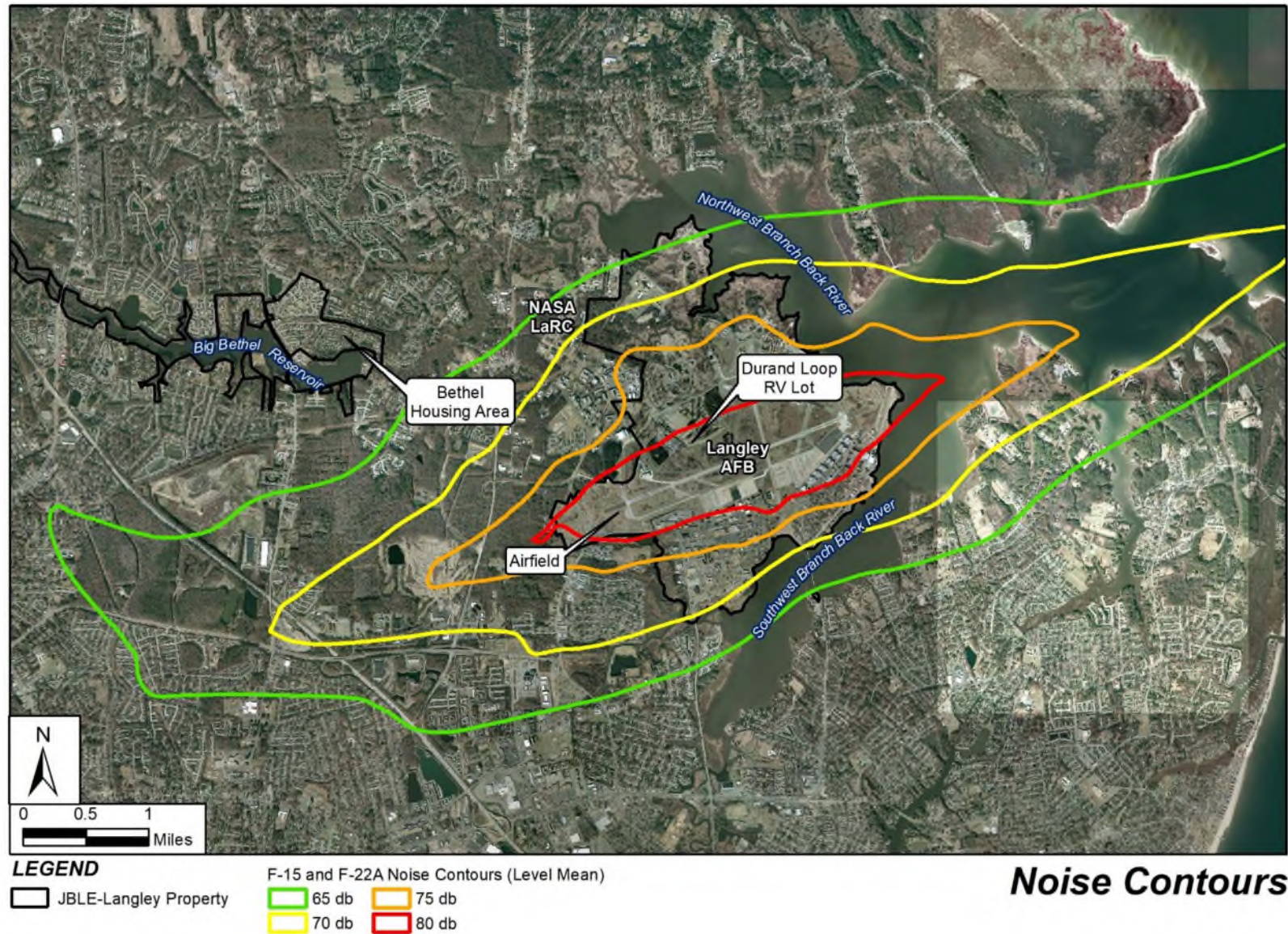


Figure 3-1

Source: JBLE-Langley GIS 2019.

Table 3-2. National and State Ambient Air Quality Standards

Pollutant	Averaging Time	Primary Standard		Secondary Standard
		Federal	Virginia	
CO	8-hour ^a	9 ppm (10 mg/m ³)	Same	None
	1-hour ^b	35 ppm (40 mg/m ³)	Same	None
Pb	Rolling 3-month average ^b	0.15 µg/m ³ ^c	Same	Same as Primary
NO ₂	Annual ^d	53 ppb ^e	Same	Same as Primary
	1-hour ^f	100 ppb	Same	None
PM ₁₀	24-hour ^g	150 µg/m ³	Same	Same as Primary
PM _{2.5}	Annual ^h	12.0 µg/m ³	Same	15 µg/m ³
	24-hour ^f	35 µg/m ³	Same	Same as Primary
O ₃ ⁱ	8-hour	0.070 ppm ^j	Same	Same as Primary
SO ₂	Annual	0.030 ppm	Same	None
	1-hour ^k	75 ppb ^k	Same	None
	3-hour ^l	--	Same	0.5 ppm
	24-hour	0.14 ppm	Same	None

Sources: USEPA 2019a, VDEQ 2019b.

Notes: Parenthetical values are approximate equivalent concentrations.

a. Not to be exceeded more than once per year.

b. Not to be exceeded.

c. Final rule signed 15 October 2008. The 1978 Pb standard (1.5 µg/m³ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except in areas designated nonattainment for the 1978 standard, that standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved. EPA designated areas for the new 2008 standard on 8 November 2011.

d. Annual mean.

e. The official level of the annual NO₂ standard is 0.053 ppm, equal to 53 ppb, which is shown here to provide a cleaner comparison to the 1-hour standard.

f. 98th percentile, averaged over 3 years.

g. Not to be exceeded more than once per year on average over 3 years.

h. Annual mean averaged over 3 years. Standard proposed by EPA to be reduced to between 12 and 13 µg/m³.

i. The 1-hour O₃ standard was revoked federally in April 2009.

j. Annual fourth highest daily maximum 8-hour concentration, averaged over 3 years. The 8-hour standard was lowered from 0.075 ppm to 0.070 ppm in October 2015, effective December 2015.

k. 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years.

l. Final rule signed 2 June 2010. The 1971 annual (0.3 ppm) and 24-hour (0.14 ppm) SO₂ standards were revoked in that same rulemaking. However, these standards remain in effect until 1 year after an area is designated for the 2010 standard, except in areas designated as nonattainment for the 1971 standards, where those standards remain in effect until implementation plans to attain or maintain the 2010 standard are approved. EPA originally designated areas for the new 2010 standard on 4 October 2013, with a second and third set of designations effective 12 September 2016 and 9 April 2018, respectively.

µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; ppb = parts per billion.

3.3.1 Attainment versus Nonattainment

EPA classifies the air quality in an Air Quality Control Region (AQCR), or in subareas of an AQCR (e.g., counties), according to whether the concentrations of criteria pollutants in ambient air exceed the NAAQS. Areas within each AQCR are, therefore, designated as either “attainment,” “nonattainment,” “maintenance,” or “unclassified” areas for each of the seven criteria pollutants:

- Attainment area—The air quality within the area is better than the NAAQS.
- Nonattainment area—Criteria pollutant levels exceed NAAQS.
- Maintenance area—The area was previously designated as a nonattainment area but is now in attainment.

- Unclassified area—There is not enough information to appropriately classify the area, so it is considered an attainment area.

Hampton City, in which JBLE-Langley is located, is designated as an Orphan Maintenance Area for O₃ standards (USEPA 2019b).

3.3.2 General Conformity

The federal General Conformity rule (40 CFR Part 93) under the CAA applies to federal actions in nonattainment or maintenance areas. The General Conformity rule requires that a subject federal action must meet the requirements of a State Implementation Plan (SIP) or Federal Implementation Plan. More specifically, CAA conformity is ensured when a federal action does not cause a new violation of the NAAQS; contribute to an increase in the frequency or severity of a violation of NAAQS; or delay the timely attainment of any NAAQS, interim progress milestones, or other milestone toward achieving compliance with the NAAQS.

3.3.3 Greenhouse Gas Emissions and Climate Change

Greenhouse gases (GHGs) are gaseous compounds that trap heat in the atmosphere. The most common GHGs emitted from human activities are carbon dioxide (CO₂), methane, and nitrous oxide. GHG emissions result from the operation of buildings and equipment that use natural gas or diesel fuel. Additional GHG emissions are generated from vehicle use. Indirectly, purchased electricity results in GHG emissions generated during energy production. Draft guidance from the CEQ, dated 21 June 2019, recommends that federal agencies consider both the potential impacts of a proposed action on climate change, as indicated by its estimated GHG emissions if they can be easily or practically estimated with reasonable accuracy (CEQ 2019). CEQ guidance recommends that agencies consider 27,563 tons (25,000 metric tons) of carbon dioxide equivalent (CO₂e) emissions on an annual basis as a reference point below which a quantitative analysis of GHG is not recommended (CEQ 2014). With JBLE-Langley being in a maintenance area, General Conformity will apply to the proposed activities if the proposed actions are estimated to produce 27,563 tons of CO₂e annually. All GHG emissions at JBLE-Langley fall under the Stationary Source Permit levels and the base continues to be exempt from mandatory EPA GHG reporting (Table 3-3).

Table 3-3. JBLE-Langley State Operating Permit Limits and Annual Emissions

Pollutant	Permit Limits (tons)	2016 Annual Emissions (tons) ^a
PM ₁₀	16.0	1.12
SO ₂	23.4	0.73
NO _x	98.0	15.05
CO	69.4	8.42
VOCs	32.9	6.34

Notes: VOC = volatile organic compounds.

^a VDEQ 2016 Annual Point Source Criteria Pollutant Emission Inventory Data.

3.4 WATER RESOURCES

Water resources for this EA include groundwater, surface water, stormwater drainage, wetlands, floodplains, and coastal zone management. Groundwater and surface water resources are protected by federal and state laws and regulations, including CWA sections 401, 402, and

303(d); the SDWA; section 438 of the EISA; and EPA's National Pollutant Discharge Elimination System (NPDES), administered by VDEQ.

The Virginia Stormwater Management Program (VSMP) regulations (Title 9 of the Virginia Administrative Code [VAC] Chapter 25-870), administered by the VDEQ, require that construction and land development activities incorporate measures to protect aquatic resources from the effects of increased stormwater runoff and nonpoint source pollution. The VSMP also requires a Stormwater Pollution Prevention Plan (SWPPP) and a VDEQ permit prior to any land-disturbing activity of 1 acre or more (JBLE-Langley 2016).

3.4.1 Wetlands

EO 11990 directs federal agencies to avoid, to the maximum extent possible, the long- and short-term adverse impacts associated with the destruction or modification of wetlands as well as direct or indirect support of new construction in wetlands whenever there is a practicable alternative. Under section 404 of the CWA, USACE is responsible for making jurisdictional wetland determinations and issuing permits for construction in wetlands. As defined by USACE and EPA, wetlands are:

Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

USACE defines a federal jurisdictional wetland as a wetland that is adjacent to a navigable waterway, significant nexus to a navigable waterway, or wetland that directly abuts a tributary of a non-navigable waterway that are relatively permanent. Types of wetlands are described in the 1987 *Corps of Engineers Wetlands Delineation Manual* (USACE 1987).

The Commonwealth of Virginia also regulates impacts to state waters, including wetlands, under the Virginia Water Protection Permit Program. This program is administered by VDEQ's Division of Water Quality, Office of Wetlands and Water Protection/Compliance. Activities requiring a permit include dredging, filling, and discharging any pollutant into or adjacent to surface waters, or otherwise altering the physical, chemical, or biological properties of surface waters; excavating in wetlands; or conducting the following activities in a wetland: (1) new activities to cause drainage that significantly alters or degrades existing wetland acreage or functions, (2) filling or dumping, (3) permanent flooding or impounding, or (4) new activities that cause significant alteration or degradation of existing wetland acreage or functions. Federal, state, and local wetland construction permits are required for any construction within wetlands and coastal zone management areas before commencing work on any proposed construction project.

Jurisdictional wetlands at JBLE-Langley encompass approximately 630 acres, of which about 460 acres are nonfreshwater estuarine wetlands. Salt and freshwater marshes of the Northwest and Southwest branches of the Back River, New Market Creek, Brick Kiln Creek, Tabbs Creek, and Tide Mill Creek surround the base on three sides. Most inland freshwater wetlands on the base have been filled, drained to ditches, or converted into golf course features. Most wetlands at JBLE-Langley are tidal, estuarine wetlands at the northern boundary of the base along the Northwest Branch of the Back River. Freshwater wetlands on base include palustrine forested, emergent, and scrub-shrub wetlands. Palustrine forest and scrub-shrub wetlands are in low-lying upland areas with nutrient-poor sandy soils and are dominated by bottomland hardwood trees and shrubs. The flight line area has many isolated palustrine emergent wetland areas (JBLE-Langley 2014).

3.4.2 Floodplains

EO 11988 requires federal agencies to avoid to the maximum 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. Each federal agency is to act to reduce the risk of flood loss; to minimize the impact of floods on human safety, health, and welfare; and to restore and preserve the natural and beneficial values served by floodplains. To comply with the EO for projects that could affect floodplains, agencies are to (1) determine whether a proposed action is in the base floodplain; (2) conduct early public review, including public notice; (3) identify and evaluate practicable alternatives to locating in the base floodplain, including alternative sites outside of the floodplain; (4) identify impacts of the proposed action; and (5) if impacts cannot be avoided, develop measures to minimize the impacts and restore and preserve the floodplain, as appropriate. The Federal Emergency Management Agency (FEMA) oversees and regulates floodplain management. Regulatory floodplains are delineated in FEMA Flood Insurance Rate Maps.

Most of JBLE-Langley lies within the 100-year floodplain (Figure 3-2). The base occasionally has severe flooding with some strong nor'easters and hurricanes. Flood-prone areas on the base include any land below 9 ft mean sea level, along the base's perimeter, and adjacent to water bodies (JBLE-Langley 2016).

3.4.3 Coastal Zone

The coastal zone includes lands governed by the Virginia Coastal Resources Management Program (VCRMP), pursuant to the federal Coastal Zone Management Act (CZMA) of 1972. The CZMA states that:

federal agency activity within or outside the coastal zone that affects land, water use, or natural resources of the coastal zone shall be carried out in a manner consistent with approved state management programs (16 U.S.C. 1456(c)(1)(A)).

The VCRMP outlines land and water use programs within Virginia's coastal zone. The Chesapeake Bay Preservation Act (Title 62.1 of the Code of Virginia § 44.15:67 *et seq.*), adopted by the General Assembly in 1988, provides for the protection and improvement of water quality of the Chesapeake Bay, its tributaries, and other state waters by minimizing the effects of human activity upon these waters (JBLE-Langley 2016). The VDEQ Office of Local Government Programs administers the Chesapeake Bay Preservation Act and associated regulations. Each locality must adopt a program based on the Act and regulations.

All of JBLE-Langley is within Virginia's coastal zone, as defined by the Virginia Coastal Zone Management Program (CZMP). Virginia's CZMP is federally approved and activities on the base with the potential to affect coastal resources must comply to the maximum extent practicable with the enforceable policies of the CZMP. Additionally, JBLE-Langley is in Tidewater Virginia, so the Chesapeake Bay Preservation Act applies. The Chesapeake Bay Preservation Act program for the City of Hampton includes designated Resource Protection Areas, which require a 100-ft buffer, and Resource Management Areas, which have general performance criteria for disturbance activities.

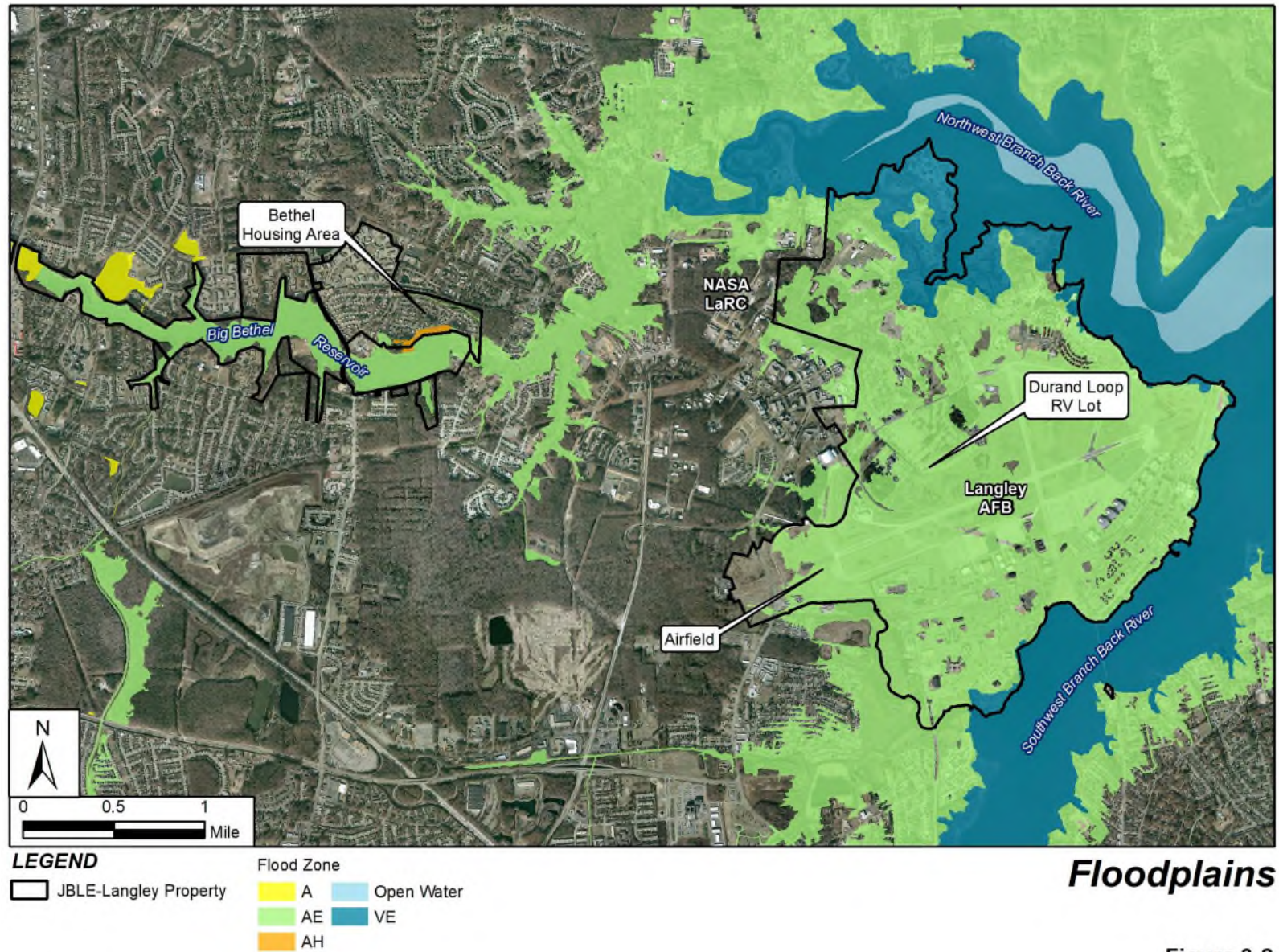


Figure 3-2

Source: JBLE-Langley GIS 2019; FEMA 2019.

3.4.4 Surface Waters and Groundwater

JBLE-Langley is on the lower Virginia Peninsula, between the Northwest Branch and Southwest Branch of the Back River, a tributary of the Chesapeake Bay. The land occupied by the installation lies entirely within the Lynnhaven-Poquoson watershed. The surface water surrounding JBLE-Langley is brackish to saline and occurs in an estuarine setting. The Back River, Brick Kiln Creek, New Market Creek, and Tabbs Creek provide drainage for the area. Two of the bodies of water are listed on the Virginia 2018 Impaired Waters 303(d) List: the lower reach of the Northwest Branch of the Back River is impaired for aquatic life and Brick Kiln, Creek is impaired for recreation because of *Enterococcus* bacteria (VDEQ 2019a). Total daily maximum loads for the Back River watershed were approved by EPA Region 3 in April 2014 (Hampton 2018; JBLE-Langley 2016). Fecal coliform is a primary contaminant of concern in the Back River, but no fecal coliform reduction is required for JBLE-Langley because wildlife is the major source in the area (JBLE-Langley 2016).

The groundwater structure in the area consists of the water-table aquifer, the Yorktown-Eastover Aquifer, and the Chickahominy Point Aquifer (JBLE-Langley 2016).

3.4.5 Stormwater Drainage

JBLE-Langley is serviced by a stormwater drainage system of pipes, box culverts, and open ditches that discharges to the Back River and its tributaries: Tide Mill Creek, Brick Kiln Creek, and Tabbs Creek. Surface water also drains directly to these water bodies. Because of the flat relief of the area, standing water accumulates during heavy storm events. VDEQ has NPDES permitting authority under the Virginia Pollutant Discharge Elimination System (VPDES). JBLE-Langley is under VPDES Industrial Stormwater Permit Number VA0025216 (expires 31 August 2020). JBLE-Langley coordinates with VDEQ if a permit modification is needed to implement any proposed base project.

3.5 BIOLOGICAL RESOURCES

Biological and natural resources include native or naturalized plants and animals and the habitats in which they live, including vegetation; wildlife; and threatened, endangered, and sensitive species in a given area. Threatened, endangered, and sensitive species include plant and animal species listed and proposed for listing by the U.S. Fish and Wildlife Service (USFWS) under the ESA and by state natural resources agencies. The ESA protects endangered and threatened plant and animal species and designated critical habitats. The Virginia Department of Agriculture and Consumer Services, Virginia Department of Game and Inland Fisheries, and Virginia Department of Conservation and Recreation (VDCR) cooperate to provide protection for Virginia's threatened and endangered species. Special status species also include bird species protected under the federal MBTA and Bald and Golden Eagle Protection Act (BGEPA).

3.5.1 Vegetation

JBLE-Langley is in the Mid-Atlantic Coastal Plain in the Outer Coastal Plain Mixed Forest Province (JBLE 2019). The historic vegetative cover was predominantly pine (*Pinus* sp.), oaks (*Quercus* spp.), and other hardwoods (i.e., tupelo (*Nyssa* sp.) and maple (*Acer* sp.). The land was cleared for farming after the first European colonists arrived. Most of the natural vegetation in the vicinity has been lost or modified as a result of urbanization and establishment of the installation in 1916. The tidal wetlands along the shore of the Main Base are the only remaining significant natural areas on JBLE-Langley.

Most of the Main Base consists of managed lawns, landscaped areas, and industrialized areas with buildings, structures, and pavement. Approximately 230 acres of the Main Base, mostly in the northwestern portion, is forested with pines and hardwoods characteristic of old field succession and growth since federal acquisition. The Bethel Housing Area is surrounded by an urban environment with highly developed turf lawns and ornamental shrubbery. The stormwater ditch along the Bethel Housing Area has mowed and maintained grasses and low, shrubby vegetation. The forest around Big Bethel Reservoir and Wythe Creek supports mature bottomland hardwood trees and associated understory vegetation. Invasive species (e.g., common reed [*Phragmites australis*], privet [*Ligustrum* spp.], and Japanese stiltgrass [*Microstegium vimineum*]) are present in the understory of most forests on JBLE-Langley (JBLE 2019).

Developed areas on JBLE-Langley are primarily paved surfaces or turf grass. Vegetation is actively modified to prevent wildlife hazard attractants on the Main Base and to reduce the risk of BASH. The BASH Plan is designed to minimize aircraft exposure to potentially hazardous wildlife strikes during airfield and flying operations at JBLE-Langley (JBLE 2017). The goal of vegetation management is to make the environment uniform, in accordance with AFI 91-202, the Air Force Mishap Prevention Program, and unattractive to the species considered the greatest hazard to aviation.

3.5.2 Wildlife

The proximity of JBLE-Langley to the Chesapeake Bay and the landward extent of the Atlantic Flyway supports an abundance of wildlife in the area. At least 150 species of breeding, migratory, and overwintering birds use the proposed action areas. The airfield wetlands attract large flocks of blackbirds, grackles, and starlings in addition to various species of waterbirds. The shoreline and marshes at JBLE-Langley provide abundant habitat for waterfowl, gulls, terns, shorebirds, and raptors such as osprey (*Pandion haliaetus*) and bald eagle (*Haliaeetus leucocephalus*). One osprey nest was located on the Main Base in 2018 but failed as a result of raccoon predation. There are no documented osprey nests currently on JBLE-Langley. The osprey is protected under the MBTA. Bald eagle nesting has occurred at Big Bethel Reservoir and on the Main Base. A bald eagle nest was documented on the north end of the forested area on the Main Base in 2007 and has been active each year since. An eagle nest at Big Bethel Reservoir was first established in 2005 and was last checked in 2016 (CCB 2019). The once-endangered bald eagle was downgraded to threatened in 1995, then delisted by the USFWS in 2007 based on recovery success. Bald eagles are protected under the MBTA and the BGEPA.

Although the Virginia Department of Game and Inland Fisheries lists more than 500 wildlife species likely to occur in the area (VDGIF 2019), on JBLE-Langley, they are likely either habitat generalists or very tolerant of human disturbance (JBLE 2019).

Native mammals around JBLE-Langley include white-tailed deer (*Odocoileus virginianus*), raccoon (*Procyon lotor*), coyote (*Canis latrans*), Virginia opossum (*Didelphis virginiana*), eastern cottontail (*Sylvilagus floridanus*), meadow vole (*Microtus pennsylvanicus*), and various other species of small rodents. JBLE-Langley and adjacent lands support an annual population of approximately 200–250 deer. At least seven bat species were confirmed to be present on JBLE-Langley in 2017 and 2018. The 2019 Integrated Natural Resources Management Plan provides a summary of the fish and invertebrates in the estuarine waters around the Main Base. At least 11 fish species occur in waters near the Bethel Housing Area. Shad attempt to spawn in Brick Kiln Creek annually, which has resulted in fish mortality from blocked fish passage at lower Big Bethel Dam and low flow conditions. JBLE-Langley supports 25 species of reptiles and amphibians, including eight species of frogs, two species of toads, one species of salamander, five species of snakes, seven species of turtles, and two species of lizards (JBLE 2019).

3.5.3 Threatened and Endangered Species

No known federal or state threatened or endangered species, other than the now delisted bald eagle, were documented on JBLE-Langley prior to 2016. Listed bat species, however, have been preliminarily detected via acoustic recording. Further investigations are ongoing to confirm species presence.

Federally listed species. The USFWS's Information for Planning and Conservation (IPaC) was used as a planning tool for the environmental analysis. An IPaC Trust Resource Report was generated for an area encompassing the proposed actions (USFWS 2019a). The report listed one species as endangered under the ESA that potentially occurs in the area, no designated critical habitat, and 25 migratory birds. Migratory birds that potentially occur in the proposed action areas include eight passerines (perching birds), four waterbirds, 11 shorebirds, and two raptors.

The northern long-eared bat (NLEB) (*Myotis septentrionalis*) is federally threatened wherever it is found. The NLEB is found across much of the eastern and north-central United States and all Canadian provinces from the Atlantic Coast west to the southern Northwest Territories and eastern British Columbia. The species' range covers 37 states and includes Hampton, Virginia. The USFWS has not designated critical habitat. During summer, NLEBs roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees. They also use caves and mines and have been found, although rarely, roosting in structures like barns and sheds. NLEBs spend winter hibernating in caves and mines called "hibernacula" (USFWS 2019b).

State-listed species. The VDCR, Natural Heritage Program lists six species as threatened or endangered in Hampton, Virginia (VDCR 2019).

- The range of Mabee's salamander (*Ambystoma mabeei*) includes Virginia, North Carolina, and South Carolina. In Virginia, the species breeds in fish-free ponds within bottomland hardwood- pine forests. Suitable habitat occurs in the proposed action areas.
- The range of the piping plover (*Charadrius melodus*) covers most of Canada and the United States. On the Atlantic Coast, the species breeds mainly on gently sloping foredunes and blowout areas behind primary dunes of sandy coastal beaches. Foraging habitat includes ocean beaches and intertidal flats. No suitable habitat occurs in the proposed action areas.
- The range of the gull-billed tern (*Gelochelidon nilotica*) includes almost all U.S. coastal states from California to New York. Nesting and foraging habitats include sandy barrier islands, beaches, sandy shores, lagoons, and marshes. Suitable habitat occurs in the proposed action areas.
- The range of the northeastern beach tiger beetle (*Cicindela dorsalis dorsalis*) includes about 40 scattered areas along the Chesapeake Bay. Habitat includes from the foredunes to the high-tide line on ocean and bay beaches. No suitable habitat occurs in the proposed action areas.
- The range of the Atlantic sturgeon (*Acipenser oxyrinchus*) includes the Atlantic Ocean and coast and major estuarine drainages from Labrador to northeastern Florida. Adults migrate between freshwater spawning areas and the Atlantic Ocean. No suitable habitat occurs in the proposed action areas.
- The range of the canebrake rattlesnake (*Crotalus horridus*) includes the coastal plain of southeastern Virginia. Habitat includes hardwoods, hardwood-pine forests, and the ridges and glades of swampy areas. Suitable habitat occurs in the proposed action areas.

Other species could occur on the base but have not been observed during species surveys. Table 3-4 lists Federal- and state-listed species with the potential to occur on JBLE-Langley and notes whether each species has been observed on the base.

Table 3-4. Federal- and State-Listed Species for Hampton, Virginia

Common Name	Scientific Name	Federal Status	State Status	Observed on JBLE? (Year)
Atlantic sturgeon	<i>Acipenser oxyrinchus</i>	Endangered	Endangered	No
Barking treefrog	<i>Hyla gratiosa</i>	None	Threatened	No
Canebrake rattlesnake	<i>Crotalus horridus</i>	None	Endangered	No
Eastern black rail	<i>Laterallus jamaicensis</i> <i>ssp. jamaicensis</i>	Proposed Threatened	Endangered	No
Green sea turtle	<i>Chelonia mydas</i>	Threatened	Threatened	No
Gull-billed tern	<i>Gelochelidon nilotica</i>	None	Threatened	Yes (2014)
Kemp's (= Atlantic) Ridley sea turtle	<i>Lepidochelys kempii</i>	Endangered	Endangered	No
Leatherback sea turtle	<i>Dermochelys coriacea</i>	Endangered	Endangered	No
Loggerhead shrike	<i>Lanius ludovicianus</i>	Sensitive	Threatened	No
Loggerhead sea turtle	<i>Caretta caretta</i>	Threatened	Threatened	No
Mabee's salamander	<i>Ambystoma mabeei</i>	None	Threatened	No
Northeastern beach tiger beetle	<i>Cicindela dorsalis</i> <i>dorsalis</i>	Threatened	Threatened	No
Northern long-eared bat	<i>Myotis septentrionalis</i>	Threatened	Threatened	Preliminary observation needs confirmation
Peregrine falcon	<i>Falco peregrinus</i>	None	Threatened	No
Piping plover	<i>Charadrius melodus</i>	Threatened	Threatened	No
Red-cockaded woodpecker	<i>Picoides</i> [= <i>Dendrocopos</i>] <i>borealis</i>	Endangered	Endangered	No
Shortnose sturgeon	<i>Acipenser</i> <i>brevirostrum</i>	Endangered	Endangered	No
Upland sandpiper	<i>Bartramia longicauda</i>	Not Listed	Threatened	No

3.6 GEOLOGY AND SOILS

The ROI to analyze -potential geology- and soil-related impacts includes the proposed project areas and a 100-ft radius. That expanse enables analysis of areas that are not expected to be affected during construction and operation but that might because of their proximity to the project areas.

The upper surface geology at JBLE-Langley consists of “recent deposits,” which consist of alluvium (silt, sand, and clay), marsh sediment (peat, silt, sand, and clay with organic matter), and sand (beach and dune sand occurring as a tidal mud flat). They are Coastal Plain deposits that extend from the surface to a depth of 774 ft (JBLE-Langley 2014).

3.6.1 Soils

Soils in this region are mostly unconsolidated fluvial, marine, and estuarine deposits underlain by beach sands, sandy clays, and gravels from the Tabb and Lynnhaven formations. Land moving and filling activities at JBLE-Langley have altered soil profiles to the extent that site soil profiles do not concur with local soil surveys from adjacent counties (JBLE-Langley 2016). Table 3-5 identifies soils of the area encompassing the proposed project locations.

- **Chickahominy-Urban land complex, 0–2 percent slopes.** This soil type is a mix of typically 80 percent Chickahominy and similar soils and 15 percent urban land (described below) (NRCS 2019). It is typically found on stream terraces. This soil type is poorly drained and produces a lot of runoff. The depth to a restrictive feature (e.g., bedrock) is more than 80 inches, but the depth to the water table is only about 0–6 inches. Flooding and ponding are generally not an issue on this soil. This soil type is not classified as prime farmland (see section 3.6.2).
- **Lawnes loam, 0–1 percent slopes, very frequently flooded.** This soil type is comprised of 80 percent Lawnes loam and similar soils and 3 percent minor components (NRCS 2019). It is typically found on tidal flats. This soil type is poorly drained but produces very little runoff. The depth to a restrictive feature (e.g., bedrock) is more than 80 inches, but the water table is generally at the surface. Flooding and ponding are frequent on the soil. This soil type is not classified as prime farmland (see section 3.6.2).
- **Udorthents-Dumps complex.** This soil type is typically 50 percent Udorthents and similar soils, 25 percent Dumps, and 8 percent minor components (NRCS 2019). The depth to a restrictive feature (e.g., bedrock) and to the water table in this soil is more than 80 inches. Flooding and ponding are not issues on the soil. This soil type is not classified as prime farmland (see section 3.6.2).
- **Urban land.** This soil type is typically 85 percent Urban land and 2 percent minor components (NRCS 2019). It produces a lot of runoff. The depth to the water table in this soil is 24–79 inches. This soil type is not classified as prime farmland (see section 3.6.2).
- **Dragston fine sandy loam.** This soil type consists of 85 percent Dragston and similar soils and 6 percent minor components (NRCS 2019). It is found on stream terraces. It has a depth to a restrictive layer (e.g., bedrock) of more than 80 inches. It is somewhat poorly drained but does not produce a lot of runoff. The depth to the water table is about 12–30 inches, but it does not flood or pond. It is considered prime farmland if drained.
- **Tomotley fine sandy loam.** This soil type consists of 80 percent Tomotley and similar soils and 3 percent minor components (NRCS 2019). It is found on marine terraces. It has a depth to a restrictive layer (e.g., bedrock) of more than 80 inches. It is poorly drained but produces very little runoff. The depth to the water table is less than 12 inches, but it does not flood or pond. It is considered prime farmland if drained.

3.6.2 Prime Farmland

The Farmland Policy Protection Act (FPPA)—a subtitle of the Agriculture and Food Act of 1981 (PL 97-98)—is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. The U.S. Department of Agriculture’s Natural Resources Conservation Service classifies soil types as prime farmland, not prime farmland, or prime farmland if altered in some way (e.g., drained). Farmland subject to FPPA requirements does not have to be used currently for cropland; it can be forest land, pastureland, cropland, or land used for another use, but not water or urban built-up land. Of the six soil types on the project footprints, five are classified as “not prime farmland” and the Tomotley fine sandy loam and Dragston fine sandy loam (at the Bethel Housing ditch site) is classified as “prime

Table 3-5. Soils of the Proposed Project Areas

Map Unit Symbol	Map Unit Name	Approximate Acres in Project Area	Percent of Project Area (%)
Airfield Storm Drainage			
8	Chickahominy-Urban land complex, 0–2 percent slopes	77	8
13	Lawnes loam, 0–1 percent slopes, very frequently flooded	7	1
26	Udorthents-Dumps complex	684	76
27	Urban land	136	15
Totals for Airfield		904	100
RV Lot			
8	Chickahominy-Urban land complex, 0–2 percent slopes	6	90
26	Udorthents-Dumps complex	1	10
Totals for RV Lot		7	100
Bethel Housing Area Drainage Ditch			
13	Dragston fine sandy loam	2	11
33	Tomotley fine sandy loam	1	8
37	Urban land	12	81
Totals for Bethel Housing Area Drainage Ditch		15	100

farmland if drained.” Construction for national defense purposes, however, is an activity not subject to the FPPA.

3.7 HAZARDOUS MATERIALS AND WASTE

The CERCLA, as amended by the Superfund Amendments and Reauthorization Act (SARA) and the Toxic Substances Control Act, defines “hazardous materials,” or HAZMAT, as any substance with physical properties of ignitability, corrosivity, reactivity, or toxicity that might cause an increase in mortality, serious irreversible illness, or incapacitating reversible illness, or that might pose a substantial threat to human health or the environment. The Occupational Safety and Health Administration (OSHA) is responsible for enforcement and implementation of federal laws and regulations pertaining to worker health and safety under 29 CFR Part 1910. OSHA also is responsible for regulating HAZMAT in the workplace and ensuring appropriate training in their handling (JBLE-Langley 2019).

The Solid Waste Disposal Act as amended by the RCRA, which was further amended by the Hazardous and Solid Waste Amendments, defines hazardous wastes. “Hazardous waste” is defined as any solid, liquid, contained gaseous, or semisolid waste or any combination of wastes that pose a substantial present or potential hazard to human health or the environment. In general, both HAZMAT and hazardous wastes include substances that, because of their quantity, concentration, physical, chemical, or infectious characteristics, might present substantial danger to public health and welfare or the environment when released or otherwise improperly managed (JBLE-Langley 2019).

AFI 32-7086, *Hazardous Materials Management*, establishes procedures and standards that govern management of HAZMAT throughout the Air Force. It applies to all Air Force personnel who authorize, procure, issue, use, or dispose of HAZMAT and to those who manage, monitor, or track any of those activities. AFI 32-7042 sets forth procedures for managing hazardous waste and is the driver for the development of the JBLE-Langley Hazardous Waste Management Plan.

The Environmental Restoration Program (ERP) initiated in 1980, a subcomponent of the Defense ERP (formerly the Installation Restoration Program [IRP]) that became law under SARA, requires DoD installations to identify, investigate, and clean up hazardous waste disposal or release sites. Remedial activities for ERP sites follow the Hazardous and Solid Waste Amendments of 1984 under the RCRA Corrective Action Program and CERCLA. The ERP provides a uniform, thorough methodology to evaluate past disposal sites, control the migration of contaminants, minimize potential hazards to human health and the environment, and clean up contamination through a series of stages until it is decided that no further remedial action is warranted.

For the purposes of this EA, hazardous materials and wastes include managing HAZMAT and hazardous waste, and ERP sites within or abutting the proposed projects.

3.7.1 Hazardous Materials and Waste

The 633rd Civil Engineer Squadron (CES) Installation Management Flight has the overall responsibility for implementing the hazardous waste program at JBLE-Langley and is the lead for monitoring compliance with applicable federal, state, and local regulations. Operations at JBLE-Langley, including aircraft operations, require the use and storage of HAZMAT. Hazardous substances used at JBLE-Langley are primarily used in aircraft maintenance and training operations and include oil, Jet A fuel, diesel, gasoline, hydraulic fluid, paints, solvents, detergents, adhesives/sealants, lube oil, batteries, antifreeze, and deicing chemicals. Procurement of hazardous and toxic materials is controlled and tracked through the Hazardous Materials Pharmacy (HAZMART). HAZMART provides centralized management of the procurement, handling, storage, and issuing of HAZMAT and turn-in, recovery, reuse, or recycling of HAZMAT. It also ensures that only the smallest quantities of HAZMAT necessary to accomplish the mission are purchased and used (JBLE-Langley 2019).

The 633rd CES/CEIEC (*Environmental Compliance*) maintains the JBLE-Langley Hazardous Waste Management Plan in accordance with AFI 32-7086, AFI 32-7042, and AFI 23-502, *Recoverable and Unusable Liquid Petroleum Products*. The purpose of this plan is to provide base personnel with an organized program that allows for proper waste management and generated hazardous waste to be managed in compliance with all federal, state, and local laws and regulations. The plan sets base policy and assigns responsibilities to base personnel in order to protect public health and the environment from activities managing and generating hazardous wastes (JBLE-Langley 2019).

JBLE-Langley is a large-quantity hazardous waste generator. In accordance with the requirements outlined in the JBLE-Langley Hazardous Waste Management Plan, hazardous waste is properly segregated, stored, characterized, labeled, and packaged for collection at designated initial satellite accumulation points. Accumulated wastes gathered at a single designated 90-day Hazardous Waste Storage Area; analyzed, characterized, and prepared for shipment; and managed by the DLA Disposition Services in Norfolk, Virginia, which arranges for disposal through its contractors (JBLE-Langley 2019). A trained contractor transports the waste from the accumulation points to the 90-day Hazardous Waste Storage Area on JBLE-Langley, where it is processed for disposal before 90 days have elapsed. A licensed disposal contractor picks up the waste and transports it off-base for disposal in a licensed disposal facility.

3.7.2 Environmental Restoration Program Sites

JBLE-Langley's environmental cleanup program is managed under the DoD ERP. There are two cleanup subprograms under the ERP: The IRP and the Military Munitions Response Program (MMRP). There are 66 ERP sites at JBLE-Langley. Of those 66 sites, 54 have been closed or require no further action (NFA) and 12 are in long-term management. These sites have undergone various remedial activities, including remedial investigations (RIs), feasibility studies, remedial design, remedial action, and/or long-term management. Specific details on the ERP can be found in the JBLE-Langley ERP site summaries and online at <https://ar.afcec-cloud.af.mil/> (JBLE-Langley 2007).

ERP or MMRP sites within or close to the proposed projects are discussed in this section. They are ERP sites LF-01, LF-07, LF-15, SS-23, ST-26, ST-34, and ST-48 and MMRP Munitions Response Site (MRS) MU157. ERP Site ST-48 is in the Bethel Housing Area. Except for ST-48, the sites and their proximity to the proposed on-base projects are shown on Figure 3-3. The proximity of ST-48 to the Bethel Housing stormwater drainage improvement project is shown on Figure 3-4 (JBLE-Langley 2007).

Site LF-01 Abandoned Landfill, End of 26 Runway. Site LF-01 is an abandoned landfill approximately 4.4 acres and situated in the Runway 26 Clear Zone (north). This site, which is in long-term monitoring, was active between 1940 and 1950 and might have received small quantities of wood, concrete, ash, glass, and metal. The landfill was covered with a minimum of 2 ft of soil and surrounded by signs. Land-use control (LUC) objectives include preventing contact with waste material and groundwater by prohibiting unauthorized ground disturbance activities and residential use. Monitoring includes inspection of the vegetated soil cover to ensure integrity, verifying that the landfill signs are in place, and verifying that no unauthorized digging has occurred (JBLE-Langley 2016). Site LF-01 was included in a clear zone drainage system replacement project that was recently completed. The project eliminated ponding by adding additional soil cover, which directed water to the stormwater system. If not corrected, the ponding water would have been detrimental to the landfill cap.

A small portion of site LF-01 is situated within the proposed drainage and grading project area at the Runway 26 Clear Zone (south).

Site LF-07 Abandoned Landfill, Shellbank Area. Site LF-07 is an abandoned landfill approximately 8.8 acres east of the north branch of Tide Mill Creek and southwest of the intersection of Sweeney Boulevard and Elm Street in the south portion of the base. This site, which is in long-term monitoring, was active from 1943 to 1968 and was likely used for municipal-type refuse. However, materials such as waste oil and solvents in drums, lead-based paints, thinners, batteries, tires, fabrics, construction debris, sanitary wastewater treatment plant sludge, and fly ash from coal burning might have been deposited at this site (JBLE-Langley 2007). A 2010 Record of Decision (ROD) document required soil cover, drainage and erosion control, institutional controls, monitoring, revegetation, wetlands replacement, and NFA (USEPA n.d.).

Site LF-07 is close to the proposed drainage and grading project where drainage improvements near Sweeney Boulevard are proposed.

Site LF-15 Abandoned Landfill, Willoughby Point. Site LF-15 is an abandoned landfill covering approximately one-half acre east of Ward Road. This site was active from 1930 to 1940 and was used for the disposal of construction debris and old vehicles. Site LF-15 is a mostly grassy area, except for a paved jogging track and drainage ditch for JBLE-Langley outfall 05. The drainage ditch drains directly into the Back River. Site LF-15 is adjacent to the Back River, and during high tidal events, is entirely flooded. During normal tidal events, the drainage ditch becomes half



LEGEND

- Langley AFB Boundary
- Environmental Remediation Site
- Environmental Remediation Area
- MU157b Boundary

Source: JBLE-Langley GIS 2019. Note: MU157b boundary is approximate.

Environmental Remediation Sites- Langley AFB

Figure 3-3



LEGEND

- Langley AFB Boundary
- Environmental Remediation Site
- Stream Restoration Project Area

Environmental Remediation Sites- Bethel Housing Area

Figure 3-4

Source: JBLE-Langley GIS 2019. Stream restoration project area is approximate.

full during high tide and empty during low tide (JBLE-Langley 2007). A 2009 ROD required excavation with off-site disposal and wetlands replacement (USEPA n.d.).

Site LF-15 is situated immediately east of the proposed drainage and grading project within the Runway 26 Clear Zone (south).

Site SS-23, Former Coal Storage Area, Willoughby Point. Site SS-23 is a former coal storage area that covered about three-fifths of an acre at Willoughby Point in the west portion of the base. The site was used from 1917 to the early 1960s, when coal was the primary heating fuel at Langley AFB. Coal was unloaded from rail cars and stored inside a concrete-walled impoundment. The impoundment has since been demolished; only a portion of the concrete floor remains. Site SS-23 is flat and mostly covered with gravel and concrete. It was closed in 1997 (JBLE-Langley 2007).

Site SS-23 is immediately south of the proposed drainage and grading project near the Runway 26 Clear Zone (south).

Site ST-26, West Apron/Control Tower, Fuel Saturated Area. Site ST-26 includes several fuel-saturated areas in the south-central portion of the base that include the Control Tower Area, the Hot Pits Area, and Brown's Creek. The Control Tower Area was originally identified as Site SS-21 in 1981. After soil sampling and analysis was conducted, the site was recommended for NFA. The Control Tower Area is the area immediately surrounding building 381 and includes the pumping station (building 380) and the fire station (building 375). The Hot Pits Area is at the northern edge of the jet parking area, where jets are fueled and defueled. Brown's Creek is a tidal creek that originates near the Control Tower and flows directly into the Back River. Site ST-21 was closed in 1992, and contamination was addressed by remediation of Site ST-26 (JBLE-Langley 2007).

ST-26 is situated in the central portion of the airfield, where grading and drainage improvements are proposed.

Site ST-34, Large Aboveground JP-4 Tanks. Site ST-34 is a bulk fuel storage area near the Back River in the eastern portion of the base near Runway 26 Clear Zone (south). The site consists of six large aboveground storage tanks for JP-4. Site ST-34 was originally identified in 1989 when Langley AFB added several storage tank areas suspected of leakage to the ERP. Past investigations, consisting of monitoring well installation and groundwater sampling, have indicated little or no fuel contamination of groundwater. The site was closed in 1996 (JBLE-Langley 2007).

Site ST-34 is immediately south of the proposed drainage and grading project.

Site ST-48, Abandoned Fuel Tanks, Abandoned Bethel Manor Service Station. Site ST-48 is the site of a former gas station covering approximately one-tenth of an acre in Bethel Manor, the JBLE-Langley off-base housing complex west of the base. The site includes abandoned underground storage tanks (USTs) from the Capehart Service Station, which operated from 1964 to 1984. The site is now used as a fire station and medical clinic that serve Bethel Manor. A decision document that closed out site ST-48 was signed in 1999 with NFA required (JBLE-Langley 2007).

Site ST-48 is situated adjacent to the western end of the proposed Bethel Housing drainage improvement project near the intersection of First Avenue and Bobcat Drive.

Site MU 157, Historic Bombing Range. The Historic Bombing Range consists of three MRSS known as the Historic Bombing Range–Golf Course (MU157), Historic Bombing Range–Marsh

Area (MU157a), and Historic Bombing Range–Target Area (MU157b). Of the three sites, only MU157b is within the project area. The remaining sites are north of the project area.

MU157b occupies about 254 acres that include a combination of airfield, open space, service areas, an abandoned nine-hole golf course, and an active driving range. An RI report prepared in 2016 indicated that the former range was used from 1917 to 1945 as a World War I- and World War II-era range to train bombardiers, fighter pilots, and crews. Geophysical investigations associated with the RI covered about 124 acres of MRS MU157b. Investigations identified subsurface targets of which 2,290 were intrusively investigated and resulted in 12 targets being identified as munitions and explosives of concern (MEC) and 257 others as munitions debris.¹ The highest densities of MEC and munitions debris were found throughout the northern part of the former target area, primarily in the northwest, in the active driving range portion of the MRS. The RI also determined that munitions constituents (MC) did not pose an unacceptable risk to human health or the environment² ; however, if more MEC is identified, additional sampling for MC might be required. Based on the RI findings, completion of a feasibility study was recommended to evaluate potential remedial actions at MRS MU157b to reduce risk of human exposure to MEC (USACE 2016). Since the 2016 RI, subsequent surveys that have not been finalized will likely show that this area is clear of MEC. However, if intrusive activities such as excavation in the area are planned, on-site UXO support would be required when those activities are being conducted (David Jennings, JBLE-Langley, email, 10 December 2019).

The RV lot and the north-central portion of the airfield where drainage improvements are proposed are within MRS MU157b.

3.8 CULTURAL RESOURCES

In accordance with section 106 of the NHPA, federal agencies are required to consider the effects of their proposed actions on historic properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on those actions. The section 106 process seeks to accommodate historic preservation concerns while also accommodating the needs of federal action through consultation with the agency officials and other parties with an interest in the effects of the action on historic properties, commencing at the early stages of project planning. The goal of the consultation is to identify historic properties potentially affected by the action assess its effects, and seek ways to avoid, minimize, or mitigate any adverse effects on the properties.

Eleven archaeological studies have been conducted at JBLE-Langley and have identified 31 archaeological sites. Seven sites are recommended as eligible for listing on the NRHP and one requires further evaluation to determine its eligibility (JBLE-Langley 2016).

Architectural surveys at JBLE-Langley have identified an area encompassing the North Base Area and airfield areas as eligible for listing on the NRHP as the Langley Field Historic District. Langley Field Historic District resources (ca. 1917 to 1945) illustrate the evolution of construction within the Army Air Corps and are associated with the development of Langley Field, the Army Air Corps, and the National Advisory Committee on Aeronautics, NASA's

¹ MEC—Distinguishes specific categories of military munitions that could pose unique explosives safety risks: (A) unexploded ordnance (UXO), (B) discarded military munitions, or (C) munitions constituents present in high enough concentrations to pose an explosive hazard.

² MC—Any materials originating from UXO, discarded military munitions, or other military munitions, including explosive and non-explosive materials, and emission, degradation, or breakdown elements of such ordnance or munitions.

forerunner. There are 244 contributing properties in the district. Property types include aircraft operations facilities; administration, residential, and recreational facilities; wind tunnels; laboratories; runways; taxiways; road systems; and landscape features. Two individually eligible buildings are located outside the district.

Six NRHP-eligible facilities owned by NASA that contribute to the eligibility of the NASA LaRC Historic District are on JBLE-Langley. They were designated on the merit of their contributions to the aeronautics and space program between 1915 and 1972. Three separate areas of the JBLE-Langley property are part of the NASA LaRC Historic District, which is listed on the NRHP.

None of the proposed project sites have archaeological sites, historic structures, or NRHP-eligible facilities, though the eastern portion of the airfield, including some of the project sites, is within the Langley Field Historic District.

According to the JBLE-Langley 2018 Integrated Cultural Resources Management Plan, no traditional cultural resource properties or sacred sites have been identified at JBLE-Langley (USAF 2018). Federally recognized tribes associated with the base have been invited to identify traditional cultural properties in the project area. Correspondence will be included in the Final EA.

3.9 LAND USE

Land use comprises the natural condition or human-modified activities occurring at a location. Land uses are frequently regulated by management plans, policies, ordinances, and regulations that determine the types of activities that are allowable or provide protection for specially designated or environmentally sensitive areas.

JBLE-Langley comprises approximately 2,883 acres of developed and undeveloped land. There are currently 13 land-use categories on the installation. Developed land uses include administrative, aircraft operations and maintenance, airfield clearance, airfield pavement, community (commercial), community (service), housing (accompanied), housing (unaccompanied), industrial, and medical. Undeveloped land uses include open space, outdoor recreation, and water. Land uses on the base are grouped by function into geographic areas. For example, the northwest portion of the installation is dedicated primarily to open space and outdoor recreation, the northeastern and southeastern portions to residential areas, and the southwestern part to community services. The flight line, located in the center of the base, is dedicated to aircraft operations and maintenance (JBLE-Langley 2016). JBLE-Langley has plans to guide land use on the installation. Currently, the General Plan, a long-term planning document, is under revision to be republished as the JBLE Installation Development Plan.

3.10 INFRASTRUCTURE AND UTILITIES

The infrastructure system potentially affected by the proposed actions would be the transportation system. The proposed actions do not involve construction of permanent facilities that would create a long-term demand on any utility system. Construction associated with the proposed actions would create negligible short-term demands on utility systems, and it is anticipated that the utility system most affected in the short term would be the transportation system, with any additional demand on other utility systems being negligible. Therefore, the transportation system is described briefly below and utility systems are not discussed.

JBLE-Langley is located approximately 3 miles northeast of Interstate 64, which provides regional access to the installation. As such, the ROI for analysis of potential transportation

impacts is 3 miles. Roads that serve as access points include LaSalle Avenue (State Route 167), Armistead Avenue (State Route 134), and King Street (State Route 278). LaSalle Avenue is a four-lane road that provides access to the Main Gate and Visitor Center. Armistead Avenue is a four-lane road that provides access to the West Gate. King Street is a two-lane road that provides access to the King Street Gate. The NASA LaRC Durand Gate, in the north-central portion of the base, provides access for base civilian and active duty personnel. Traffic congestion primarily occurs at the Main and West gates during peak hours and on Sweeney Boulevard (JBLE-Langley 2016). Construction vehicles would access the installation via Armistead Avenue and the West Gate.

3.11 SAFETY AND OCCUPATIONAL HEALTH

Potential safety issues at JBLE-Langley include flight and airfield operations and maintenance, antiterrorism/force protection activities, and construction activities. Clearance and permission are required to enter or work in restricted areas associated with the airfield. Contractors working on construction projects on JBLE-Langley are responsible for complying with Air Force safety and OSHA regulations. They are required to conduct construction activities in a manner that does not pose any undue risk to construction workers or base personnel. Industrial hygiene programs address exposure to HAZMAT, use of personal protective equipment, and use and availability of material safety data sheets.

The presence of obstructions, abrupt grade changes, open ditches, and standing water on the airfield presents a risk of damage to aircraft and injury to Air Force personnel.

3.12 SOCIOECONOMIC RESOURCES

This section describes the economic and sociological environments of the ROI surrounding JBLE Langley. The ROI is a geographic area selected as the basis on which social and economic impacts of project alternatives are analyzed. The socioeconomic ROI for this project is the Virginia Beach-Norfolk-Newport News VA-NC Metropolitan Statistical Area, comprised of 17 cities and counties and locally known as Hampton Roads. For comparative purposes, socioeconomic data also is presented for the commonwealth of Virginia and the United States.

Population. The ROI's 2018 estimated population was 1,729,114, an increase of 5 percent over the 2010 population of 1,648,136. During the same time period, Virginia's and the United States' populations grew by 6 percent (U.S. Census Bureau 2010, 2019a). JBLE-Langley has more than 20,000 military and civilian personnel working on-base and serves a greater population of more than 145,000 active duty, guard and reserve, family members, civilians, contractors, and retirees that reside in Hampton Roads (Langley AFB 2019; U.S. DoD Military OneSource 2019).

Employment. The ROI's labor force increased 2 percent between 2010 and 2018, less than the 4 percent growth of the Virginia labor force and the 5 percent growth of United States labor force. The ROI's 2018 annual unemployment rate was 3.3 percent, slightly higher than the Virginia state unemployment rate of 3 percent but lower than the national unemployment rate of 3.9 percent. The national, state, and ROI unemployment rates all decreased between 2010 and 2018 (BLS 2019).

The top five ROI industries (based on employment by industry) were government and government enterprises (including federal military and civilian, state, and local employment); health care and social assistance; retail trade; accommodation and food services; and professional, scientific, and technical services. Together those industry sectors accounted for almost 60 percent of the ROI's total employment. The government and government enterprises sector accounted for the largest portion, accounting for 23 percent of the ROI's employment (BEA 2019). JBLE is part

of the government sector and is a major contributor to the regional economy. In 2018, the Air Force employed about 20,500 people (military and civilian) at the base, with an annual payroll of \$1.2 billion and \$169 million in local expenditures on operations and maintenance construction, utilities, and other goods and services. JBLE had a total economic impact of about \$2.9 billion in fiscal year 2018 (Langley AFB 2019).

Income. ROI income levels were lower than state income levels but close to national income levels. The ROI's per capita personal income was \$31,155, 86 percent of the Virginia state per capita personal income of \$36,268, but 99.9 percent of the national per capita personal income of \$31,177. The ROI's median household income of \$61,924 was 90 percent of the Virginia median household income of \$68,766 but 107 percent of the national median household income of \$57,652 (U.S. Census Bureau 2019b).

Housing. JBLE-Langley family housing is made up of five communities with a total of 1,430 housing units (single family, duplex, fourplex, and sixplex homes) (Langley Family Housing 2019). The JBLE-Langley Bethel Housing Area is adjacent to the stormwater drainage ditch proposed to be improved. The Air Force also has dormitories for unaccompanied personnel and temporary housing at the Langley Inns on JBLE-Langley (JBLE-Langley 2016).

The ROI has about 689,500 housing units with a median value of \$237,300, less than Virginia's median home value of \$255,800 but more than the United States' median value of \$193,500. The median gross rent in the ROI was \$1,126 dollars a month, less than the state average of \$1,166 but more than the national average of \$982. The median selected monthly owner costs for housing units with a mortgage were \$1,663 for the ROI, less than the state average of \$1,728 but more than the national average of \$1,515 (U.S. Census Bureau 2019b).

Recreation. JBLE-Langley has a variety of indoor and outdoor recreational opportunities on base. The commissary, the exchange, restaurants, a bowling center, a community center, a theater, a library, fitness centers, a park, and a marina are all located south of the airfield and the Eaglewood Golf Course is north of the airfield. Off-base, the Hampton Roads region has many recreational opportunities, including water-related recreational activities, historical sites (Colonial Williamsburg and Jamestown), the Busch Gardens amusement and water parks, community recreational fields and swimming pools, concert venues, theaters, and shopping.

3.13 ENVIRONMENTAL JUSTICE

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations*, was issued by President Clinton on 11 February 1994. The EO requires that federal agencies take into consideration disproportionately high and adverse human health or environmental effects of federal government decisions, policies, projects, and programs on minority and low-income populations and that the agencies identify alternatives that could mitigate those effects.

To identify potential environmental justice populations, researchers collected U.S. Census minority and poverty data on census tracts in the ROI. Census tracts are subdivisions of a county.³ Figure 3-5 shows the tracts that correspond to JBLE-Langley and the tracts that are contiguous with the boundaries of the base. A large portion of JBLE-Langley is within census tract 102, and

3 The U.S. Census Bureau defines "census tracts" as small, relatively permanent statistical subdivisions of a county or equivalent entity that are updated by local participants prior to each decennial census. The primary purpose of census tracts is to provide a stable set of geographic units for the presentation of statistical data. Census tracts generally have a population between 1,200 and 8,000.

most of the Bethel Housing Area is within census tract 502.04. The proposed project sites are within those census tracts.

CEQ guidance on environmental justice states that minority populations should be identified in areas in which either the minority population exceeds 50 percent or the minority population percentage is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (CEQ 1997). Analysts used the latter guidance for this project, identifying census tracts with minority population percentages exceeding those for Virginia, which has a lower threshold than the 50 percent threshold (i.e., 37 percent). Minority populations included in the census are identified as Black or African American, American Indian, Alaska Native, Asian, Native Hawaiian, Pacific Islander, Hispanic or Latino, or people of two or more races.

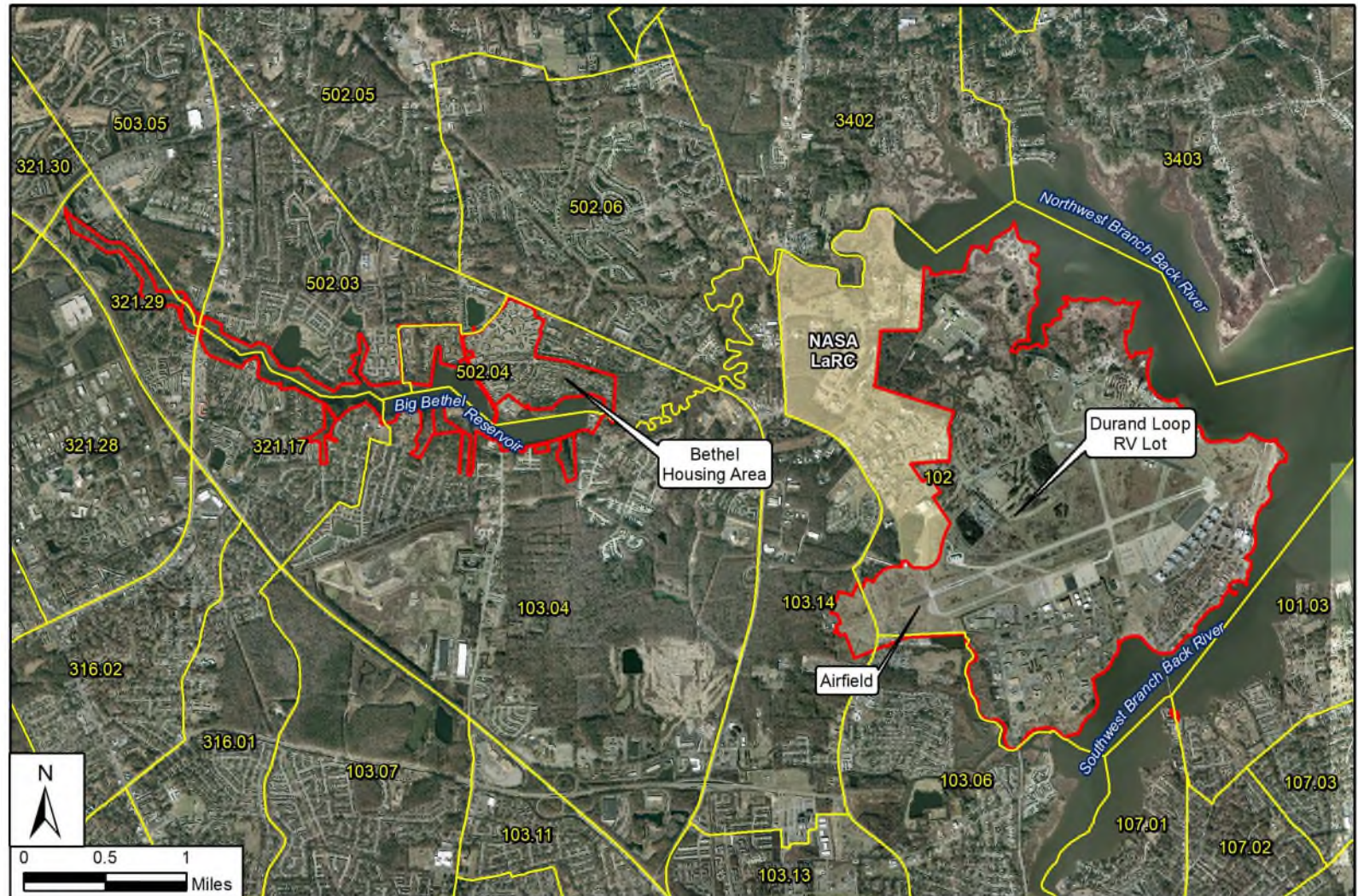
Poverty thresholds established by the U.S. Census Bureau are used to identify low-income populations (CEQ 1997). Per CEQ guidance, low-income populations in an affected area should be identified with the annual statistical poverty thresholds from Census Bureau reports on income and poverty. The Census Bureau reports poverty status as the number of people or families with income below a defined threshold level, defining the poverty threshold level as an annual income of \$12,784 or less for an individual and \$25,465 or less for a family of four (U.S. Census Bureau 2019c). The Census Bureau defines a “poverty area” as a census tract where 20 percent or more of the residents have incomes below the poverty threshold, and an “extreme poverty area” as one with 40 percent or more of the population below the poverty threshold (U.S. Census Bureau 1995).

Table 3-6 lists minority population and poverty statistics for the census tracts as well as for the ROI, Virginia, and the United States. Of the seven census tracts that include or border JBLE-Langley, six of them had a higher percentage of minority residents than Virginia, and four of the tracts had more than 50 percent minority residents (including tracts 102 and 502.04). Of the seven census tracts that include or border JBLE-Langley, one of the tracts (107.01, south of JBLE-Langley across the Southwest Branch of the Back River) had a percentage of the population in poverty higher than 20 percent.

Table 3-6. Minority and Low-Income Populations, 2013-2017 5-Year Estimates

Jurisdiction	Minority population (percent)	People below poverty level (percent)
ROI	45	12
Virginia	37	11
United States	39	15
Census Tracts		
101.03	66	5
102 (JBLE-Langley)	65	6
103.06	40	11
103.14	37	11
107.01	42	33
502.04 (includes JBLE-Langley Bethel Housing Area)	61	7
502.06	78	2

Source: U.S. Census Bureau 2019b.



LEGEND

- JBLE-Langley Property
- Census Tract

Census Tracts

Figure 3-5

Source: JBLE-Langley GIS 2019, U.S. Census 2019.

Protection of Children. On 21 April 1997, President Clinton issued EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*. This EO seeks to protect children from disproportionately incurring environmental health or safety risks. The EO recognizes that a growing body of scientific knowledge demonstrates that children might suffer disproportionately from environmental health and safety risks. These risks arise because children's bodily systems are not fully developed; children eat, drink, and breathe more in proportion to their body weight; their size and weight can diminish protection from standard safety features; and their behavior patterns can make them more susceptible to accidents. Based on these factors, President Clinton directed each federal agency to make it a high priority to identify and assess environmental health and safety risks that might disproportionately affect children. The President also directed each federal agency to ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health or safety risks.

The Air Force proposes to fully comply with EO 13045 by incorporating these concerns into the decision-making process supporting JBLE-Langley policies, programs, projects, and activities. In this regard, the USAF ensures that it would identify, disclose, and respond to potential adverse social and environmental effects on children in the area affected by a proposed action. Children are present at JBLE-Langley as residents and visitors (e.g., residing in on-base family housing or lodging, using recreational facilities, and at childcare facilities). Precautions are taken to ensure child safety through many means, including using fencing, limiting access to certain areas, and requiring adult supervision. The proposed Bethel Housing drainage improvement project is adjacent to JBLE-Langley Bethel Housing Area and off-base housing. There are no residential areas or facilities where children typically are present (e.g., schools, daycares, or playgrounds) near the other proposed action sites at the airfield or the RV storage lot.

3.14 VISUAL RESOURCES

Visual resources for this EA are defined as the natural and human aspects of land use that comprise the aesthetic qualities of an area. They include the natural environment such as trees, topography, and land structure, as well as any man-made structures that currently exist within the area. The importance of a change in visual character is influenced by social considerations, including public value placed on the resource, public awareness of the area, and general community concern for visual resources in the area (JBLE-Langley 2016).

The largest structures on-base are the aircraft operations and maintenance facilities in the southern portion of the base. NASA operates a facility complex that resembles a large industrial area along the northwestern boundary of the base. Older buildings such as the Albert Kahn-designed hangars give the base a character reflecting its history as an important airbase from the beginning of the aviation era.

Much of the vegetation on-base was planted at the time of the base's original construction about 100 years ago. Large oaks are the dominant species of trees in the Langley Field Historic District. Trees that exhibit unique and unusual size or appearance are a part of the historic character of the base. The Langley General Plan indicates visual resources are taken into consideration for all installation improvement projects (JBLE-Langley 2016).

The Bethel Housing Area stormwater drainage ditch has a mixed natural and suburban character dominated by pools of water, wetlands, and wetland vegetation flanked by residential housing behind fencing. In its current state, the natural character of the ditch is diminished by stagnant pools of water, degraded streambanks, and poor water quality and poor water flow.

SECTION 4.0

ENVIRONMENTAL CONSEQUENCES

Criteria used to determine potential environmental impacts of the proposed actions are described at the beginning of each resource area subsection. The significance of an action is measured in terms of context and intensity. The types and levels of effects are the following:

- Short-term or long-term impacts. Short-term impacts occur during the time required for construction or demolition activities. Long-term impacts are expected to be persistent after the completion of the construction or demolition activities.
- Negligible, minor, moderate, or significant impacts. These terms characterize the magnitude or intensity of impacts. Negligible impacts are perceptible but at a lower level of detection. Minor impacts are slight but detectable. Moderate impacts are apparent. Significant impacts meet the thresholds for significance set forth in CEQ regulations (40 CFR 1508.27). Significant impacts warrant more attention and effort in developing mitigation to fulfill the requirements set forth in NEPA.
- Adverse or beneficial impacts. Adverse impacts have unfavorable or undesirable outcomes on the environment. Beneficial impacts have positive outcomes.

4.1 AIRSPACE

Potential impacts of a proposed action on airspace are considered significant if the action would:

- Modify special use airspaces;
- Significantly increase flight operations within airspaces; or
- Modify airspace location, dimensions, or aircraft operational capacity.

4.1.1 Airfield Storm Drainage and Grading and Bethel Housing Drainage Improvement Projects

Proposed Actions. Long-term beneficial effects on airspace would be expected. These projects would be expected to improve JBLE-Langley airspace by decreasing the presence of wildlife in the base's immediate airspace. No significant effects on airspace would be expected.

No Action Alternative. No effects on airspace would occur. No changes to airspace would result under the no action alternative.

4.1.2 Recreational Vehicle Storage Lot Project

Proposed Action. No significant effects on airspace would be expected. Although adjacent to the airfield, the proposed RV storage lot would not penetrate any imaginary airfield surfaces.

No Action Alternative. No effects on airspace would occur. No changes to airspace would result under the no action alternative.

4.2 NOISE

Potential impacts of a proposed action on the noise environment are considered significant if the action would:

- Conflict with applicable federal, state, interstate, or local noise control regulations; or
- Result in continuous and long-term noise levels at 85 dB or above.

4.2.1 Airfield Storm Drainage and Grading and Recreational Vehicle Storage Lot Projects

Proposed Actions. Short-term, minor adverse effects on the noise environment would be expected. These projects would create construction noise that would end with the completion of the construction phase of each project. Each project would be conducted on or near the airfield, where aircraft flights are the major source of noise at JBLE-Langley. The project locations lie mostly within the base's 80-dB noise contour, so construction noise would contribute negligibly to the overall noise environment. No sensitive receptors would be adversely affected by construction noise from any of the projects.

No Action Alternative. No effects on the noise environment would occur. No changes to the noise environment would result under the no action alternative.

4.2.2 Bethel Housing Drainage Improvement Project

Proposed Action. Short-term, minor adverse effects on the noise environment would be expected. Construction noise would constitute an adverse effect on the surrounding residential noise environment, where traffic is the most noticeable consistent noise source. Basic noise best management practices (BMPs)—such as keeping equipment in good working order and operating primarily during normal working hours (Monday through Friday from 7 a.m. to 7 p.m.)—would be employed to minimize the adverse effects of the construction noise on the surrounding communities.

No Action Alternative. No effects on the noise environment would occur. No changes to the noise environment would result under the no action alternative.

4.3 AIR QUALITY

Potential impacts of a proposed action on air quality are considered significant if the action would:

- Increase ambient air pollution above any NAAQS;
- Contribute to an existing violation of any NAAQS;
- Interfere with or delay timely attainment of NAAQS;
- Expose people to hazardous air pollutants in large quantities; or
- Result in a substantial increase in the base's potential to emit GHG.

For this analysis, increases above baseline emissions were estimated for temporary emissions sources, primarily caused by construction activities associated with airfield drainage, RV parking lot construction, and drainage ditch bed repair. The Air Conformity Applicability Model (ACAM), developed by the Air Force Civil Engineering Center was used to estimate air emissions for the proposed action. A detailed ACAM output report can be found in appendix A.

4.3.1 Airfield Storm Drainage and Grading, Recreational Vehicle Storage Lot, and Bethel Housing Drainage Improvement Projects

Proposed Actions. Short-term, less-than-significant effects on air quality would be expected from implementing the proposed projects. Overall construction emissions from all four projects, assumed to occur over the same calendar year, would be expected to have the combined annualized emission shown in Table 4-1. Compared to Hampton City calendar year (CY) 2017 actual emissions (the most recent year available from the USEPA's National Emissions Inventory), the combined emissions total from the proposed actions account for less than 1

percent of local emissions, except for fugitive particulates, which could represent up to 13 percent of local air emissions. JBLE-Langley would comply with applicable Virginia air regulations, as applicable, including 9 VAC 5-50-60 et seq. (which addresses the abatement of visible emissions and fugitive dust emissions) and 9 VAC 5-130-10 et seq. (which addresses open burning).

As noted in section 3.3, JBLE-Langley is in the City of Hampton, Virginia ozone maintenance area, and as such emissions from federal projects are subject to General Conformity for pollutants affecting O₃ – both VOCs and NO_x – if applicable. Air emissions are expected to be generated only from temporary construction-related activities, as no new construction of permanent stationary air emissions sources is proposed. Emissions of volatile organic compounds and NO_x for the proposed actions do not exceed the General Conformity rule *de minimis* thresholds. Total emissions by calendar year for the proposed action are summarized in appendix A.

Table 4-1. Total Annual Emissions Increase for all Sites Alternative 1, Compared to Hampton City CY 2017 NEI Emissions Totals

Activity	Emissions (tpy)						De Minimis Threshold	Exceeds De Minimis Level?
	NO _x	VOC	CO	SO ₂	PM ₁₀	PM _{2.5}		
All Construction (CY 2020)	6.598	0.978	5.231	0.016	69.857	0.266	100 ^a	No
CY 2017 NEI Hampton City Emissions Totals	2,570	3,674	13,671	151	538	278	n/a	n/a
Construction Emissions as % of Hampton City Emissions	0.26%	0.03%	0.04%	0.01%	12.98%	0.1%	n/a	n/a

Note: tpy = tons per year; VOC = volatile organic compound.

^a De minimis thresholds for NO_x and VOC are both 100 tpy.

General Conformity. Annual emissions would be below the General Conformity rule *de minimis* thresholds and would not contribute to a violation of any federal, state, or local air regulations. Long-term impacts would be negligible.

Greenhouse Gases. Short-term GHG emissions (CO₂ only) from construction and construction-related activities are estimated to be well below the proposed reference point 27,563 tons per year of GHG and represent approximately 0.001 percent of Virginia's annual CO₂ emissions budget (Table 4-2) (DOE 2019). Because of the estimated emissions totals and short duration of each project, implementation of the proposed projects at JBLE-Langley would not be expected to have significant air quality impacts.

Table 4-2. Estimated GHG Emissions from Proposed Projects

Project	Estimated GHG (CO ₂ only) Emissions
Airfield storm drainage and grading	1,209 tpy
Recreational vehicle storage lot	147 tpy
Bethel Housing Drainage restoration	337 tpy

No Action Alternative. No effects on air quality would occur. Air emissions would remain at their current baseline levels, and there would be no impact on air quality.

4.4 WATER RESOURCES

Potential impacts of a proposed action on water resources are considered significant if the action would:

- Violate federal or state surface water protection laws;
- Constitute a substantial risk to aquatic animals and/or humans or contamination posing secondary health risks during the project life;
- Eliminate or sharply curtail existing aquatic life or human uses dependent on in-stream flows or water withdrawals during the project life;
- Place structures within a 100-year flood hazard area that violate federal, state, or local floodplain regulations; or
- Expose people or structures to a substantial risk of loss, injury, or death involving flooding, including flooding because of the failure of a levee or dam.

4.4.1 Airfield Storm Drainage and Grading and Recreational Vehicle Storage Lot Projects

Proposed Actions. No significant effects on water resources would be expected. The projects would be expected to contribute minor amounts of sediment to stormwater runoff and to nearby surface waters but use of BMPs as specified in construction permits and the projects' SWPPPs would ensure minimal impacts on water quality and aquatic life. Measures would be taken to prevent and contain spills of fuels, lubricants, or other pollutants into surface waters. Virginia Water Quality Standards would not be violated in any surface water because of project activities. The projects would be consistent with the enforceable policies of the VCRMP and the Chesapeake Bay Preservation Act. A coastal zone consistency determination is provided in appendix B.

Wetlands. The airfield storm drainage and grading project by design would result in a loss of wetlands on the airfield, and the USAF would comply with wetland mitigation requirements in permits for the project to ensure the impacts were below the level of significance. JBLE-Langley has applied for and received the following permits for the project:

- Virginia Water Protection Permit Number 17-0458; effective 1 October 2018 and expiring 20 September 2028; issued by the Virginia Department of Environmental Quality (VDEQ).
- U.S. Army Corps of Engineers (USACE) Permit Number NOA-2017-00574, in compliance with section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 403) and section 404 of the CWA (33 U.S.C. § 1344); effective 12 October 2018 and expiring 21 June 2028; issued by USACE, Norfolk District.

The project would impact nontidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow, and an adjacent buffer area 100 ft wide or more along both sides of the Back River. Therefore, compliance with the Chesapeake Bay Preservation Area (CBPA) Designation and Management Regulations (9 VAC 25-830) is required. JBLE-Langley has complied with state and local CBPA requirements by submitting a Water Quality Impact Assessment for review and approval by the Virginia DEQ.

The Air Force would compensate for permanent wetland impacts through the purchase of wetland credits from a Virginia DEQ-approved mitigation bank, consisting of 5.27 nontidal wetland credits and 1.36 tidal wetland credits for Phase II and 8.29 nontidal wetland credits for Phase III.

Wetlands would not be impacted by the recreational vehicle storage lot project.

Floodplains. No significant adverse impacts on floodplains would be expected from the projects. In accordance with EO 11988, JBLE-Langley has determined that the proposed projects would occur within the base floodplain. As shown in Figure 3.2, most of JBLE-Langley is within the FEMA base floodplain. The extremely limited area on the installation not within the floodplain has other development constraints, such as being within the munitions storage area or near the runway. Therefore, JBLE-Langley has no practicable alternative for the RV storage lot that would avoid all floodplain impacts or further minimize impacts on floodplains, meet mission requirements and installation layout constraints, and serve the purpose of the proposed project.

JBLE-Langley published a public notice in *The Daily Press* on December 20–21, 2019 informing the public of the potential of the proposed actions to affect wetlands and floodplains and soliciting public comment on them. There are no alternatives to conducting the airfield storm drainage and grading project or recreational vehicle storage lot project in a floodplain. One alternative location for the RV storage lot was identified during project planning, but that location is also within the base floodplain. The airfield storm drainage and grading project would not adversely affect the floodplain. To minimize the potential impacts of developing an RV storage lot in a floodplain area, the Air Force would elevate the level of the site above the base floodplain, thus reducing the risk of flood loss and minimizing the impact of floods on human safety, health, and welfare.

No Action Alternative. No effects on water resources would occur. No changes to water resources would result under the no action alternative.

4.4.2 Bethel Housing Drainage Improvement Project

Proposed Action. No significant effects on water resources would be expected. Soils along the ditch would be disturbed and the project would be expected to contribute minor amounts of sediment to stormwater runoff and to nearby surface waters. Water would be temporarily dammed or diverted during work on individual segments of the ditch to minimize water quality and aquatic life impacts. Long-term beneficial effects on water quality, wetlands, and aquatic life would be expected after completion of the project. Implementing the project could slightly alter the shape of the floodplain along the ditch, but the change would not place any structures or people at increased flood risk. The project would be consistent with the enforceable policies of the VCRMP and the Chesapeake Bay Preservation Act.

No Action Alternative. No effects on water resources would occur. No changes to water resources would result under the no action alternative.

4.5 BIOLOGICAL RESOURCES

Potential impacts of a proposed action on biological resources are considered significant if the action would:

- Cause detectable impacts on native communities, and species would be expected to be outside the natural range of variability for long periods of time or in perpetuity;
- Cause large, short-term declines in species populations or instability in population numbers or structure, genetic variability, and other demographic factors for species;
- Cause a loss of habitat that could affect the viability of at least some native species; or

- Jeopardize the continued existence of a federally listed species within and/or outside JBLE-Langley boundaries.

4.5.1 Airfield Storm Drainage and Grading and Recreational Vehicle Storage Lot Projects

Proposed Actions. No significant effects on biological resources would be expected. Short-term adverse effects on biological and natural resources would be expected from temporary disturbance during construction that displaces wildlife. No effects on the distribution or diversity of vegetation, listed species, bald eagles, or ospreys would be expected, nor would the projects reduce the distribution or viability of species or habitats of concern. No federal threatened, endangered, or candidate species or their critical habitat would be adversely affected by the proposed project.

No Action Alternative. No effects on biological resources would occur. No changes to biological resources would result under the no action alternative.

4.5.2 Bethel Housing Drainage Improvement Project

Proposed Action. No significant effects on biological resources would be expected. Short-term adverse effects and long-term beneficial effects on biological and natural resources would be expected. Short-term effects would result from temporary disturbance of wildlife and vegetation during construction. Long-term beneficial effects would result from replacing invasive plant species with native riparian species, increasing in-stream habitat diversity, and improving habitat for and decreasing mortality of shad. No adverse effects on listed species, bald eagles, ospreys, or the distribution or viability of species or habitats of concern would be expected.

No Action Alternative. No effects on biological resources would occur. No changes to biological resources would result under the no action alternative.

4.6 GEOLOGY AND SOILS

Potential impacts of a proposed action on geology and soils are considered significant if the action would:

- Result in a change to the character of the resources over a relatively wide area, or
- Create impacts that mitigation measures could not reduce to below the level of significance.

4.6.1 Airfield Storm Drainage and Grading and Recreational Vehicle Storage Lot Projects

Proposed Action. No significant effects on geology or soils would be expected. The projects would not affect the underlying geology of the sites. Each proposed action would temporarily disturb soils, but the Air Force would stabilize all disturbed soils once construction activities are completed in accordance with construction permits. Stormwater drainage on the airfield would be improved, and existing stormwater drainage structures on the site proposed for the RV storage lot would be retained.

No Action Alternative. No effects on geology or soils would occur. No changes to local geology or soils would result under the no action alternative.

4.6.2 Bethel Housing Drainage Improvement Project

Proposed Action. No significant effects on geology or soils would be expected. The project would not affect underlying geology of the site but would temporarily disturb soils. The Air Force would minimize soil loss to surface water during construction and stabilize all disturbed soils once construction was completed in accordance with construction permits. Long-term beneficial effects on soils would be expected from stabilizing the ditch banks to reduce erosion.

No Action Alternative. No effects on geology or soils would occur. No changes to local geology or soils would result under the no action alternative.

4.7 HAZARDOUS MATERIALS AND WASTE

Impacts on HAZMAT management would be considered adverse if the federal action resulted in noncompliance with applicable federal and state regulations, or increased the amounts generated or procured beyond current JBLE-Langley waste management procedures and capacities. Impacts on the ERP would be considered adverse if the federal action disturbed (or created) contaminated sites resulting in negative effects on human health or the environment.

4.7.1 Airfield Storm Drainage and Grading and Recreational Vehicle Storage Lot Projects

Proposed Actions: Negligible adverse effects on HAZMAT and hazardous wastes would be expected from implementing the projects. HAZMAT and hazardous waste associated with the projects would be minimal and handled and disposed of in accordance with federal, state, and local regulations and in accordance with established base procedures. The use of such materials and generated waste would be expected from the use of heavy equipment used during construction activities. Construction contractors would be responsible for preventing spills by implementing proper storage and handling procedures and by following base requirements. Contractors would perform daily inspections of equipment, maintain appropriate spill-containment materials on-site, and store all fuels and other materials in appropriate containers. Equipment maintenance activities would not be conducted on-site. All HAZMAT used during the performance of work would be reported to the base for tracking and accountability purposes. In addition, the contractor would provide copies of safety data sheets to the base and maintain copies at the proposed project location.

The new RV storage lot would be located on top of an historical bombing range. However, the project would not involve excavation. Instead, unclassified fill would be added and compacted on the existing surface. As a precaution, safety monitoring for UXO would be conducted during the earthwork portion of the project.

No adverse effects on ERP or MMRP sites would be expected. Activities occurring within the MRS site, close to an ERP site, or within LUC areas, such as LF-01, would require coordination with the JBLE Environmental Restoration Office prior to ground-disturbing activities being conducted. Such coordination would determine the location of monitoring wells, the need for dig permits, and if LUC waivers are needed. Also, any intrusive activities occurring within site MRS MU157b would require on-site UXO support. Project planning would also determine appropriate health and safety requirements and proper handling and disposal of any MEC or contaminated soils or groundwater that might be encountered during construction. Should MEC or contaminated soils or groundwater be encountered, they would be managed in accordance with base requirements and applicable federal, state, and local laws and regulations.

No Action Alternative. No effects on hazardous materials and wastes would occur. No changes to hazardous material and waste use, handling, storage, transport, or disposal would result under the no action alternative.

4.7.2 Bethel Housing Drainage Improvement Project

Proposed Action. The effects of implementing the Bethel Housing drainage improvement project on HAZMAT and hazardous waste would be similar to the effects of implementing the other projects. The former gas station and associated abandoned USTs have been closed, and no proposed project activities would occur within the former gas station area.

No Action Alternative. No effects on hazardous materials and wastes would occur. No changes to hazardous material and waste use, handling, storage, transport, or disposal would result under the no action alternative.

4.8 CULTURAL RESOURCES

Potential impacts of a proposed action on cultural resources are considered significant if the action would:

- Alter the character or use of an historic property;
- Diminish the integrity of the historic property's location, design setting, materials, workmanship, feeling, or association; or
- Otherwise cause an unresolvable "adverse impact" under section 106 of the NHPA.

4.8.1 Airfield Storm Drainage and Grading, Recreational Vehicle Storage Lot, and Bethel Housing Drainage Improvement Projects

Proposed Actions. No significant effects on cultural resources would be expected. None of the projects would affect any known archaeological sites, historic structures, or NRHP-eligible facilities. Storm drainage and grading work on the eastern portion of the airfield would occur within the Langley Field Historic District. No adverse effects on the historic district or any of the resources that contribute to it would be expected from implementing this project. A survey for archaeological sites and historic structures was conducted on JBLE-Langley in 1990–1991 (Wheaton et al. 1991). Based on that survey, no historic properties or buildings or structures 50 years or older are present within or adjacent to project sites for the airfield storm drainage and grading project. If any unknown cultural resources were discovered during project implementation, work would cease and the Air Force would coordinate with the SHPO and appropriate Native American tribes to avoid or mitigate potential impacts.

No Action Alternative. No effects on cultural resources would occur. No cultural resources would be affected under the no action alternative.

4.9 LAND USE

Potential impacts of a proposed action on land use are considered significant if the action would:

- Conflict with applicable ordinances and/or permit requirements, or
- Cause nonconformance with the current general plans and land-use plans or preclude adjacent or nearby properties from being used for existing activities.

4.9.1 Airfield Storm Drainage and Grading and Bethel Housing Drainage Improvement Projects

Proposed Actions. No significant effects on land use would be expected. None of the projects would change the land use of its proposed site or create a land-use conflict.

No Action Alternative. No effects on land use would occur. No land-use changes or conflicts would result under the no action alternative.

4.9.2 Recreational Vehicle Storage Lot Project

Proposed Action. No significant effects on land use would be expected. Repurposing the now-vacant land of a former golf course and bombing range as an RV storage lot would change the land use of the site but the proposed change would have no adverse effects on land use and would not create a land-use conflict.

No Action Alternative. No effects on land use would occur. No land-use changes or conflicts would result under the no action alternative.

4.10 INFRASTRUCTURE AND UTILITIES

Potential impacts of a proposed action on the transportation system are considered significant if the action would:

- Increase traffic on the installation and local roads so they are unable to accommodate the additional vehicles;
- Cause a road not to comply with federal, state, or local laws and regulations; or
- Constitute a substantial risk to human health or the environment.

4.10.1 Airfield Storm Drainage and Grading, Recreational Vehicle Storage Lot, and Bethel Housing Drainage Improvement Projects

Proposed Actions. No significant effects on transportation resources would be expected. Short-term, minor adverse effects on the transportation system would be expected. Construction traffic would be associated with each of the projects. Local roads generally have low-traffic volume and incidents of congestion, with heavy volume and congestion being limited to morning and evening rush hours on weekdays. Minor impacts on the transportation system near the base and the Bethel Housing Area would be expected from the temporary increase in the number of vehicles during the construction phase of each project. Appropriate routes for construction vehicles would be communicated prior to project implementation, and construction traffic during rush hours would be avoided to the extent practicable. Upon completion of each proposed project, impacts on the transportation system would cease. Construction vehicles would use roads suitable for their size and weight to minimize impacts on road surfaces. Overall, there would be no significant impacts on transportation. Impacts on other infrastructure systems would be negligible.

No Action Alternative. No effects on the transportation system would occur. No changes in traffic or roadways would result under the no action alternative, and no other infrastructure systems would be affected.

4.11 SAFETY AND OCCUPATIONAL HEALTH

Potential impacts of a proposed action on safety and occupational health are considered significant if the action would create a safety risk inconsistent with USAF occupational safety and health requirements and OSHA standards.

4.11.1 Airfield Storm Drainage and Grading, Recreational Vehicle Storage Lot, and Bethel Housing Drainage Improvement Projects

Proposed Actions. No significant adverse effects on safety and occupational health would be expected. The proposed projects would not involve activities that present a high safety or occupational risk. Contractors would comply with applicable safety regulations and follow standard safety practices while operating construction equipment and would secure construction sites and equipment when not working on-site to minimize safety risks to base personnel.

The airfield storm drainage and grading project would have a long-term, minor beneficial effect on flight safety. Removing standing water on the airfield would reduce BASH risk, thereby improving safety for pilots.

No Action Alternative. No effects on safety and occupational health would occur. No actions that would alter the current state of safety and occupational health on JBLE-Langley would result under the no action alternative. However, not implementing the airfield storm drainage and grading project would allow standing water on the airfield to continue to attract birds to the airfield, which poses a continual flight safety risk.

4.12 SOCIOECONOMIC RESOURCES

Potential impacts of a proposed action on socioeconomic resources are considered significant if the action would:

- Cause substantial gains or losses in population or the composition of the population;
- Cause extensive relocation or disruption of community businesses, creating an economic hardship for surrounding communities;
- Cause disequilibrium in the housing market such as severe housing shortages or surpluses, resulting in substantial property value changes; or
- Cause changes to accessibility of community services or change demands so the current system cannot accommodate the change.

4.12.1 Airfield Storm Drainage and Grading, Recreational Vehicle Storage Lot, and Bethel Housing Drainage Improvement Projects

Proposed Actions. No significant effects on socioeconomic resources would be expected. The economic and recreational effects, and effects on the protection of children are discussed individually below.

- **Economics.** Short-term, minor beneficial economic effects would be expected. Each of the proposed projects would have a beneficial economic impact from employment, income, and business sales associated with construction activity. The impact would be minor relative to the size of the economy of the ROI and JBLE-Langley's local and regional economic effect. If all three proposed projects were implemented within a single 12-month period, the expenditures would amount to about 3 percent of the base's annual total local expenditures. None of the projects would require personnel changes at JBLE-Langley, so the projects would have no population effect or effect on the demand for housing or public services (e.g., public schools, emergency services, or healthcare).
- **Recreation.** Long-term, minor beneficial effects would be expected. The proposed new recreational area along the Bethel Housing drainage ditch, if implemented, would improve recreational facilities available to residents, and a secure RV storage lot would improve security for the recreational equipment stored on the lot.

No Action Alternative. No effects on socioeconomics would occur. No changes in socioeconomics, recreation, or the protection of children would result under the no action alternative.

4.13 ENVIRONMENTAL JUSTICE

Potential impacts of a proposed action on environmental justice are considered significant if the action would have a disproportionate adverse effect on minority, low-income, or youth populations.

4.13.1 Airfield Storm Drainage and Grading and Recreational Vehicle Storage Lot Projects

Proposed Actions. No significant effects on environmental justice would be expected. No effects would be expected from the proposed projects because these actions would not result in disproportionate adverse environmental or health effects on the low-income or minority populations in the ROI.

No Action Alternative. No effects on environmental justice would occur. The no action alternative would not result in disproportionate adverse environmental or health effects on low-income or minority populations and it is not an action with the potential to substantially affect populations covered by EO 12898 or EO 13045 by excluding anyone, denying anyone benefits, or subjecting anyone to discrimination or disproportionate environmental or human health risks.

4.13.2 Bethel Housing Drainage Improvement Project

Proposed Action. No significant effects on environmental justice would be expected. Long-term, minor beneficial effects would be expected. The proposed project would improve the environmental conditions in and around the ditch.

Short-term, minor adverse and long-term, minor beneficial effects on the protection of children would be expected. The Bethel Housing drainage improvement project would occur adjacent to residential areas, and construction sites and activity—which can be enticing to children—could be an increased safety risk. Appropriate safety measures would be implemented during construction, and construction contractors would comply with Air Force, OSHA, and local health and safety regulations. Barriers and “No trespassing” signs would be placed around the perimeter of construction sites to deter children from playing in those areas, and construction vehicles and equipment would be secured when not in use. These measures would reduce the risk of potential harm to children. After construction is complete, the project would have long-term beneficial effects for children because of improved water quality and a reduced mosquito population along the stream.

No Action Alternative. No effects on environmental justice would occur. The no action alternative would not result in disproportionate adverse environmental or health effects on low-income or minority populations, and it is not an action with the potential to substantially affect populations covered by EO 12898 or EO 13045 by excluding anyone, denying anyone benefits, or subjecting anyone to discrimination or disproportionate environmental or human health risks.

4.14 VISUAL RESOURCES

Potential impacts of a proposed action on visual resources are considered significant if the action would:

- Have a substantial adverse impact on a scenic vista or viewshed;
- Substantially damage scenic resources, including primary/secondary ridgelines, trees, rock outcroppings, and historic buildings;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare that would adversely impact daytime or nighttime views in the area.

4.14.1 Airfield Storm Drainage and Grading Project

Proposed Actions. Implementation of the proposed project would have no significant impacts on visual resources. The proposed airfield storm drainage and grading project would not change the general appearance of the airfield, which would remain open and grassy.

No Action Alternative. Implementation of the no action alternative would have no significant impacts on visual resources as the visual aspect of the airfield would not change.

4.14.2 Recreational Vehicle Storage Lot Project

Proposed Action. Implementation of the RV storage lot project would have no significant impacts on visual resources but would create a long-term change in the appearance of the proposed site, which is currently vegetated in trees and open grassy areas. Although different, the altered appearance of the site would not have adverse visual impacts because views of the proposed RV lot are from locations on JBLE-Langley and no significant vistas or viewsheds would be affected.

No Action Alternative. Implementation of the no action alternative would have no significant impacts on visual resources as the visual aspect of the proposed site for the RV lot would not change.

4.14.3 Bethel Housing Drainage Improvement Project

Proposed Action. Implementation of the Bethel Housing drainage improvement project would have no significant impacts on visual resources but would create a long-term, minor beneficial change in the appearance of the ditch. Eliminating stagnant water, grading the ditch for continuous flow, reducing streambank erosion, and adding wetland areas would improve the appearance and attractiveness of the ditch.

No Action Alternative. Implementation of the no action alternative would have no significant impacts on the visual aspect of the ditch. The ditch would remain as it is or continue to deteriorate over time.

4.15 OTHER NEPA CONSIDERATIONS

4.15.1 Unavoidable Adverse Effects

Unavoidable adverse effects would result from implementing the proposed projects. They would be short-term effects associated with construction, and none of them would be significant. Construction projects by their very nature involve contributions of air pollutants, soil disturbance, noise, and alterations to normal activities on and in the immediate vicinity of the construction site. These disturbances are both unavoidable and temporary. The RV storage lot project would have a long-term negligible effect on the floodplain. The lot would be elevated above the 100-

year floodplain to protect the equipment stored on the site. Flood levels would not be affected and no increased risk to structures or human health would result.

The airfield storm drainage and grading project could have unavoidable adverse impacts on wetlands. There is no practicable alternative for the project. The wetlands would be removed to improve the surface for aircraft landing and reduce the chance of BASH events.

Federal, state, and local laws that require a project proponent to obtain permits and to use BMPs to minimize impacts on numerous resource areas, such as air quality and water and biological resources, are applicable to the proposed projects. JBLE-Langley would obtain all necessary permits and comply with all applicable permit conditions, including the use of BMPs to minimize adverse environmental impacts. In doing so, JBLE-Langley would minimize the unavoidable adverse effects of implementing the proposed projects.

4.15.2 Relationship of Short-Term Uses and Long-Term Productivity

Short-term uses of the biophysical components of the environment include construction-related disturbances and effects associated with increased activity that occurs over a period of less than 5 years. Long-term uses of the environment are those occurring over a period of more than 5 years, including permanent resource loss.

The proposed projects would each result in short-term disturbance of the natural and human environments and some exclusion of other activities occurring in the immediate vicinity of each project site. Once a project is completed, the disturbance would end and the environment left in a state similar to what it was before the project had occurred. Completion of each project would be beneficial to both the natural and human aspects of the environment. Long-term productivity of the natural and human environments would be unaffected by the proposed projects or would be improved because of the elimination of environmental aspects (e.g., wildlife on the airfield and the low-flow condition in Bethel Housing drainage ditch) that currently inhibit productivity.

4.15.3 Irreversible and Irretrievable Commitments of Resources

The irreversible environmental changes that would result from implementing the proposed projects are related to the use of nonrenewable resources and the effects that use of those resources would have on future generations. They involve the consumption of material resources, energy resources, and human resources. Irreversible effects primarily result from using or destroying a specific resource that cannot be replaced within a reasonable timeframe (e.g., energy and minerals).

Material Resources. Material resources used for the proposed projects are limited to concrete, gravel, fill soil, and various material supplies for infrastructure. These material resources would be unavailable for other uses until sometime in the future, when they could be recycled or repurposed. The materials that would be consumed are not in short supply, would not limit other unrelated construction activities, and would not be significant.

Energy Resources. Energy resources consumed by the proposed projects would be irretrievably lost. They include petroleum-based products (e.g., gasoline and diesel fuel) and electricity. Consumption of these energy resources would not place a significant demand on their availability in the region.

Human Resources. The use of human resources for construction and operation is considered an irretrievable loss only in that it would preclude those personnel from engaging in other work activities. Use of human resources for the proposed projects, however, represents employment opportunities and is considered beneficial.

4.16 CUMULATIVE EFFECTS

CEQ regulations stipulate that the cumulative effects analysis within an EA should consider the potential environmental impacts resulting from:

...the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions (40 CFR 1508.7).

The scope of the cumulative effects analysis involves both temporal and geographic extent in which effects could be expected to occur, as well as a description of the resource that potentially could be cumulatively affected. For the analysis in this EA, the temporal extent for which cumulative effects are considered for most resource areas is the individual duration of each proposed project. This is suitable because, upon project completion, most effects of the projects themselves would cease. The spatial area considered for cumulative effects is the same as the one considered for individual resource areas.

Cumulative adverse effects can occur when a proposed project and unrelated projects have adverse effects on the same resource area both temporally and spatially. The proposed projects in this EA could have adverse effects on noise, air quality, water resources, biological resources, soils, HAZMAT, transportation, and the protection of children. All the adverse effects would be short term, generally lasting only for the duration of project implementation.

Past, present, and planned future actions at JBLE-Langley that could contribute to cumulative effects are listed in Table 4-3. For the reasons discussed below, none of the adverse effects of the proposed projects would contribute to significant adverse cumulative effects.

Table 4-3. JBLE-Langley projects potentially contributing to cumulative effects.

Scheduled Project	Project Summary	Implementation Date	Relevance to Action Alternative	Potentially Affected Resources
Past Actions				
Final Installation Development Plan for JBLE-Langley	Project evaluated potential impacts associated with identified priority installation development projects while the JBLE-Langley Installation Development is under revision. Final EA completed September 2016.	Priority installation projects are proposed to be constructed over the next 5 years.	Implementation could overlap with the proposed actions.	Air Quality, Noise, Land Use, Socioeconomics – Income and Employment
Present Actions				

Scheduled Project	Project Summary	Implementation Date	Relevance to Action Alternative	Potentially Affected Resources
Renew the License with the Civil Air Patrol to Occupy the Former Aero Club	Project included renewing license with the Civil Air Patrol to occupy the former Aero Club; providing office and hangar space; adding parking on airfield parking ramp; using aviation gasoline fuel tank; and allowing for the potential addition of four aircraft over time (Categorical Exclusion).	Ongoing	Past action is part of the existing conditions for the Action Alternative.	Air Quality, Noise
Future Actions				
ISR Campus Development Project	Project includes consolidation of ISR functions into one walkable campus and connected quads. It is in the planning stages for future development. Several projects associated include proposed new facility construction, upgrades to roadways, and repurposing of facilities. Development Plan Final completed in 2019.	Implementation unknown	Construction could potentially overlap with the proposed actions.	Air Quality, Water Resources (wetlands), Socioeconomics – Income and Employment
CAF ADAIR	Provide dedicated contract ADAIR sorties to improve the quality of training and readiness of pilots of the 1 st Fighter Wing; includes the addition of 78 contracted maintainers and 15 contracted pilots	2021	Implementation could overlap with the proposed actions.	Airspace Management, Air Quality

Scheduled Project	Project Summary	Implementation Date	Relevance to Action Alternative	Potentially Affected Resources
Installation Infrastructure Capital Improvement Projects	Projects include construction, renovation, repair and demolition of infrastructure at JBLE-Langley, including a new Fuels System Maintenance Hangar and Fuels Automated System Complex, internal renovations of aircraft maintenance hangars, administrative facilities, and repair/replacement/addition of transportation, parking and utility systems. A total of 371,968 ft ² would eventually be constructed and 22 buildings demolished.	Ongoing	Construction may overlap with proposed actions.	Air Quality, Noise, Socioeconomics – Income and Employment
Reforge Initiative	This planned pilot training initiative would include four to six advanced trainers (T-50 or similar aircraft) that would be leased to the Air Force and operate at JBLE-Langley for five years.	Spring 2021	Implementation could overlap with the proposed actions.	Air Quality, Noise
F-22 Formal Training Unit Beddown	This action includes the movement of 31 F-22 aircraft and 16 T-38 aircraft to JBLE-Langley along with support personnel to provide for the training of new pilots to fly the F-22. In addition, support facilities including a maintenance hangar, aircraft painting facility, training building, and dormitories would be constructed to support the mission.	Summer 2021	Implementation could overlap with the proposed actions.	Noise, Air Quality

Noise. Adverse noise effects would be limited to within approximately 800 ft of where construction equipment is being operated and to the time during which the equipment is being operated. Noise effects of the proposed projects would occur on and near the JBLE-Langley airfield and along the Bethel Housing drainage ditch. No changes are proposed to JBLE-Langley overall, its airfield, or its surroundings, including the NASA LaRC facilities, that would alter the fundamental noise environment of the area. No cumulative effects on the noise environment, therefore, would be expected. Similarly, the Bethel Housing drainage ditch passes between developed residential areas that are expected to remain residential for the foreseeable future. No

fundamental changes in the noise environment around the ditch are expected, and no cumulative noise effects would be expected.

Air Quality. The Commonwealth of Virginia accounts for the effects of all past, present, and reasonably foreseeable emissions during the development of its SIP, including all significant stationary, area, and mobile emission sources. Estimated emissions generated by the proposed projects and other construction and demolition projects of similar scope, all of which involve temporary emissions but do not establish new permanent major sources of air emissions, would be *de minimis*, and it is understood that activities of this limited size and nature would not contribute significantly to adverse cumulative effects on air quality. The quantity of GHGs associated with the proposed projects and similar actions would be negligible. Cumulative effects on air quality and climate change would be minimal.

Water Resources. Each project would have the potential to affect water resources through inadvertent pollutant releases to surface waters through stormwater runoff. Each construction or ground-disturbing activity affecting 1 acre or more must be permitted, and its proponent must implement BMPs to limit soil and pollutant loss to stormwater and ensure that post-construction runoff does not exceed the pre-construction runoff rate. Cumulative effects on water resources would be held at less than significant through the permitting process.

Biological Resources. A cumulative adverse effect on biological resources would result from a substantial loss of habitat, breeding sites, natural food availability, or other fundamental requirements for the plants and animals of a region. Each project would cause short-term disturbances that could affect animal presences during its duration. The RV storage lot project would mostly eliminate habitat on the project site and the Airfield Storm Drainage and Grading project would reduce wetlands on the airfield. The Bethel Housing drainage improvement project would improve habitats along the ditch. The vegetation on the proposed RV storage lot site is regrowth from the site's previous uses as a bombing range and a golf course, and abundant similar and better habitat exists nearby. JBLE-Langley, NASA LaRC, and the surrounding aquatic habitats define the overall biological aspect of the area, and no foreseeable changes to the basic biological character of the area are anticipated.

Soils. Each proposed project would have site-specific effects on soils, and disturbed soils would be stabilized upon project completion or upon completion of individual phases of a project. Other construction projects on the base or in the surrounding area would also disturb soils, but those effects would also be site specific and their proponents would also control soil loss and stabilize soils after project completion. The nature and profile of the area's soils would not be affected, and no cumulative adverse effects on soils would result.

HAZMAT. A cumulative effect on HAZMAT and hazardous wastes would result from such materials and wastes from individual projects not being managed in accordance with regulations and plans. Adherence to project and base management plans would limit potential impacts of individual projects and their cumulative effects.

Transportation. The proposed projects would have short-term, minor adverse effects on transportation. No proposed or scheduled projects would alter the road system at JBLE-Langley. The regional transportation system is adequate to handle the minor increase in traffic attributable to the proposed projects, and local planning authorities take into consideration such minor fluctuations in traffic volume in developing regional transportation plans and implementing transportation projects. No cumulative adverse effects on the transportation system would be expected.

Protection of Children. Adverse effects of the proposed projects on children would occur if children, supervised or unsupervised, accessed a construction site. Construction sites are not

monitored or patrolled around the clock, so the possibility of unauthorized access to a construction site by children always exists. Construction site managers would secure equipment and sites when construction personnel are not present to minimize the potential for personal harm to unauthorized persons, whether children or adults. It would be incumbent upon each construction manager to ensure construction sites are secure and safe, to follow safety regulations and procedures, and to prevent unauthorized access to the construction site. Cumulative effects on the protection of children would be minimized by following these guidelines.

4.17 MITIGATION

Because there is no practicable alternative for the Airfield Storm Drainage and Grading project, mitigation is required for impacts of the project on wetlands. It would not be practicable to relocate the runway to resolve the airfield drainage issues and the wetlands on the airfield present a safety hazard. JBLE-Langley submitted a Joint Permit Application to the Virginia Marine Resources Commission (VMRC), USACE, VDEQ, and the Hampton Wetlands Board, and acquired all required permits for conducting the project. The permit specifies mitigation required as a result of the loss of wetlands. The Air Force would accomplish the required mitigation through purchase of wetland credits from a private mitigation bank approved by the VDEQ and USACE wetlands boards and servicing the Lynnhaven-Poquoson watershed. If no credits are available from approved wetland banks from within the local watershed, mitigation credits would be purchased through a payment to the Virginia Aquatic Resources Trust Fund (VARTF). The base would submit proof of credit purchase to all regulators (VDEQ, USACE, Hampton Wetlands Board, and VMRC) prior to construction and in accordance with all applicable laws. If no credits are available for purchase within the local watershed or from VARTF, the Air Force would submit a mitigation plan for review and approval to the USACE Norfolk District Regulatory Branch, VDEQ, VMRC and the local wetland board prior to commencing the construction of each phase of the project.

No mitigation would be required for impacts on other resource areas.

SECTION 5.0 REFERENCES

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SECTION 6.0 LIST OF PREPARERS

Jonas Berge, Tetra Tech, Inc.
BS, Chemistry, University of Wisconsin
BS, Conservation Biology, University of Wisconsin
Years of Experience: 11

Michelle Cannella, Tetra Tech, Inc.
BS, Mineral Economics, Pennsylvania State University
Years of Experience: 23

Greg Hippert, Tetra Tech, Inc.
BS, Earth Science, University of North Carolina at Charlotte
Years of Experience: 22

Penelope Garver, Tetra Tech, Inc.
BS, Journalism, University of Maryland
Years of Experience: 26

Jennifer Jarvis, Tetra Tech, Inc.
BS, Environmental Resource Management, Virginia Polytechnic Institute and State University
Years of Experience: 20

Samuel Pett, Tetra Tech, Inc.
MS, Environmental Science and Policy, University of Massachusetts/Boston
BS, Wildlife Biology and Zoology, Michigan State University
Years of Experience: 26

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SECTION 7.0 DISTRIBUTION LIST

Federal Agency

Cindy Schulz, Field Supervisor
U.S. Fish and Wildlife Service
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410

State Agencies

Ryan Brown, Executive Director
Virginia Department of Wildlife Resources
7870 Villa Park Drive, Suite 400 (Villa Park 3)
Henrico, VA 23228

Janet Weyland, Deputy Regional Director
Virginia Department of Environmental Quality
Tidewater Regional Office
5636 Southern Blvd.
Virginia Beach, VA 23462

Julie Langan, State Historic Preservation Officer
Virginia Department of Historic Resources
State Historic Preservation Office
2801 Kensington Avenue
Richmond, VA 23221

Federally Recognized Native American Tribes

Catawba Indian Nation
Chickahominy Indian Tribe
Delaware Nation
Delaware Tribe
Eastern Chickahominy Tribe
Nansemond Indian Tribal Association
Pamunkey Indian Tribe
Rappahannock Tribe
Upper Mattaponi Indian Tribe

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Appendix A
Air Emissions Calculations

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Air Emissions Calculations

Contents of this Appendix:

Introduction: Introduction to the Air Quality appendix; briefly describes the methods used.

Summary: Summarizes total emissions by calendar year for all Proposed Action activities as part of the JBLE Airfield and Drainage Projects.

County Emissions: Summarizes total emissions for the Hampton City Tier report for 2017. Provides a comparison of all Proposed Action emissions to regional emissions.

Comparisons to local thresholds of significance and to General Conformity de minimis thresholds (if applicable) are made in the text.

Introduction:

This air analysis provides estimated emissions for proposed actions to occur at Joint Base Langley-Eustis related to the Airfield and Drainage Improvement Projects. Calculations were performed for the single proposed alternative comprising three separate actions: Airfield drainage improvement, RV parking lot construction, and Bethel Housing Area Drainage Improvement. Emissions were calculated for the National Ambient Air Quality Standards within the Hampton Roads Intrastate (HRI) Air Quality Control Region (AQCR) for nitrogen oxides (NO_x), volatile organic compounds (VOCs), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter measured as less than or equal to 10 microns in diameter (PM₁₀), and particulate matter measured as less than or equal to 2.5 microns in diameter (PM_{2.5}). Estimated Greenhouse Gas (GHG) emissions were also calculated and compared to the previous Council of Environmental Quality (CEQ) reference point of 25,000 metric tons per year (tpy).

The analysis was performed for construction periods during which grading, paving, building construction, painting, and vehicle (construction commuter and haul truck) activities were accounted for concerning each proposed action. All construction was assumed to occur within one 12-month period.

The DOPAA, 35% design reviews, and AF Form 1391s served as the primary source for all construction assumptions. See the notes in each individual proposed action emissions calculation spreadsheet.

Ongoing permanent operational emissions were assumed to not be a factor as all the proposed actions were improvements or replacements of existing features and were not adding additional missions or stationary emissions points.

The Air Conformity Applicability Model (ACAM), developed by the Air Force Civil Engineering Center was used to estimate air emissions.

SUMMARY

Construction Emissions for All Proposed Actions – Preferred Alternative

Air Emissions for Construction Projects - All Proposed Actions - Preferred Alternative

	Construction Emissions (tons)						
	NO_x	VOC	CO	SO_x	PM₁₀	PM_{2.5}	CO_{2e}
Airfield Drainage	4.870	0.701	3.628	0.012	52.257	0.190	1,209.0
RV Parking Lot	0.602	0.088	0.493	0.001	5.576	0.024	147.3
Bethel Housing Drainage	1.126	0.189	1.110	0.003	12.024	0.052	336.5
TOTAL	6.598	0.978	5.231	0.016	69.857	0.266	1,692.8

Note: Total PM₁₀, PM_{2.5} fugitive dust emissions are assuming USEPA 50% control efficiencies.

CO₂ emissions converted to metric tons =

1,536 metric tons

State of Virginia's CO₂ emissions from fuel combustion =

97,859,090 metric tons (DOE 2019)

Percent of Virginia's Fuel Combustion CO₂ emissions =

0.0016%

United States' CO₂ emissions =

5,166,082,320 metric tons (DOE 2019)

Percent of USA's CO₂ emissions =

0.00003%

Source: U.S. Department of Energy, Energy Information Administration (U.S. DOE/EIA). 2019. *Table 1. State Emissions by Year (Million Metric Tons of Carbon Dioxide)*. Available online <<http://www.eia.gov/environment/emissions/state/>>. 2017 data values are the most recent. Data accessed 27 November 2019.

Future-year emissions budgets are not available so actual 2017 air emissions inventories for Hampton City are used as an approximation of the current local emissions. Because construction emissions for this project are several orders of magnitude below significance, the conclusion would be the same, regardless of whether future-year budget data set were used.

Hampton City Point and Area Sources Combined						
Year	NO_x (tpy)	VOC (tpy)	CO (tpy)	SO₂ (tpy)	PM₁₀ (tpy)	PM_{2.5} (tpy)
2017	2,570	3,674	13,671	151	538	278

Note: tpy=tons per year.

Source: USEPA 2020.

Air Emissions from Proposed Construction Activities Point and Area Sources Combined						
	NO_x (tpy)	VOC (tpy)	CO (tpy)	SO₂ (tpy)	PM₁₀ (tpy)	PM_{2.5} (tpy)
County Emissions	2,570	3,674	13,671	151	538	278
Projects Emissions	6.598	0.978	5.231	0.016	69.857	0.266
% of Regional	0.26%	0.03%	0.04%	0.01%	12.98%	0.1%

Source: USEPA 2020.

Appendix B
Coastal Zone Federal Consistency Determination

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**Coastal Zone Management Act (CZMA) Consistency Determination
for
Installation Development Projects
Joint Base Langley-Eustis, Langley AFB, Hampton, Virginia**



Prepared for:

**DEPARTMENT OF THE AIR FORCE
Joint Base Langley-Eustis
Hampton, Virginia**

December 2020

This document provides the Commonwealth of Virginia with the 633d Air Base Wing's Consistency Determination under CZMA section 307(c)(1) [or (2)] and 15 CFR Part 930, subpart C, for the [name of federal activity]. The information in this Consistency Determination is provided pursuant to 15 CFR §930.39. This activity includes the actions described below:

Background

Joint Base Langley-Eustis, Langley Air Force Base (hereafter JBLE-Langley) is located within the city of Hampton, Virginia near the southern extremity of the lower Virginia Peninsula of the Chesapeake Bay. The installation is bound on three sides by the northwest and southwest branches of the Back River and it is occupied jointly with the National Aeronautics and Space Administration (NASA) Langley Research Center along the western portion of the base. Access onto the base is via four gate entrances: Armistead Avenue, LaSalle Avenue, King Street, and NASA's Durand gate.

Purpose and Need for Action

Each of the three projects included in the proposed action has a specific purpose and need, which is presented below.

Airfield Storm Drainage and Grading Project:

The purpose of the project is to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. The project is needed to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding.

Recreational Vehicle Storage Lot Project:

The purpose of the RV storage lot project is to provide JBLE-Langley service members with a single, secure location that will accommodate approximately 250 RVs, trailers, and boats, including the RVs currently on the Durand Loop RV storage lot. The project is needed to improve security for valuable personally owned vehicles (POVs); reduce the risk of flooding damage to RVs stored at JBLE-Langley; and improve parking efficiency and nighttime operations.

Bethel Housing Area Drainage Improvement Project:

The purpose of the Bethel Housing Area drainage improvement project is to improve water quality, flow, and habitat in the ditch. The project is needed to eliminate fish becoming trapped and dying in upstream pools, reduce the presence of stagnant water where mosquitoes breed, eliminate open-ponded reaches that attract waterfowl, and provide the public with new recreational space.

Proposed Actions and Alternatives

The EA evaluates the potential environmental impacts that could arise from the implementation of the four projects. Each project is evaluated separately in the EA, though when the expected impacts of individual projects are the same or very similar, they are discussed collectively. These projects include initiatives for surface grading, infrastructure construction, and natural area restoration.

Airfield Storm Drainage and Grading Project:

The project would involve grading low areas in the airfield to eliminate obstructions and abrupt grade changes, improving storm drain infrastructure, and removing wetlands from the airfield to reduce the attractiveness of the area to birds, which present a BASH risk.

Under the No Action Alternative, this project would not be implemented. The Air Force would not regrade or eliminate wetlands from the airfield. Obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface would not be eliminated. The risk of damage to aircraft in the event of a mishap would not be reduced and airfield wildlife risks would remain inconsistent with the BASH Plan. Military personnel and the base mission would remain vulnerable to risky intrusions. The No Action Alternative is analyzed in the EA, consistent with CEQ regulations, to provide a baseline against which the impacts of the action alternative can be assessed.

Recreational Vehicle Storage Lot Project:

The project would involve clearing the site proposed for the new RV storage lot of existing vegetation and grading it with fill to raise the lot elevation above floodplain level and to direct stormwater drainage onto adjacent pervious land areas. The Air Force would install underground storm drain pipe to direct stormwater to impacted USACE-regulated ditch segments into the Durand Loop storm drain system and Back River; install underground electrical service to and within the site; install a security fence, pole-mounted lights, and motorized access gates; and mark all parking spaces clearly.

Under the No Action Alternative, this project would not be implemented. The Air Force would not relocate the Durand Loop RV storage lot to a new location. Without the project, the base would continue to fail to meet service members' needs for RV storage rentals and the 633 Force Support Squadron (FSS) would lose crucial revenues. Valuable POVs would remain at risk from flooding and damage from difficult nighttime parking operations in areas where pavement markings and area lighting are missing. Disorganized, random vehicle placement would continue, resulting in inefficient use of available space. The No Action Alternative is analyzed in the EA, consistent with CEQ regulations, to provide a baseline against which the impacts of the action alternative can be assessed.

Bethel Housing Area Drainage Improvement Project:

The project would involve modifying the existing channel, floodplain areas, wetlands, and adjacent areas. Specifically, the Air Force would stabilize existing drainage channels and control the grade of the ditch while maintaining the location and width of the existing channel; install structures throughout the ditch system to provide habitat diversity; plant native riparian species and remove invasive plant species; improve locations of stormwater outfalls into the ditch by enhancing preformed scour holes or installing vernal pools; and install a stormwater management pool at a downstream location to treat incoming stormwater from upstream locations and to serve as additional habitat for shad, replacing the poor-quality ditch habitat at the upstream end of the system where the shad currently become trapped and die. A drop structure would be installed to discourage shad from moving upstream. Optionally, a small park with educational signage about the function of stream and wetland ecosystems would be installed near the downstream end.

Under the No Action Alternative, this project would not be implemented. The Air Force would not improve the Bethel Housing Area drainage ditch. Shad would continue to become trapped and die in upstream pools. Streambanks would continue to erode without the protection of a riparian buffer. Flow in the ditch would continue to incise the channel, especially during intense rain events. Habitat quality in the ditch would continue to lack runs and riffle-pool diversity. Points in the ditch at stormwater outfalls would continue to receive and pass sediment downstream. Ducks would continue to be present where the ditch is ponded, depositing excessive nutrients into the water. The No Action Alternative is analyzed in the EA, consistent with CEQ regulations, to provide a baseline against which the impacts of the action alternative can be assessed.

The 633d Air Base Wing has determined that these development activities affect the land or water uses or natural resources of Virginia in the following manner:

The affects are detailed in Section 4 of the attached Environmental Assessment.

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

- a) *Tidal and Non-Tidal Wetlands* - It is the policy of the Commonwealth to preserve the tidal wetlands, to prevent their despoliation and destruction, and to accommodate necessary economic development in a manner consistent with wetlands preservation. Furthermore, it is the Commonwealth's policy that nontidal surface waters, including wetlands and streams, shall be protected. Impacts to wetlands and streams shall be avoided or minimized to the maximum extent practicable.

Tidal Wetlands are administered by the Virginia Marine Resources Commission (VMRC) under the authority of the Tidal Wetlands Act of 1972 (Virginia Code § 28.2- 1301 and -1308; 4 VAC § 20-390-20).

Tidal and Nontidal Wetlands are administered by the Department of Environmental Quality (DEQ) through the Virginia Water Protection Permit program and includes Water Quality Certification pursuant to Section 401 of the Clean Water Act (Virginia Code §§ 62.1-44.15:20 and -44.15:21; and 9 VAC §§ 25-210-10, -210-45, 210-80, 260-10, -380, -390).

Analysis — Two of the proposed projects—the Airfield Storm Drainage and Grading Project and the Bethel Housing Area Drainage Improvement Project—would impact wetlands. The proposed projects would result in the loss of approximately 1.36 acres of intertidal emergent wetlands, 4.74 acres of intertidal ditch, 13.56 acres of non-tidal emergent wetlands, and 0.56 acre of non-tidal ditch. The Bethel Housing Area Drainage Improvement Project would restore 0.5 acre of wetland along the ditch. The airfield is a previously disturbed area of land that has resulted in the creation of wetlands. The Airfield Storm Drainage and Grading Project would reduce the chance of a bird/aircraft strike. The Air Force has coordinated with the US Army Corps of Engineers (USACE) and VDEQ and has obtained the required permits (USACE permit number NAO-2017-00574 / VWP permit 17-V0458). The Air Force would adhere to all required mitigation actions. The proposed RV lot project has no wetlands in or adjacent to the project location.

- b) *Subaqueous Lands* — All decisions affecting subaqueous lands shall be guided by the Commonwealth's General Policy to conserve, develop, and utilize its natural resources, its public lands, and its historical sites and buildings and to protect its atmosphere, lands, and waters from pollution, impairment, or destruction, for the benefit, enjoyment, and general welfare of the people of the Commonwealth. The General Assembly has authorized VMRC to grant or deny any use of stateowned bottomlands, including dredging, aquaculture, the taking and use of material from the bottomland, and the placement of wharves, bulkheads, and fill. (Virginia Code §§ 28.2-1200, -1203, -1204 and -1205).

Analysis — The Airfield Storm Drainage and Grading and Bethel Housing Area Drainage Improvement projects could impact subaqueous lands. Both projects would impact wetlands as discussed in Enforceable Policies C and the Bethel Housing Area Drainage Improvement Project would impact a streambed. All the projects could cause some nonpoint source water pollution as discussed in Enforceable Policy K. The Air Force would implement BMPs to minimize or eliminate adverse impacts on subaqueous lands.

- c) *Dunes and Beaches* - It is the policy of the Commonwealth to preserve and protect coastal primary sand dunes and beaches, to prevent their despoliation and destruction, and whenever practical, to accommodate necessary economic development in a manner consistent with the protection of such features. Dune and beach protection is carried out pursuant to the Coastal Primary Sand Dune Protection Act as administered by VMRC (Virginia Code §§ 28.2-1401 and -1408).

Analysis — None of the proposed projects would have any potential to impact dunes or beaches. Each of the proposed projects is in the inland portion of JBLE-Langley away from any dune/beach ecosystem.

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

The program is administered by DEQ and 84 Bay Act localities through the Chesapeake Bay Preservation Act (Virginia Code §§ 28.2-104.1, 62.1-44.15:24, -44.15:51, -44.15:67, -44.15:68, -44.15:69, -44.15:73, -44.15:74, and -44.15:78) and Chesapeake Bay Preservation Area Designation and Management Regulations (9 VAC §§ 25-830-30, -40, -80, -90, -100, -120, -130, -140, and -150).

Analysis - To comply with the Chesapeake Bay Preservation Act to the maximum extent practicable, the Air Force would review RPA buffers when conducting final project siting and per RMA regulations would minimize land disturbance, retain indigenous vegetation, and minimize post-development impervious surfaces. Except for the Bethel Housing Area Drainage Improvement Project, the proposed projects would occur in previously disturbed areas. There are no areas planned for development which are native vegetative communities (the Bethel Housing Area drainage ditch is largely overgrown with non-native invasive plant species). Upon completion of each project disturbed areas would be reseeded in native vegetation.

- e) *Marine Fisheries* - It is the policy of the Commonwealth to conserve and promote the seafood and marine resources of the Commonwealth, including fish, shellfish and marine organisms, and manage the fisheries to maximize food production and recreational opportunities within the Commonwealth's territorial waters.

The policy is administered by VMRC (Virginia Code §§ 28.2-101, -201, -203, -203.1, -225, -551, -600, -601, -603 -618, and -1103, -1203 and the Constitution of Virginia, Article XI, Section 3).

Analysis - Two of the proposed projects would have no potential to impact fisheries. They are in the inland portion of JBLE-Langley. The Bethel Housing Area Drainage Improvement Project would improve habitat for fish in the ditch, resulting in a beneficial effect on fisheries.

- f) *Wildlife and Inland Fisheries* – Activities affecting wildlife and inland fisheries shall not negatively impact the Commonwealth's efforts in conserving, protecting, replenishing, propagating and increasing of the supply of game birds, game animals, fish and other wildlife of the Commonwealth, including fish or wildlife listed as threatened or endangered by the Department of Wildlife Resources Board, the use of drugs on vertebrate wildlife, and nonindigenous aquatic nuisance, predatory, or undesirable species.

The Department of Wildlife Resources (DWR) administers the enforceable policy affecting:

Wildlife and Fish (Virginia Code §§ 29.1-501, -512, -521, -530.2, -531, -533, -542, -543.1, -545, -548, -549, -550, -552, -554, -556, -569, and -574; 4 VAC §§ 15-30-10, -20, -50, and 15-290-60).

State-listed Threatened and Endangered Species (Virginia Code §§ 29.1-501, -564, -566, -567, and -568; 4 VAC §§ 15-20-130 and -140).

The Use of Drugs on Vertebrate Wildlife (Virginia Code § 29.1-501 and -508.1).

Nonindigenous Aquatic Nuisance, Predatory, or Undesirable Species (Virginia Code §§ 29.1-501, -542, -543.1, -545, -569, -571, -574, and -575; 4 VAC §§ 15-20-210, -30-20, -30-40, and 15-290-60).

Analysis – The Airfield Storm Drainage and Grading Project would have a beneficial impact on birds and wildlife by reducing the potential for interaction between them and aircraft. The Bethel Housing Area Drainage Improvement Project would improve habitat for fish in the ditch, resulting in a beneficial effect on fisheries. The RV storage lot project would have a minimal impact on wildlife.

- g) *Plant Pests and Noxious Weeds* - The enforceable policy applies to activities affecting quarantines established for pests by the Board of Agriculture and Consumer Services (BACS) or the Commissioner of Agriculture and Consumer Services, the importation of regulated articles proclaimed a menace to public health by BACS, and plant pests and noxious weeds.

The Virginia Department of Agriculture and Consumer Services (VDACS) is responsible for the administration of the policy addressing:

Quarantines (Virginia Code §§ 3.2-700 and -703; 2 VAC §§ 5-315-10 to -130, -318-10 to -140, -330-10 to -90, and -440-10 to -70, -100, and -110).

Importation of Regulated Articles (Virginia Code § 3.2-704).

Plant Pests and Noxious Weeds (Virginia Code §§ 3.2-712 and -804; 2 VAC §§ 5-315-10 to -130, -317-10 to -100, -318-10 to -140, -330-10 to -90, and -440-10 to -70, -100, and -110).

Analysis – Any areas disturbed by this project will be revegetated with native species.

- h) *Commonwealth Lands* - The enforceable policy applies to activities on state-owned lands managed by DWR and the Department of Conservation and Recreation (DCR) to include the free passage of anadromous and other migratory fish, the removal of coastal resources from Back Bay, encroachments into game refuges, tampering with DWR owned or operated aquatic and terrestrial habitats, and fire use, hunting and fishing, feeding wildlife, boating and vehicle use in state parks.

DWR authority for the administration of the policy includes:

Dams and Fish Passage (Virginia Code § 29.1-532).

Back Bay (Virginia Code § 29.1-103(10); 4 VAC § 15-20-90).

Damage to Boundary Enclosures and Entry to Refuges (Virginia Code § 29.1-554).

Protection of Aquatic and Terrestrial Habitats Used or Owned by DGIF (Virginia Code § 29.1-554; 4 VAC §§ 15-20-150 and -320-100).

DCR authority for the administration of the policy includes:

Fire Prevention (4 VAC §§ 5-30-70 and -220).

Hunting and Fishing in State Parks (4 VAC §§ 5-30-240 to -250).

Feeding Wildlife in State Parks Prohibited (4 VAC § 5-30-422).

Boating and Vehicles in State Parks (4 VAC §§ 5-30-190, -290, and -330).

Analysis – None of the projects involve activities on Commonwealth Lands.

- i) *Point Source Air Pollution* - The Clean Air Act established by the Federal Government and the Commonwealth of Virginia is automatically incorporated into the Commonwealth's Coastal Zone Management Program in accordance with 15 CFR § 923.45. Furthermore, it is the policy of the Commonwealth, after observing the effects of air pollution, to abate, control, and prohibit air pollution throughout the Commonwealth (Virginia Code § 10.1-1308).

DEQ is responsible for the administration of the policy affecting:

Asphalt Paving Operations in Volatile Organic Compound Emission Control Areas (Virginia Code §§ 10.1-1308 and -1322; 9 VAC §§ 5-20-206 and -45-780).

Open Burning (Virginia Code §§ 10.1-1308 and -1322; 9 VAC §§ 5-80-1105, -130-10, -130-30 to -50, 20-60-30, and 5-60-200).

Fugitive Dust Emissions (Virginia Code §§ 10.1-1308 and -1322; 9 VAC §§ 5-50-90 and -40-90).

State Operating Permits (Virginia Code §§ 10.1-1308 and -1322; 9 VAC § 5-80-800).

New Source Review (Virginia Code §§ 10.1-1308 and -1322; 9 VAC §§ 5-80-1100, -1400, -1605, and -2000).

Analysis — JBLE-Langley is in an orphan maintenance area for ozone and in an attainment area for all other criteria pollutants. None of the proposed projects would involve establishing a new stationary source of air pollution on the base. The projects would generate mobile source air emissions during construction activities. Impacts would be controlled using construction practices consistent with policies of 9VAC5-50-60 *et seq.* Overall, the proposed projects are not expected to adversely impact local or regional air quality.

Proposed Project	Emissions (tpy)							De Minimis Threshold	Exceeded De Minimis Levels?
	NO _x	VOC	CO	SO ₂	PM ₁₀	PM _{2.5}	CO ₂ ^a		
Airfield Storm Drainage and Grading Project	4.87	0.701	3.628	0.012	52.257	0.190	1209.0	100 ^b	No
Recreational Vehicle Storage Lot Project	0.602	0.088	0.493	0.001	5.576	0.024	147.3	100 ^b	No
Bethel Housing Area Drainage Improvement Project	1.126	0.189	1.110	0.003	12.024	0.052	336.5	100 ^b	No

^a The estimated short-term GHG emissions are well below the reference point of 25,000 metric tpy.

^b The de minimis thresholds for NO_x and VOC are both 100 tpy.

Note: tpy = tons per year.

j) Point Source Water Pollution — It is the policy of the Commonwealth to protect existing high quality state waters and restore all other state waters to such condition of quality that any such waters will permit all reasonable public uses and will support the propagation and growth of all aquatic life, including game fish, which might reasonably be expected to inhabit them; safeguard the clean waters of the Commonwealth from pollution; prevent any increase in pollution; reduce existing pollution; promote and encourage the reclamation and reuse of wastewater in a manner protective of the environment and public health; and promote water resource conservation, management and distribution, and encourage water consumption reduction in order to provide for the health, safety, and welfare of the present and future citizens of the Commonwealth.

The National Pollutant Discharge Elimination System (NPDES) permit program established pursuant to Section 402 of the federal Clean Water Act and administered by DEQ as the Virginia Pollutant Discharge Elimination System (VPDES) permit program (Virginia Code § 62.1-44.2; 9 VAC § 25-31-20).

Analysis — Two waterbodies are listed on the 2014 Impaired Waters list—Brick Kiln Creek and Northwest Branch of Back River for recreation use impairments from enterococcus and Northwest Branch of Back River for shellfish condemnation areas from fecal coliform. Total Daily Maximum Loads (TDMLs) for the Back River watershed were approved by USEPA Region III in April 2014. However, no fecal coliform reduction is required for JBLE-Langley as the major source in the area is wildlife, which does not impact downstream segments. Nonpoint source water pollution is expected with any of the proposed projects. If any were to occur during or after completion of the proposed projects, the Air Force would coordinate activities, plans, and permits with VDEQ.

k) Nonpoint Source Water Pollution — It is the policy of the Commonwealth to control stormwater runoff to protect the quality and quantity of state waters from the potential harm of unmanaged stormwater; to

control soil erosion and sediment deposition in order to prevent unreasonable degradation of properties, stream channels, state waters, and other natural resources; and to otherwise act to control nonpoint source water pollution to ensure the general health, safety, and welfare of the citizens of the Commonwealth.

Virginia's Erosion and Sediment Control Law requires soil-disturbing projects to be designed to reduce soil erosion and to decrease inputs of chemical nutrients and sediments to the Chesapeake Bay, its tributaries, and other rivers and waters of the Commonwealth. This program is administered by DEQ (Virginia Code §§ 62.1-44.15:25, 62.1-44.15:52; 9 VAC §§ 25-840-30, 25-870-20).

Analysis — Any action could create nonpoint source water pollution. The Air Force would use best management practices to reduce the chance of nonpoint source impacts. Site-specific Erosion and Sediment Control Plans would be generated for VDEQ approval. JBLE-Langley maintains a Stormwater Pollution Prevention Plan that is updated annually and addresses stormwater impacts and nonpoint source pollution.

- l) *Shoreline Sanitation* — It is the policy of the Commonwealth for sewage to be disposed of in a safe and sanitary manner that protects the public health and welfare and the environment. The Virginia Department of Health administers the enforceable policy for conventional and alternative onsite sewage systems.

Adequate Service for Human Occupied Structures (Virginia Code §§ 32.1-12 and -164; 12 VAC §§ 5-610-20 and -80).

Public and Environmental Health Protection (Virginia Code §§ 32.1-12 and -164; 12 VAC §§ 5-610-20, -120, -240, -320, -330, -450 to -500, -560, -593, -594, -596, -597, -670, -720 to -770, -810, -815, -870, -880, -890, -960, -965, -1000, -1010, -1040, -1050, -1060, -1070, -1110, -1120, -1130, -613-10 to -210, and -640-5,-20 to -40, -60 to -90, -110 to -120, -140 to -180, -210 to -290, -390 to -470, and -490 to -520).

Onsite Sewage System Design Requirements (Virginia Code §§ 32.1-12, -163.5(A), -163.6(A), and -164; 12 VAC §§ 5-610-260 and -597).

Analysis — None of the proposed projects would have septic tanks installed or demolished. No wastewater would be discharged to the ground as part of any proposed project.

Pursuant to 15 CFR Section 930.41, the Virginia Coastal Zone Management Program has 60 days from the receipt of this letter in which to concur with or object to this Consistency Determination, or to request an extension under 15 CFR section 930.41(b). Virginia's concurrence will be presumed if its response is not received by the 633d Air Base Wing on the 60th day from receipt of this determination. The State's response should be sent to:

Mr. David M. Jennings
633 CES/CEIE
37 Sweeney Blvd
Joint Base Langley Eustis VA 23665
david.jennings.4@us.af.mil

Appendix C
Scoping Letters, NOA, and Comments

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Daily Press



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Notice Publish Date:

Friday, December 20, 2019

Notice Content

Potential to Impact Floodplains and Wetlands Joint Base Langley-Eustis, Langley Air Force Base, Virginia (Langley AFB) The Air Force is preparing an Environmental Assessment (EA) for implementing four projects at Langley AFB. Projects identified in the EA are subject to the requirements and objectives of Executive Order (EO) 11988, Floodplain Management, and EO 11990, Protection of Wetlands. This notice complies with Section 2(a)(4) of EO 11988 and Section 2(b) of EO 11990. The proposed projects are to replace the drainage system on and regrade the airfield, install a security fence around the airfield, construct a new recreational vehicle (RV) lot, and do stream restoration along Brick Kiln Creek near the Bethel Housing Area. The airfield drainage and regrading project is necessary to reduce the risk of damage to aircraft that may land in the area and to reduce ponding that contributes to bird aircraft strike hazard (BASH). The security fence project is needed to comply with Air Force security requirements. The RV lot project is needed to improve security for and reduce flood damage risk to personally owned vehicles. The stream restoration project is needed to reduce the potential for BASH strikes and eliminate areas of stagnant water. Most of Langley AFB lies within the 100-year floodplain due to its location and elevation. EO 11988 requires that federal agencies reduce the risk of flood loss by minimizing the impact of floods on human safety, health and welfare, and restore and preserve the natural and beneficial values served by floodplains. Langley AFB is heavily developed and provides minimal flood control for downriver areas. The proposed projects would not contribute to any measurable loss of flood control capacity and would not adversely affect human safety, health, or welfare. The airfield drainage and grading project would result in filling wetlands. The stream restoration project would impact existing wetlands but would also create new wetlands along the creek. In accordance with EO 11990, Langley AFB is consulting with the U.S. Army Corps of Engineers, Virginia Department of Environmental Quality, and City of Hampton, Virginia, regarding potential impacts on wetlands. The Air Force requests advance public comment to determine if there are any public concerns regarding the project's potential to impact floodplains and wetlands. The proposed projects will be analyzed in a forthcoming EA and the public will have the opportunity to comment on the draft EA when it is released. Comments should be sent to David Jennings, 633 CES / CEIE, 37 Sweeney Blvd, Langley AFB, VA 23665 or emailed to Mr. Jennings at 633CES.CEIE.NEPAPublicComment@us.af.mil. For further information, please contact Mr. Jennings at 757-225-4223. 12/20 & 12/21/2019 6542557

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10306 Eaton Pl Ste 340
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10306 Eaton Pl Ste 340
Fairfax, VA 22030-2201

Affidavit of Publication

State of Illinois
County of Cook

Order Number: 6798997
Purchase Order: Draft Environmental Assessment

This day, Jeremy Gates appeared before me and, after being duly sworn, made oath that:

- 1) He/she is affidavit clerk of Daily Press, a newspaper published by Daily Press, LLC in the city of Newport News and the state of Virginia
- 2) That the advertisement hereto annexed has been published in said newspaper on the dates stated below
- 3) The advertisement has been produced on the websites classifieds.pilotonline.com and <https://www.publicnoticevirginia.com>

Published on: Oct 30, 2020: Oct 31, 2020: Nov 01, 2020.

Jeremy Gates

Subscribed and sworn to before me in my city and state on the day and year aforesaid this 5 day of November, 2020

My commission expires November 23, 2020

Notary Signature



Notary Stamp

**Notice of Availability
Draft Environmental Assessment
(EA) of Airfield and Drainage
Projects**

**Joint Base Langley-Eustis,
Langley Air Force Base, Virginia**
Joint Base Langley-Eustis, Langley Air
Force Base (JBLE-Langley) has completed a Draft EA that evaluates the potential impacts of airfield improvement and drainage projects at JBLE-Langley. Projects evaluated in this EA include:

Airfield Drainage and Grading, which will grade and fill areas of the airfield, including wetlands, and to reconstruct drainage structures, including installing new or repairing existing drain pipes, ditches, and culverts to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. This is required to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding.

Recreational Vehicle Storage Lot, which will construct a new RV storage lot at a single, secure location that will accommodate approximately 250 RVs, trailers, and boats, including the RVs currently on the Durand Loop RV storage lot. The RV lot project is needed to improve security for valuable personally owned vehicles (POVs); reduce the risk of flooding damage to RVs stored at JBLE-Langley; and improve parking efficiency and nighttime operations.

Bethel Housing Area Drainage Improvement, which will restore a stormwater drainage ditch near the Bethel Housing Area to reduce flooding, improve wetland habitat, increase habitat diversity, improve stormwater flow, and reduce streambank erosion along the ditch. This is needed to eliminate fish becoming trapped and dying in upstream pools, reduce the presence of stagnant water where mosquitoes breed, eliminate open-ponded reaches that attract waterfowl, and help reduce total maximum daily loads (TMDLs) in the ditch in accordance with TMDL reduction requirements set to go into effect in 2023.

These projects will impact wetlands and involve construction in a floodplain. In accordance with EO 11990, Protection of Wetlands, and EO 11988, Floodplain Management, JBLE-Langley published notice of this action on December 20-21, 2019, in the Daily Press to solicit any public concerns regarding the project's potential to impact wetlands and floodplains. No comments were received.

The analysis considered in detail the potential environmental impacts of the Proposed Action and alternatives including a No Action Alternative. The results, as found in the EA, show that the Proposed Action would not have a significant adverse impact on the environment, indicating that a Finding of No Significant Impact (FONSI)/Finding of No Practicable Alternative (FONPA) would be appropriate. An Environmental Impact Statement should not be necessary to implement the Proposed Action. The Draft EA and Draft FONSI/FONPA are available for review on JBLE-Langley's website at <https://www.jble.af.mil/Portals/46/Draft%20EA%20FONSI%20and%20FONPA%20.pdf>



EA%20FONSI%2001%20Public%20
Review JBLE-Langley Airfield%20
Improvements Oct2020_1.pdf. Cop-
ies are also available for review at the
Hampton Main Library, 4207 Victoria
Blvd., Hampton, VA. Written com-
ments on the Draft EA and Draft FON-
SI/FONPA are invited and will be ac-
cepted for a 30-day period beginning
October 30, 2020 and ending Novem-
ber 29, 2020. Comments for consider-
ation by JBLE-Langley on this docu-
ment should be provided in writing to
David Jennings by email at 633CES.
CEIE.NEPAPublicComment@us.af.
mil or by mail at 633d Civil Engineer
Squadron, 37 Sweeney Blvd, Langley
AFB, VA 23665. Mr. Jennings can be
reached at the email address provided
or at 757-225-4223.

The Air Force is aware of the poten-
tial impact of the ongoing coronavirus
(COVID-19) pandemic on the usual
methods of access to information and
ability to communicate, such as the
mass closure of local public libraries
and challenges with the sufficiency of
an increasingly overburdened internet.
The Air Force seeks to implement ap-
propriate additional measures to en-
sure that the public and all interested
stakeholders have the opportunity to
participate fully in this Environmental
Assessment process. Accordingly,
please do not hesitate to contact us
directly at the email address or tele-
phone number provided above; we are
available to discuss and help resolve
issues involving access to the Draft EA
and Proposed FONSI/FONPA, or the
ability to comment.

10/30, 10/31, 11/1/2020
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Notice Publish Date:

Friday, October 30, 2020

Notice Content

Notice of AvailabilityDraft Environmental Assessment (EA) of Airfield and Drainage ProjectsJoint Base Langley-Eustis, Langley Air Force Base, Virginia Joint Base Langley-Eustis, Langley Air Force Base (JBLE-Langley) has completed a Draft EA that evaluates the potential impacts of airfield improvement and drainage projects at JBLE-Langley. Projects evaluated in this EA include: Airfield Drainage and Grading, which will grade and fill areas of the airfield, including wetlands, and to reconstruct drainage structures, including installing new or repairing existing drain pipes, ditches, and culverts to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. This is required to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding. Recreational Vehicle Storage Lot, which will construct a new RV storage lot at a single, secure location that will accommodate approximately 250 RVs, trailers, and boats, including the RVs currently on the Durand Loop RV storage lot. The RV lot project is needed to improve security for valuable personally owned vehicles (POVs); reduce the risk of flooding damage to RVs stored at JBLE-Langley; and improve parking efficiency and nighttime operations.Bethel Housing Area Drainage Improvement, which will restore a stormwater drainage ditch near the Bethel Housing Area to reduce flooding, improve wetland habitat, increase habitat diversity, improve stormwater flow, and reduce streambank erosion along the ditch. This is needed to eliminate fish becoming trapped and dying in upstream pools, reduce the presence of stagnant water where mosquitoes breed, eliminate open-ponded reaches that attract waterfowl, and help reduce total maximum daily loads (TMDLs) in the ditch in accordance with TMDL reduction requirements set to go into effect in 2023.These projects will impact wetlands and involve construction in a floodplain. In accordance with EO 11990, Protection of Wetlands, and EO 11988, Floodplain Management, JBLE-Langley published notice of this action on December 20-21, 2019, in the Daily Press to solicit any public concerns regarding the project's potential to impact wetlands and floodplains. No comments were received.The analysis considered in detail the potential environmental impacts of the Proposed Action and alternatives including a No Action Alternative. The results, as found in the EA, show that the Proposed Action would not have a significant adverse impact on the environment, indicating that a Finding of No Significant Impact (FONSI)/Finding of No Practicable Alternative (FONPA) would be appropriate. An Environmental Impact Statement should not be necessary to implement the Proposed Action. The Draft EA and Draft FONSI/FONPA are available for review on JBLE-Langley's website at https://www.jble.af.mil/Portals/46/Draft%20EA%20FONSI%20for%20Public%20Review_JBLE-Langley_Airfield%20Improvements_Oct2020_1.pdf. Copies are also available for review at the Hampton Main Library, 4207 Victoria Blvd., Hampton, VA. Written comments on the Draft EA and Draft FONSI/FONPA are invited and will be accepted for a 30-day period beginning

October 30, 2020 and ending November 29, 2020. Comments for consideration by JBLE-Langley on this document should be provided in writing to David Jennings by email at 633CES.CEIE.NEPAPublicComment@us.af.mil or by mail at 633d Civil Engineer Squadron, 37 Sweeney Blvd, Langley AFB, VA 23665. Mr. Jennings can be reached at the email address provided or at 757-225-4223. The Air Force is aware of the potential impact of the ongoing coronavirus (COVID-19) pandemic on the usual methods of access to information and ability to communicate, such as the mass closure of local public libraries and challenges with the sufficiency of an increasingly overburdened internet. The Air Force seeks to implement appropriate additional measures to ensure that the public and all interested stakeholders have the opportunity to participate fully in this Environmental Assessment process. Accordingly, please do not hesitate to contact us directly at the email address or telephone number provided above; we are available to discuss and help resolve issues involving access to the Draft EA and Proposed FONSI/FONPA, or the ability to comment. 10/30, 10/31, 11/1/2020 6798997

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TETRA TECH

Reference Librarian
Main Library
4207 Victoria Blvd.
Hampton, VA 23669

October 26, 2020

Dear Reference Librarian:

Joint Base Langley-Eustis (JBLE) -Langley has completed an Environmental Assessment (EA) that evaluates proposed projects to improve drainage on the airfield, provide secure recreation space, and restore a drainage ditch. The enclosed draft EA evaluates potential impacts to the human and natural environment as a result of implementing the proposed actions. A copy of the draft Finding of No Significant Impact/Finding of No Practicable Alternative (FONSI/FONPA) is included with the printed version of the draft EA and on the enclosed CD.

Please make the enclosed draft EA and draft FONSI/FONPA available to the public for review for 30 days from the publication of a Notice of Availability in the *Daily Press*. The notice will be published first on either Friday, October 30, 2020 or Friday, November 6, 2020. The notice will run for 3 days.

Thank you. If you have any questions or require further information, please contact me at the email address or phone number below.

Sincerely,

Samuel Pett
Tetra Tech, Inc. (contractor)
sam.pett@tetrattech.com
703-385-2191



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 633D AIR BASE WING
JOINT BASE LANGLEY-EUSTIS VA

NOV 10 2023

Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Blvd
JBLE-Langley VA 23665-2107

Ms. Bettina Sullivan
VA Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street
Richmond VA 23219-2405

Dear Ms. Sullivan

The United States Air Force (Air Force) has prepared a Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI) evaluating the potential environmental impacts associated with the proposed Airfield and Drainage Projects at Joint Base Langley-Eustis, Langley Air Force Base (JBLE-Langley), Virginia. The draft EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations implementing NEPA, and the Air Force NEPA regulations. The proposed action includes the following specific projects:

Airfield Drainage and Grading, which will grade and fill areas of the airfield, including wetlands, and to reconstruct drainage structures, including installing new or repairing existing drain pipes, ditches, and culverts to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. This is required to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding.

Recreational Vehicle (RV) Storage Lot, which will construct a new RV storage lot at a single, secure location that will accommodate approximately 250 RVs, trailers, and boats, including the RVs currently on the Durand Loop RV storage lot. The RV lot project is needed to improve security for valuable personally owned vehicles (POVs), reduce the risk of flooding damage to RVs stored at JBLE-Langley and improve parking efficiency and nighttime operations.

Bethel Housing Area Drainage Improvement, which will restore a stormwater drainage ditch near the Bethel Housing Area to reduce flooding, improve wetland habitat, increase habitat diversity, improve stormwater flow, and reduce streambank erosion along the ditch. This is needed to eliminate fish from becoming trapped and dying in upstream pools, reduce the presence of stagnant water where mosquitoes can breed, eliminate open-ponded reaches that attract

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waterfowl, and help reduce total maximum daily loads (TMDLs) in the ditch in accordance with TMDL reduction requirements set to go into effect in 2023.

Executive Order 12372, Intergovernmental Review of Federal Programs, requires federal agencies to solicit federal agency as well as state and local government participation in the NEPA process. Accordingly, I am requesting your participation in the review and comment process. Copies of the Draft EA and the proposed FONSI are available under the Environmental Assessments section of the JBLE-Langley Environmental website, <https://www.jble.af.mil/About-Us/Units/Air-Force/Langley-Environmental>.

Please provide comments on the Draft EA and Proposed FONSI within 30 days of receipt of this letter to Mr. David Jennings at 37 Sweeney Blvd, JBLK-Langley VA 23665-2107 or by electronic mail to 633CES.CEIE.NEPAPublicComment@us.af.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Brenda W. Cook". The signature is fluid and cursive, with the first name "Brenda" being more prominent.

BRENDA W. COOK, DAFC
Deputy Base Civil Engineer



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 633D AIR BASE WING
JOINT BASE LANGLEY-EUSTIS VA

NOV 10 2023

Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Blvd
JBLE-Langley VA 23665-2107

Mr. Raymond T. Fernald
Environmental Services Section
VA Department of Game & Inland Fisheries
4010 West Broad Street
Richmond VA 23230-3916

Dear Mr. Fernald

The United States Air Force (Air Force) has prepared a Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI) evaluating the potential environmental impacts associated with the proposed Airfield and Drainage Projects at Joint Base Langley-Eustis, Langley Air Force Base (JBLE-Langley), Virginia. The draft EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations implementing NEPA, and the Air Force NEPA regulations. The proposed action includes the following specific projects:

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Sincerely,

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BRENDA W. COOK, DAFC
Deputy Base Civil Engineer



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 633D AIR BASE WING
JOINT BASE LANGLEY-EUSTIS VA

NOV 10 2022

Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Blvd
JBLE-Langley VA 23665-2107

Mr. Tony Watkinson
Habitat Management Division
VA Marine Resources Commission
Building 96, 380 Fenwick Road
Ft. Monroe VA 23651-1064

Dear Mr. Watkinson

The United States Air Force (Air Force) has prepared a Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI) evaluating the potential environmental impacts associated with the proposed Airfield and Drainage Projects at Joint Base Langley-Eustis, Langley Air Force Base (JBLE-Langley), Virginia. The draft EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations implementing NEPA, and the Air Force NEPA regulations. The proposed action includes the following specific projects:

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Sincerely,

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BRENDA W. COOK, DAFC
Deputy Base Civil Engineer



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 633D AIR BASE WING
JOINT BASE LANGLEY-EUSTIS VA

NOV 10 2022

Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Blvd
JBLE-Langley VA 23665-2107

Ms. Amy M. Ewing
Environmental Services Section
VA Department of Game & Inland Fisheries
4010 West Broad Street
Richmond VA 23230-3916

Dear Ms. Ewing

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HEADQUARTERS 633D AIR BASE WING
JOINT BASE LANGLEY-EUSTIS VA

NOV 10 2023

Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Blvd
JBLE-Langley VA 23665-2107

Mr. J. Randall Wheeler
City Manager
500 City Hall Avenue
Poquoson VA 23662-1996

Dear Mr. Wheeler

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HEADQUARTERS 633D AIR BASE WING
JOINT BASE LANGLEY-EUSTIS VA

NOV 10 2023

Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Blvd
JBLE-Langley VA 23665-2107

Mr. Andrew Griffey
Hampton Wetland Board
22 Lincoln Street
Hampton VA 23669-3522

Dear Mr. Griffey

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HEADQUARTERS 633D AIR BASE WING
JOINT BASE LANGLEY-EUSTIS VA

NOV 10 2022

Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Blvd
JBLE-Langley VA 23665-2107

Mayor McKinley L. Price
City of Newport News, Virginia
2400 Washington Ave
Newport News VA 23607-4301

Dear Mayor Price

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 633D AIR BASE WING
JOINT BASE LANGLEY-EUSTIS VA

NOV 10 2020

Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Blvd
JBLE-Langley VA 23665-2107

Mayor W. Eugene Hunt, Jr.
City of Poquoson, Virginia
500 City Hall Avenue
Poquoson VA 23662-1996

Dear Mayor Hunt

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JOINT BASE LANGLEY-EUSTIS VA

NOV 10 2022

Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Blvd
JBLE-Langley VA 23665-2107

Ms. Nicole Woodward
US Army Corps of Engineers, Regulatory Branch
803 Front St.
Norfolk VA 23510-1011

Dear Ms. Woodward

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 633D AIR BASE WING
JOINT BASE LANGLEY-EUSTIS VA

NOV 11 2020

Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Blvd
JBLE-Langley VA 23665-2107

Mayor Donnie Tuck
City of Hampton, Virginia
8th Floor, City Hall
22 Lincoln Street
Hampton VA 23669-3522

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HEADQUARTERS 633D AIR BASE WING
JOINT BASE LANGLEY-EUSTIS VA

NOV 10 2023

Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Blvd
JBLE-Langley VA 23665-2107

Mr. Neil Morgan
York County Administrator
PO Box 532
Yorktown VA 23690-0532

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Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Blvd
JBLE-Langley VA 23665-2107

Mr. Craig M. Galant, PE
Acting Director of Engineering
Department of Engineering
2400 Washington Ave
Newport News VA 23607-4301

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HEADQUARTERS 633D AIR BASE WING
JOINT BASE LANGLEY-EUSTIS VA

NOV 10 2023

Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Blvd
JBLE-Langley VA 23665-2107

Mr. Christopher DeHart
Environmental Services Manager
419 North Armistead Avenue
Hampton VA 23669-3475

Dear Mr. DeHart

The United States Air Force (Air Force) has prepared a Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI) evaluating the potential environmental impacts associated with the proposed Airfield and Drainage Projects at Joint Base Langley-Eustis, Langley Air Force Base (JBLE-Langley), Virginia. The draft EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations implementing NEPA, and the Air Force NEPA regulations. The proposed action includes the following specific projects:

Airfield Drainage and Grading, which will grade and fill areas of the airfield, including wetlands, and to reconstruct drainage structures, including installing new or repairing existing drain pipes, ditches, and culverts to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. This is required to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding.

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Bethel Housing Area Drainage Improvement, which will restore a stormwater drainage ditch near the Bethel Housing Area to reduce flooding, improve wetland habitat, increase habitat diversity, improve stormwater flow, and reduce streambank erosion along the ditch. This is needed to eliminate fish from becoming trapped and dying in upstream pools, reduce the presence of stagnant water where mosquitoes can breed, eliminate open-ponded reaches that attract

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waterfowl, and help reduce total maximum daily loads (TMDLs) in the ditch in accordance with TMDL reduction requirements set to go into effect in 2023.

Executive Order 12372, Intergovernmental Review of Federal Programs, requires federal agencies to solicit federal agency as well as state and local government participation in the NEPA process. Accordingly, I am requesting your participation in the review and comment process. Copies of the Draft EA and the proposed FONSI are available under the Environmental Assessments section of the JBLE-Langley Environmental website, <https://www.jble.af.mil/About-Us/Units/Air-Force/Langley-Environmental>.

Please provide comments on the Draft EA and Proposed FONSI within 30 days of receipt of this letter to Mr. David Jennings at 37 Sweeney Blvd, JBLK-Langley VA 23665-2107 or by electronic mail to 633CES.CEIE.NEPAPublicComment@us.af.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Brenda W. Cook". The signature is fluid and cursive, with the first name "Brenda" being more prominent than the last name "Cook".

BRENDA W. COOK, DAFC
Deputy Base Civil Engineer



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 633D AIR BASE WING
JOINT BASE LANGLEY-EUSTIS VA

NOV 10 2020

Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Blvd
JBLE-Langley VA 23665-2107

Mr. Keith Boyd
USDA-NRCS
203 Wimbledon Lane
Smithfield VA 23430-6020

Dear Mr. Boyd

The United States Air Force (Air Force) has prepared a Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI) evaluating the potential environmental impacts associated with the proposed Airfield and Drainage Projects at Joint Base Langley-Eustis, Langley Air Force Base (JBLE-Langley), Virginia. The draft EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations implementing NEPA, and the Air Force NEPA regulations. The proposed action includes the following specific projects:

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BRENDA W. COOK, DAFC
Deputy Base Civil Engineer



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 633D AIR BASE WING
JOINT BASE LANGLEY-EUSTIS VA

NOV 10 2022

Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Blvd
JBLE-Langley VA 23665-2107

Ms. Nora Theodore
Office of Environmental Programs
US EPA, Region III
1650 Arch Street (3EA30)
Philadelphia PA 19103-2087

Dear Ms. Theodore

The United States Air Force (Air Force) has prepared a Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI) evaluating the potential environmental impacts associated with the proposed Airfield and Drainage Projects at Joint Base Langley-Eustis, Langley Air Force Base (JBLE-Langley), Virginia. The draft EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations implementing NEPA, and the Air Force NEPA regulations. The proposed action includes the following specific projects:

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BRENDA W. COOK, DAFC
Deputy Base Civil Engineer



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 633D AIR BASE WING
JOINT BASE LANGLEY-EUSTIS VA

NOV 10 2022

Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Blvd
JBLE-Langley VA 23665-2107

Ms. Cindy Schulz, Field Supervisor
Ecological Services
U.S. Fish and Wildlife Service
6669 Short Lane
Gloucester VA 23061-4410

Dear Ms. Schulz

The United States Air Force (Air Force) has prepared a Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI) evaluating the potential environmental impacts associated with the proposed Airfield and Drainage Projects at Joint Base Langley-Eustis, Langley Air Force Base (JBLE-Langley), Virginia. The draft EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations implementing NEPA, and the Air Force NEPA regulations. The proposed action includes the following specific projects:

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BRENDA W. COOK, DAFC
Deputy Base Civil Engineer



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 633D AIR BASE WING
LANGLEY AIR FORCE BASE VA

Mr. David Jennings
633 CES/CEIE
37 Sweeney Blvd
Langley AFB, VA 23665-2107

November 19, 2020

Mr. Marc Holma
State Historic Preservation Office
2801 Kensington Avenue
Richmond, VA 23221

Dear Mr. Holma,

The 633 Air Base Wing implement several projects at JBLE-Langley discussed in the draft Environmental Assessment for Airfield and Drainage Projects at Joint Base Langley-Eustis, Langley Air Force Base (JBLE-Langley), Virginia. Project locations are shown at Attachments 1 and 2. These projects are:

- Airfield Drainage and Grading, which will grade and fill areas of the airfield, including wetlands, and to reconstruct drainage structures, including installing new or repairing existing drain pipes, ditches, and culverts to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. The area is depicted in Attachment 3. Note that the Phase I areas have already been completed, reference DHR File Number 2016-4013. This is required to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding. Part of this action will occur within the Langley Field Historic District (DHR ID 114-0165). The potential for this project was previously mentioned during consultations for a wetlands permit for a related project, reference DHR File Number 2017-3904. Note that site 44HT0117 is within the airfield area but will not be disturbed by this action.
- Recreational Vehicle (RV) Storage Lot (Attachment 4), which will construct a new RV storage lot at a single, secure location that will accommodate approximately 250 RVs, trailers, and boats, including the RVs currently on the Durand Loop RV storage lot. The RV lot project is needed to improve security for valuable personally owned vehicles (POVs), reduce the risk of flooding damage to RVs stored at JBLE-Langley and improve parking efficiency and nighttime operations.
- Bethel Housing Area Drainage Improvement (Attachment 5), which will restore a stormwater drainage ditch near the Bethel Housing Area to reduce flooding, improve wetland habitat, increase habitat diversity, improve stormwater flow, and reduce

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streambank erosion along the ditch. This is needed to eliminate fish from becoming trapped and dying in upstream pools, reduce the presence of stagnant water where mosquitoes can breed, eliminate open-ponded reaches that attract

In accordance with 36 CFR 800.5, we have applied the Criteria of Effect and Adverse Effect to this undertaking and found that there will be **No Adverse Effect** on historic properties.

The 633d Air Base Wing is determined to preserve and protect historic resources on JBLE-Langley. The above actions are required to support Air Force missions necessary to the National Defense. Please review the materials enclosed and contact us with any questions. If we do not hear from you within 30 days after your receipt of this letter, we will assume that you do not object to our determination and will proceed with the undertaking in accordance with the enclosed plans. Should you have any questions regarding this project, please contact Mr. David Jennings at (757) 225-4223 or david.jennings.4@us.af.mil. Thank you in advance for your consideration.

DAVID M. JENNINGS
Cultural Resources Manager

10 Attachments

1. Langley Aerial View
2. Bethel Housing Aerial View
3. Airfield Wetlands and Ditches
4. Durand Loop Recreational Vehicle Lot
5. Bethel Drainage
6. Langley Archive Search
7. Bethel Housing Archive Search
8. Langley Quad Excerpt
9. Bethel Housing Quad Excerpt
10. Draft Environmental Assessment for Airfield and Drainage Projects

To complete Airfield and Drainage Projects at JBLE-Langley (**No Adverse Effect**).

Concur: _____ Date: _____

JULIE V. LANGAN

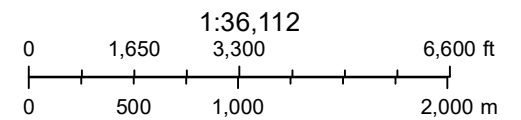
Director and State Historic Preservation Officer for the Commonwealth of Virginia

Langley



November 18, 2020

Attachment 1

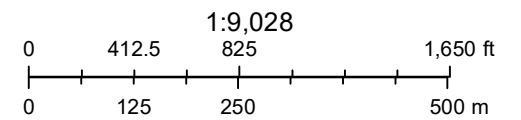


Bethel Housing

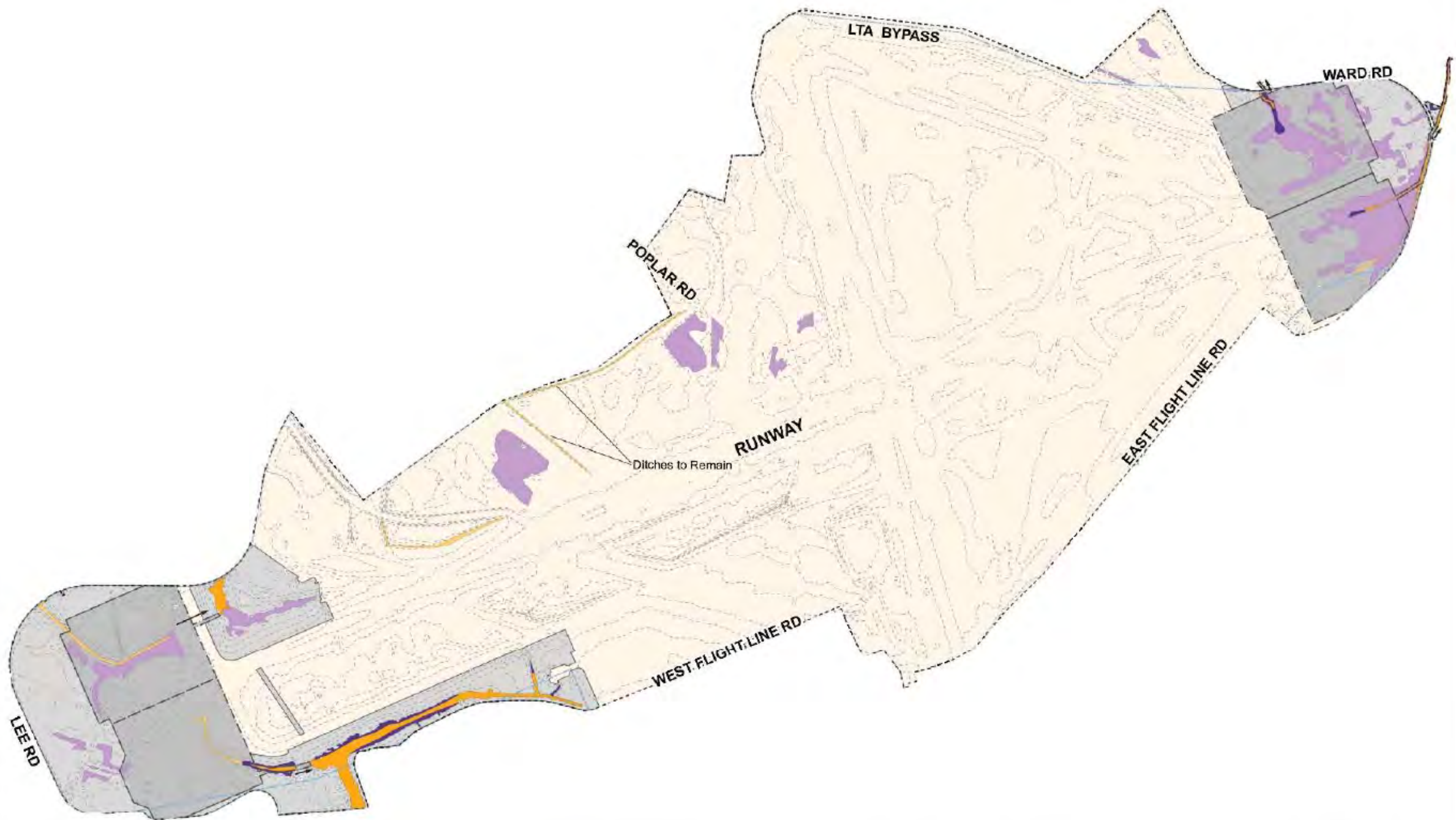


November 6, 2020

Attachment 2



Attachment 3



LEGEND

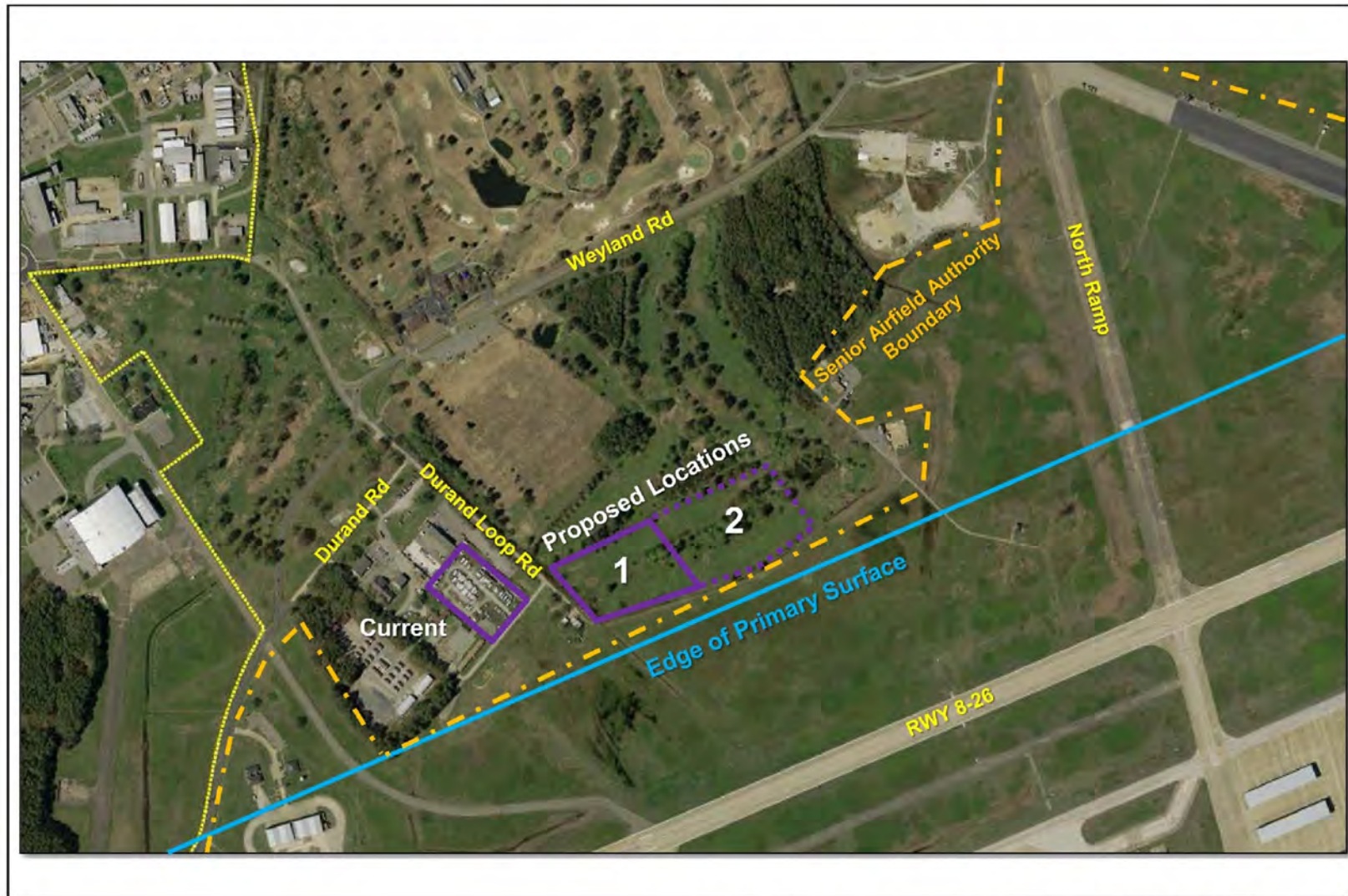
- Airfield Boundary
- Phase III Areas
- Phase II Areas
- Phase 1 Areas

Cowardin Classification (USACE Confirmed 8/22/2017)

- Intertidal Ditch
- Non-tidal Ditch
- Intertidal Emergent Wetland
- Non-tidal Emergent Wetland

Airfield Wetlands and Ditches









Attachment 4

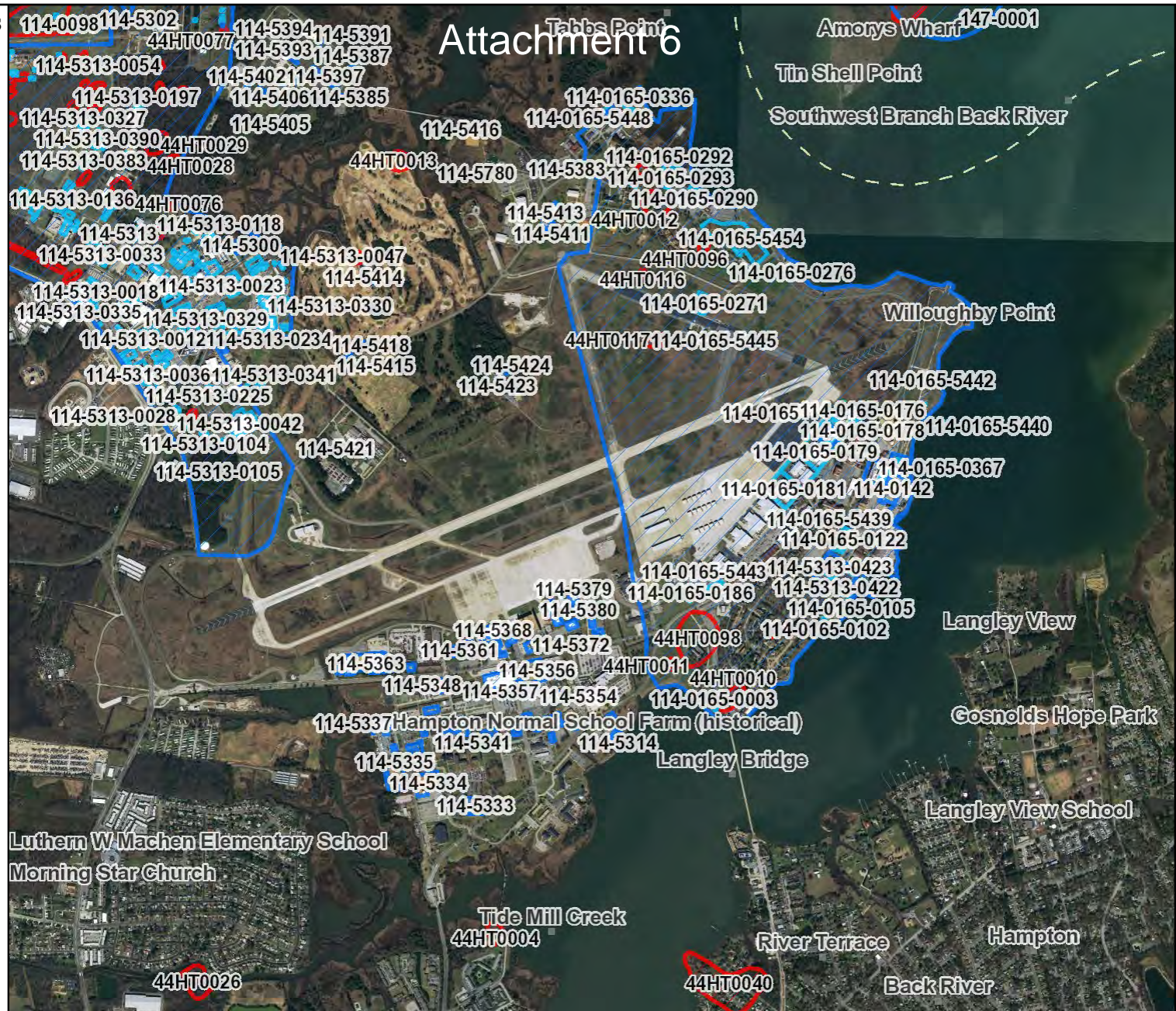


Durand Loop Recreational Vehicle Lot



Attachment 5

-  Architecture Resources
-  Architecture Labels
-  Individual Historic District Properties
-  Archaeological Resources
-  Archaeology Labels
-  DHR Easements
-  USGS GIS Place names
-  County Boundaries



Title: Langley AFB

Date: 11/6/2020

DISCLAIMER: Records of the Virginia Department of Historic Resources (DHR) have been gathered over many years from a variety of sources and the representation depicted is a cumulative view of field observations over time and may not reflect current ground conditions. The map is for general information purposes and is not intended for engineering, legal or other site-specific uses. Map may contain errors and is provided "as-is". More information is available in the DHR Archives located at DHR's Richmond office.

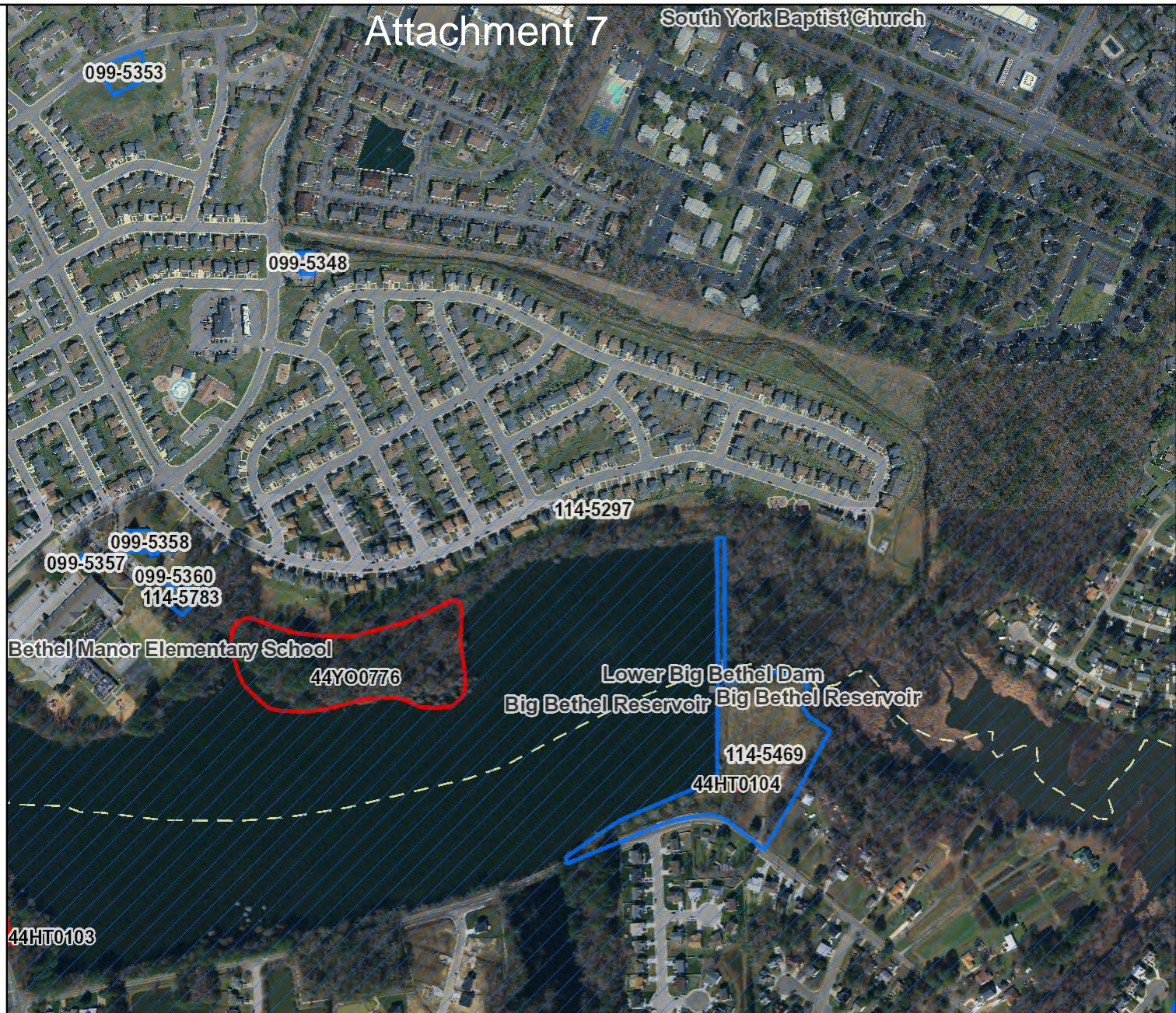
Notice if AE sites: Locations of archaeological sites may be sensitive the National Historic Preservation Act (NHPA), and the Archaeological Resources Protection Act (ARPA) and Code of Virginia §2.2-3705.7 (10). Release of precise locations may threaten archaeological sites and historic resources.

**Legend**

- Architecture Resources
- Architecture Labels
- Individual Historic District Properties
- Archaeological Resources
- Archaeology Labels
- DHR Easements
- USGS GIS Place names
- County Boundaries

Attachment 7

South York Baptist Church



Feet

0 200 400 600 800

1:9,028 / 1"=752 Feet

Title: Bethel Housing**Date: 11/6/2020**

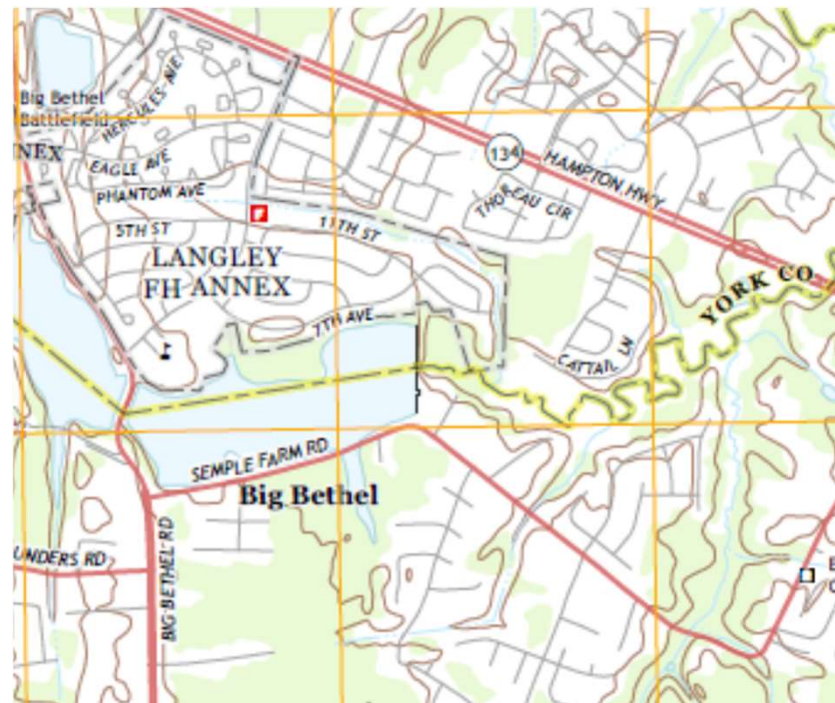
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Attachment 8



Attachment 9





DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 633D AIR BASE WING
JOINT BASE LANGLEY-EUSTIS VA

NOV 10 2020

Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Blvd
JBLE-Langley VA 23665-2107

Ms. Nicole Woodward
US Army Corps of Engineers, Regulatory Branch
803 Front St.
Norfolk VA 23510-1011

Dear Ms. Woodward

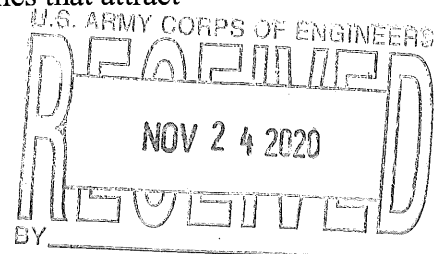
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Page 6 of 10

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BRENDA W. COOK, DAFC
Deputy Base Civil Engineer



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 633D AIR BASE WING
LANGLEY AIR FORCE BASE VA

NOV 09 2020

Ms. Brenda W. Cook
Deputy Base Civil Engineer
37 Sweeney Boulevard
Joint Base Langley-Eustis VA 23665-2107

Ms. Caitlin Rogers
Catawba Indian Nation
Tribal Historic Preservation Office
1536 Tom Steven Road
Rock Hill SC 29730-9535

Dear Ms. Rogers

In accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulation, 36 Code of Federal Regulation (CFR) Part 800, the United States Air Force (USAF) is providing information for your review and inviting the Catawba Indian Nation to engage in government-to-government consultation regarding proposed projects at Joint Base Langley-Eustis (JBLE-Langley), Virginia.

The USAF is preparing an Environmental Assessment (EA), provided in hard copy with this letter, to evaluate potential environmental consequences associated with the following proposed actions:

Airfield Drainage and Grading, which will grade and fill areas of the airfield, including wetlands, and to reconstruct drainage structures, including installing new or repairing existing drain pipes, ditches, and culverts to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. This is required to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding.

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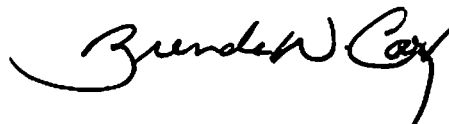
The Area of Potential Effects (APE) for this undertaking includes the proposed construction areas on JBLE-Langley and Bethel Housing. There are no recorded archaeological sites within the APE. A base wide survey, attached, identified no archaeological sites in the APE and demonstrated the APE is heavily disturbed by decades of previous construction activities and use, as well as the addition of fill material in certain areas. Therefore, JBLE-Langley has concluded the undertaking will have no effect on potentially eligible archaeological sites.

JBLE-Langley is not aware of any historic properties of religious or cultural significance located within the APE. However, we request assistance of the Catawba Indian Nation in identifying the presence of these properties within the APE and any effect the undertaking may have on these properties. It is not expected that undiscovered cultural resources would be found during implementation of the proposed undertaking; however, in the event of an inadvertent discovery during ground-disturbing operations, JBLE-Langley will cease work immediately, contact a professional archaeologist and initiate additional consultations with your office.

To ensure that your responses are incorporated into our planning process for this EA, we respectfully request you provide us with any response based on your review within 30 days, though we will accept responses provided after 30 days.

If you have any questions concerning this EA, please contact Mr. David Jennings, at (757) 225-4223, david.jennings.4@us.af.mil; or 37 Sweeney Blvd., JBLE-Langley, VA 23665. Thank you in advance for your assistance in this effort.

Sincerely,

A handwritten signature in black ink, appearing to read "Brenda W. Cook", with a stylized flourish at the end.

BRENDA W. COOK, DAFC
Deputy Base Civil Engineer

2 Attachments:

1. Draft Environmental Assessment for Airfield and Drainage Projects
2. Archeological Site Survey and Testing, Langley Air Force Base, Virginia

From: COOK, BRENDA W GS-14 USAF ACC 633 CES/CD
Sent: Friday, November 6, 2020 1:44 PM
To: wayne.adkins@att.net
Cc: ASKEGREN, MICHAEL D Lt Col USAF ACC 633 CES/CC; PATTON, CARMICHAEL T GS-13 USAF ACC 633 CES/CEIE; JENNINGS, DAVID M GS-12 USAF ACC 633 CES/CEIE; HARVISON, NATEISHA D GS-13 USAF ACC 633 CES/CEI
Subject: JBLE-Langley Airfield Improvements Environmental Assessment
Attachments: Draft EA FONSI for JBLE-Langley_Airfield Improvements_Oct2020.pdf

Dear Chief Adkins

In accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulation, 36 Code of Federal Regulation (CFR) Part 800, the United States Air Force (USAF) is providing information for your review and inviting the Chickahominy Indian Tribe to engage in government-to-government consultation regarding proposed projects at Joint Base Langley-Eustis (JBLE-Langley), Virginia.

The USAF is preparing an Environmental Assessment (EA) (attached) to evaluate potential environmental consequences associated with the following proposed actions:

Airfield Drainage and Grading, which will grade and fill areas of the airfield, including wetlands, and to reconstruct drainage structures, including installing new or repairing existing drain pipes, ditches, and culverts to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. This is required to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding.

Recreational Vehicle Storage Lot, which will construct a new Recreational Vehicle storage lot at a single, secure location that will accommodate approximately 250 RVs, trailers, and boats, including the RVs currently on the Durand Loop RV storage lot. The RV lot project is needed to improve security for valuable personally owned vehicles (POVs), reduce the risk of flooding damage to RVs stored at JBLE-Langley and improve parking efficiency and nighttime operations.

Bethel Housing Area Drainage Improvement, which will restore a stormwater drainage ditch near the Bethel Housing Area to reduce flooding, improve wetland habitat, increase habitat diversity, improve stormwater flow, and reduce streambank erosion along the ditch. This is needed to eliminate fish from becoming trapped and dying in upstream pools, reduce the presence of stagnant water where mosquitoes can breed, eliminate open-ponded reaches that attract waterfowl, and help reduce total maximum daily loads (TMDLs) in the ditch in accordance with TMDL reduction requirements set to go into effect in 2023.

The Area of Potential Effects (APE) for this undertaking includes the proposed construction areas on JBLE-Langley and Bethel Housing. There are no recorded archaeological sites within the APE. A base wide survey identified no archaeological sites in the APE and demonstrated the APE is heavily disturbed by decades of previous construction activities and use, as well as the addition of fill material in certain areas. Therefore, JBLE-Langley has concluded the undertaking will have no effect on potentially eligible archaeological sites.

The base wide survey file is too large to email, so we will send you a link to the DoD SAFE file exchange system. If you would prefer a hard copy or a disk, please let us know and we will be happy to provide these formats.

JBLE-Langley is not aware of any historic properties of religious or cultural significance located within the APE. However, we request assistance of the Chickahominy Indian Tribe in identifying the presence of these properties within the APE and any effect the undertaking may have on these properties. It is not expected that undiscovered cultural resources would be found during implementation of the proposed undertaking; however, in the event of an inadvertent discovery during ground-disturbing operations, JBLE-Langley will cease work immediately, contact a professional archaeologist and initiate additional consultations with your office.

To ensure that your responses are incorporated into our planning process for this EA, we respectfully request you provide us with any response based on your review within 30 days, though we will accept responses provided after 30 days.

If you have any questions concerning this EA, please contact Mr. David Jennings, at (757) 225-4223, david.jennings.4@us.af.mil; or 37 Sweeney Blvd., JBLE-Langley, VA 23665. Thank you in advance for your assistance in this effort.

Sincerely,

BRENDA W. COOK, DAFC
Deputy Base Civil Engineer

From: COOK, BRENDA W GS-14 USAF ACC 633 CES/CD
Sent: Friday, November 6, 2020 1:42 PM
To: Remedios.holmes@cied.org
Cc: ASKEGREN, MICHAEL D Lt Col USAF ACC 633 CES/CC; JENNINGS, DAVID M GS-12 USAF ACC 633 CES/CEIE; PATTON, CARMICHAEL T GS-13 USAF ACC 633 CES/CEIE; HARVISON, NATEISHA D GS-13 USAF ACC 633 CES/CEI
Subject: JBLE-Langley Airfield Improvements Environmental Assessment
Attachments: Draft EA FONSI for JBLE-Langley_Airfield Improvements_Oct2020.pdf

Dear Ms. Holmes

In accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulation, 36 Code of Federal Regulation (CFR) Part 800, the United States Air Force (USAF) is providing information for your review and inviting the Chickahominy Indian Tribe - Eastern Division to engage in government-to-government consultation regarding proposed projects at Joint Base Langley-Eustis (JBLE-Langley), Virginia.

The USAF is preparing an Environmental Assessment (EA) (attached) to evaluate potential environmental consequences associated with the following proposed actions:

Airfield Drainage and Grading, which will grade and fill areas of the airfield, including wetlands, and to reconstruct drainage structures, including installing new or repairing existing drain pipes, ditches, and culverts to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. This is required to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding.

Recreational Vehicle Storage Lot, which will construct a new Recreational Vehicle storage lot at a single, secure location that will accommodate approximately 250 RVs, trailers, and boats, including the RVs currently on the Durand Loop RV storage lot. The RV lot project is needed to improve security for valuable personally owned vehicles (POVs), reduce the risk of flooding damage to RVs stored at JBLE-Langley and improve parking efficiency and nighttime operations.

Bethel Housing Area Drainage Improvement, which will restore a stormwater drainage ditch near the Bethel Housing Area to reduce flooding, improve wetland habitat, increase habitat diversity, improve stormwater flow, and reduce streambank erosion along the ditch. This is needed to eliminate fish from becoming trapped and dying in upstream pools, reduce the presence of stagnant water where mosquitoes can breed, eliminate open-ponded reaches that attract waterfowl, and help reduce total maximum daily loads (TMDLs) in the ditch in accordance with TMDL reduction requirements set to go into effect in 2023.

The Area of Potential Effects (APE) for this undertaking includes the proposed construction areas on JBLE-Langley and Bethel Housing. There are no recorded archaeological sites within the APE. A base wide survey identified no archaeological sites in the APE and demonstrated the APE is heavily disturbed by decades of previous construction activities and use, as well as the addition of fill material in certain areas. Therefore, JBLE-Langley has concluded the undertaking will have no effect on potentially eligible archaeological sites.

The base wide survey file is too large to email, so we will send you a link to the DoD SAFE file exchange system. If you would prefer a hard copy or a disk, please let us know and we will be happy to provide these formats.

JBLE-Langley is not aware of any historic properties of religious or cultural significance located within the APE. However, we request assistance of the Chickahominy Indian Tribe - Eastern Division in identifying the presence of these properties within the APE and any effect the undertaking may have on these properties. It is not expected that undiscovered cultural resources would be found during implementation of the proposed undertaking; however, in the event of an inadvertent discovery during ground-disturbing operations, JBLE-Langley will cease work immediately, contact a professional archaeologist and initiate additional consultations with your office.

To ensure that your responses are incorporated into our planning process for this EA, we respectfully request you provide us with any response based on your review within 30 days, though we will accept responses provided after 30 days.

If you have any questions concerning this EA, please contact Mr. David Jennings, at (757) 225-4223, david.jennings.4@us.af.mil; or 37 Sweeney Blvd., JBLE-Langley, VA 23665. Thank you in advance for your assistance in this effort.

Sincerely,

BRENDA W. COOK, DAFC
Deputy Base Civil Engineer

Pett, Sam

From: COOK, BRENDA W GS-14 USAF ACC 633 CES/CD
Sent: Friday, November 6, 2020 1:47 PM
To: epaden@delawarenation-nsn.gov
Cc: SPRIGGS, PAMELA A GS-06 USAF ACC 633 CES/CCS; JENNINGS, DAVID M GS-12 USAF ACC 633 CES/CEIE; PATTON, CARMICHAEL T GS-13 USAF ACC 633 CES/CEIE; HARVISON, NATEISHA D GS-13 USAF ACC 633 CES/CEI; GERBER, BONNIE L CIV USAF ACC 633 CES/CEI; COOK, BRENDA W GS-14 USAF ACC 633 CES/CD; ASKEGREN, MICHAEL D Lt Col USAF ACC 633 CES/CC
Subject: JBLE-Langley Airfield Improvements Environmental Assessment
Attachments: Draft EA FONSI for JBLE-Langley_Airfield Improvements_Oct2020.pdf

Dear Ms. Paden

In accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulation, 36 Code of Federal Regulation (CFR) Part 800, the United States Air Force (USAF) is providing information for your review and inviting the Delaware Nation to engage in government-to-government consultation regarding proposed projects at Joint Base Langley-Eustis (JBLE-Langley), Virginia.

The USAF is preparing an Environmental Assessment (EA) (attached) to evaluate potential environmental consequences associated with the following proposed actions:

Airfield Drainage and Grading, which will grade and fill areas of the airfield, including wetlands, and to reconstruct drainage structures, including installing new or repairing existing drain pipes, ditches, and culverts to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. This is required to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding.

Recreational Vehicle Storage Lot, which will construct a new Recreational Vehicle storage lot at a single, secure location that will accommodate approximately 250 RVs, trailers, and boats, including the RVs currently on the Durand Loop RV storage lot. The RV lot project is needed to improve security for valuable personally owned vehicles (POVs), reduce the risk of flooding damage to RVs stored at JBLE-Langley and improve parking efficiency and nighttime operations.

Bethel Housing Area Drainage Improvement, which will restore a stormwater drainage ditch near the Bethel Housing Area to reduce flooding, improve wetland habitat, increase habitat diversity, improve stormwater flow, and reduce streambank erosion along the ditch. This is needed to eliminate fish from becoming trapped and dying in upstream pools, reduce the presence of stagnant water where mosquitoes can breed, eliminate open-ponded reaches that attract waterfowl, and help reduce total maximum daily loads (TMDLs) in the ditch in accordance with TMDL reduction requirements set to go into effect in 2023.

The Area of Potential Effects (APE) for this undertaking includes the proposed construction areas on JBLE-Langley and Bethel Housing. There are no recorded archaeological sites within the APE. A base wide survey identified no archaeological sites in the APE and demonstrated the APE is heavily disturbed by decades of previous construction activities and use, as well as the addition of fill material in certain areas. Therefore, JBLE-Langley has concluded the undertaking will have no effect on potentially eligible archaeological sites.

The base wide survey file is too large to email, so we will send you a link to the DoD SAFE file exchange system. If you would prefer a hard copy or a disk, please let us know and we will be happy to provide these formats.

JBLE-Langley is not aware of any historic properties of religious or cultural significance located within the APE. However, we request assistance of the Delaware Nation in identifying the presence of these properties within the APE and any effect the undertaking may have on these properties. It is not expected that undiscovered cultural resources would be found during implementation of the proposed undertaking; however, in the event of an inadvertent discovery during ground-disturbing operations, JBLE-Langley will cease work immediately, contact a professional archaeologist and initiate additional consultations with your office.

To ensure that your responses are incorporated into our planning process for this EA, we respectfully request you provide us with any response based on your review within 30 days, though we will accept responses provided after 30 days.

If you have any questions concerning this EA, please contact Mr. David Jennings, at (757) 225-4223, david.jennings.4@us.af.mil; or 37 Sweeney Blvd., JBLE-Langley, VA 23665. Thank you in advance for your assistance in this effort.

Sincerely,

BRENDA W. COOK, DAFC
Deputy Base Civil Engineer

Pett, Sam

From: Morrow, D Keith CIV USAF 733 MSG (USA) <david.k.morrow.civ@mail.mil>
Sent: Monday, November 30, 2020 4:23 PM
To: samflyingeagle48@yahoo.com
Cc: keithfanders@gmail.com; davehennaman@gmail.com; SPRIGGS, PAMELA A GS-06 USAF ACC 633 CES/CCS; JENNINGS, DAVID M GS-12 USAF ACC 633 CES/CEIE; PATTON, CARMICHAEL T GS-13 USAF ACC 633 CES/CEIE; HARVISON, NATEISHA D GS-13 USAF ACC 633 CES/CEI; GERBER, BONNIE L CIV USAF ACC 633 CES/CEI; COOK, BRENDA W GS-14 USAF ACC 633 CES/CD; ASKEGREN, MICHAEL D Lt Col USAF ACC 633 CES/CC
Subject: JBLE-Langley Airfield Improvements Environmental Assessment
Attachments: Draft EA FONSI for JBLE-Langley_Airfield Improvements_Oct2020.pdf

Dear Chief Bass

In accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulation, 36 Code of Federal Regulation (CFR) Part 800, the United States Air Force (USAF) is providing information for your review and inviting the Nansemond Indian Nation to engage in government-to-government consultation regarding proposed projects at Joint Base Langley-Eustis (JBLE-Langley), Virginia.

The USAF is preparing an Environmental Assessment (EA) (attached) to evaluate potential environmental consequences associated with the following proposed actions:

Airfield Drainage and Grading, which will grade and fill areas of the airfield, including wetlands, and to reconstruct drainage structures, including installing new or repairing existing drain pipes, ditches, and culverts to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. This is required to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding.

Recreational Vehicle Storage Lot, which will construct a new Recreational Vehicle storage lot at a single, secure location that will accommodate approximately 250 RVs, trailers, and boats, including the RVs currently on the Durand Loop RV storage lot. The RV lot project is needed to improve security for valuable personally owned vehicles (POVs), reduce the risk of flooding damage to RVs stored at JBLE-Langley and improve parking efficiency and nighttime operations.

Bethel Housing Area Drainage Improvement, which will restore a stormwater drainage ditch near the Bethel Housing Area to reduce flooding, improve wetland habitat, increase habitat diversity, improve stormwater flow, and reduce streambank erosion along the ditch. This is needed to eliminate fish from becoming trapped and dying in upstream pools, reduce the presence of stagnant water where mosquitoes can breed, eliminate open-ponded reaches that attract waterfowl, and help reduce total maximum daily loads (TMDLs) in the ditch in accordance with TMDL reduction requirements set to go into effect in 2023.

The Area of Potential Effects (APE) for this undertaking includes the proposed construction areas on JBLE-Langley and Bethel Housing. There are no recorded archaeological sites within the APE. A base wide survey identified no archaeological sites in the APE and demonstrated the APE is heavily disturbed by decades of previous construction activities and use, as well as the addition of fill material in certain areas. Therefore, JBLE-Langley has concluded the undertaking will have no effect on potentially eligible archaeological sites.

The base wide survey file is too large to email, so we will send you a link to the DoD SAFE file exchange system. If you would prefer a hard copy or a disk, please let us know and we will be happy to provide these formats.

JBLE-Langley is not aware of any historic properties of religious or cultural significance located within the APE. However, we request assistance of the Nansemond Indian Nation in identifying the presence of these properties within the APE and any effect the undertaking may have on these properties. It is not expected that undiscovered cultural resources would be found during implementation of the proposed undertaking; however, in the event of an inadvertent discovery during ground-disturbing operations, JBLE-Langley will cease work immediately, contact a professional archaeologist and initiate additional consultations with your office.

To ensure that your responses are incorporated into our planning process for this EA, we respectfully request you provide us with any response based on your review within 30 days, though we will accept responses provided after 30 days.

If you have any questions concerning this EA, please contact Mr. David Jennings, at (757) 225-4223, david.jennings.4@us.af.mil; or 37 Sweeney Blvd., JBLE-Langley, VA 23665. Thank you in advance for your assistance in this effort.

Sincerely,

D. Keith Morrow
Deputy Commander
733d Mission Support Group
Fort Eustis, VA 23604
DSN: 826-2908
Comm: 757-878-2908
Cell: 757-272-5497
Fax: 757-878-5722
email: david.k.morrow.civ@mail.mil

D. Keith Morrow
Deputy Commander
733d Mission Support Group
Fort Eustis, VA 23604
DSN: 826-2908
Comm: 757-878-2908
Cell: 757-272-5497
Fax: 757-878-5722
email: david.k.morrow.civ@mail.mil

Pett, Sam

From: COOK, BRENDA W GS-14 USAF ACC 633 CES/CD
Sent: Friday, November 6, 2020 1:48 PM
To: terry.clouthier@pamunkey.org
Cc: ASKEGREN, MICHAEL D Lt Col USAF ACC 633 CES/CC; JENNINGS, DAVID M GS-12 USAF ACC 633 CES/CEIE; PATTON, CARMICHAEL T GS-13 USAF ACC 633 CES/CEIE; HARVISON, NATEISHA D GS-13 USAF ACC 633 CES/CEI
Subject: JBLE-Langley Airfield Improvements Environmental Assessment
Attachments: Draft EA FONSI for JBLE-Langley_Airfield Improvements_Oct2020.pdf

Dear Mr. Clouthier

In accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulation, 36 Code of Federal Regulation (CFR) Part 800, the United States Air Force (USAF) is providing information for your review and inviting the Pamunkey Indian Tribe to engage in government-to-government consultation regarding proposed projects at Joint Base Langley-Eustis (JBLE-Langley), Virginia.

The USAF is preparing an Environmental Assessment (EA) (attached) to evaluate potential environmental consequences associated with the following proposed actions:

Airfield Drainage and Grading, which will grade and fill areas of the airfield, including wetlands, and to reconstruct drainage structures, including installing new or repairing existing drain pipes, ditches, and culverts to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. This is required to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding.

Recreational Vehicle Storage Lot, which will construct a new Recreational Vehicle storage lot at a single, secure location that will accommodate approximately 250 RVs, trailers, and boats, including the RVs currently on the Durand Loop RV storage lot. The RV lot project is needed to improve security for valuable personally owned vehicles (POVs), reduce the risk of flooding damage to RVs stored at JBLE-Langley and improve parking efficiency and nighttime operations.

Bethel Housing Area Drainage Improvement, which will restore a stormwater drainage ditch near the Bethel Housing Area to reduce flooding, improve wetland habitat, increase habitat diversity, improve stormwater flow, and reduce streambank erosion along the ditch. This is needed to eliminate fish from becoming trapped and dying in upstream pools, reduce the presence of stagnant water where mosquitoes can breed, eliminate open-ponded reaches that attract waterfowl, and help reduce total maximum daily loads (TMDLs) in the ditch in accordance with TMDL reduction requirements set to go into effect in 2023.

The Area of Potential Effects (APE) for this undertaking includes the proposed construction areas on JBLE-Langley and Bethel Housing. There are no recorded archaeological sites within the APE. A base wide survey identified no archaeological sites in the APE and demonstrated the APE is heavily disturbed by decades of previous construction activities and use, as well as the addition of fill material in certain areas. Therefore, JBLE-Langley has concluded the undertaking will have no effect on potentially eligible archaeological sites.

The base wide survey file is too large to email, so we will send you a link to the DoD SAFE file exchange system. If you would prefer a hard copy or a disk, please let us know and we will be happy to provide these formats.

JBLE-Langley is not aware of any historic properties of religious or cultural significance located within the APE. However, we request assistance of the Pamunkey Indian Tribe in identifying the presence of these properties within the APE and any effect the undertaking may have on these properties. It is not expected that undiscovered cultural resources would be found during implementation of the proposed undertaking; however, in the event of an inadvertent discovery during ground-disturbing operations, JBLE-Langley will cease work immediately, contact a professional archaeologist and initiate additional consultations with your office.

To ensure that your responses are incorporated into our planning process for this EA, we respectfully request you provide us with any response based on your review within 30 days, though we will accept responses provided after 30 days.

If you have any questions concerning this EA, please contact Mr. David Jennings, at (757) 225-4223, david.jennings.4@us.af.mil; or 37 Sweeney Blvd., JBLE-Langley, VA 23665. Thank you in advance for your assistance in this effort.

Sincerely,

BRENDA W. COOK, DAFC
Deputy Base Civil Engineer

Pett, Sam

From: Morrow, D Keith CIV USAF 733 MSG (USA) <david.k.morrow.civ@mail.mil>
Sent: Monday, November 30, 2020 4:21 PM
To: chiefannerich@aol.com
Cc: ellen@culturalheritagepartners.com; marion@culturalheritagepartners.com; JENNINGS, DAVID M GS-12 USAF ACC 633 CES/CEIE; PATTON, CARMICHAEL T GS-13 USAF ACC 633 CES/CEIE; SPRIGGS, PAMELA A GS-06 USAF ACC 633 CES/CCS; HARVISON, NATEISHA D GS-13 USAF ACC 633 CES/CEI; GERBER, BONNIE L CIV USAF ACC 633 CES/CEI; rappahannocktrib@aol.com; COOK, BRENDA W GS-14 USAF ACC 633 CES/CD; ASKEGREN, MICHAEL D Lt Col USAF ACC 633 CES/CC
Subject: JBLE-Langley Airfield Improvements Environmental Assessment
Attachments: Draft EA FONSI for JBLE-Langley_Airfield Improvements_Oct2020.pdf

Dear Chief Richardson

In accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulation, 36 Code of Federal Regulation (CFR) Part 800, the United States Air Force (USAF) is providing information for your review and inviting the Rappahannock Tribe to engage in government-to-government consultation regarding proposed projects at Joint Base Langley-Eustis (JBLE-Langley), Virginia.

The USAF is preparing an Environmental Assessment (EA) (attached) to evaluate potential environmental consequences associated with the following proposed actions:

Airfield Drainage and Grading, which will grade and fill areas of the airfield, including wetlands, and to reconstruct drainage structures, including installing new or repairing existing drain pipes, ditches, and culverts to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. This is required to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding.

Recreational Vehicle Storage Lot, which will construct a new Recreational Vehicle storage lot at a single, secure location that will accommodate approximately 250 RVs, trailers, and boats, including the RVs currently on the Durand Loop RV storage lot. The RV lot project is needed to improve security for valuable personally owned vehicles (POVs), reduce the risk of flooding damage to RVs stored at JBLE-Langley and improve parking efficiency and nighttime operations.

Bethel Housing Area Drainage Improvement, which will restore a stormwater drainage ditch near the Bethel Housing Area to reduce flooding, improve wetland habitat, increase habitat diversity, improve stormwater flow, and reduce streambank erosion along the ditch. This is needed to eliminate fish from becoming trapped and dying in upstream pools, reduce the presence of stagnant water where mosquitoes can breed, eliminate open-ponded reaches that attract waterfowl, and help reduce total maximum daily loads (TMDLs) in the ditch in accordance with TMDL reduction requirements set to go into effect in 2023.

The Area of Potential Effects (APE) for this undertaking includes the proposed construction areas on JBLE-Langley and Bethel Housing. There are no recorded archaeological sites within the APE. A base wide survey identified no archaeological sites in the APE and demonstrated the APE is heavily disturbed by decades of previous construction activities and use, as well as the addition of fill material in certain areas. Therefore, JBLE-Langley has concluded the undertaking will have no effect on potentially eligible archaeological sites.

The base wide survey file is too large to email, so we will send you a link to the DoD SAFE file exchange system. We will also provide a hard copy of the materials to you.

JBLE-Langley is not aware of any historic properties of religious or cultural significance located within the APE. However, we request assistance of the Rappahannock Tribe in identifying the presence of these properties within the APE and any effect the undertaking may have on these properties. It is not expected that undiscovered cultural resources would be found during implementation of the proposed undertaking; however, in the event of an inadvertent discovery during ground-disturbing operations, JBLE-Langley will cease work immediately, contact a professional archaeologist and initiate additional consultations with your office.

To ensure that your responses are incorporated into our planning process for this EA, we respectfully request you provide us with any response based on your review within 30 days, though we will accept responses provided after 30 days.

If you have any questions concerning this EA, please contact Mr. David Jennings, at (757) 225-4223, david.jennings.4@us.af.mil; or 37 Sweeney Blvd., JBLE-Langley, VA 23665. Thank you in advance for your assistance in this effort.

Sincerely,

D. Keith Morrow
Deputy Commander
733d Mission Support Group
Fort Eustis, VA 23604
DSN: 826-2908
Comm: 757-878-2908
Cell: 757-272-5497
Fax: 757-878-5722
email: david.k.morrow.civ@mail.mil

Pett, Sam

From: Morrow, D Keith CIV USAF 733 MSG (USA) <david.k.morrow.civ@mail.mil>
Sent: Monday, November 30, 2020 4:22 PM
To: info@umtribe.org; wfrankadams@verizon.net
Cc: SPRIGGS, PAMELA A GS-06 USAF ACC 633 CES/CCS; JENNINGS, DAVID M GS-12 USAF ACC 633 CES/CEIE; PATTON, CARMICHAEL T GS-13 USAF ACC 633 CES/CEIE; HARVISON, NATEISHA D GS-13 USAF ACC 633 CES/CEI; GERBER, BONNIE L CIV USAF ACC 633 CES/CEI; COOK, BRENDA W GS-14 USAF ACC 633 CES/CD; ASKEGREN, MICHAEL D Lt Col USAF ACC 633 CES/CC
Subject: JBLE-Langley Airfield Improvements Environmental Assessment
Attachments: Draft EA FONSI for JBLE-Langley_Airfield Improvements_Oct2020.pdf

Dear Chief Adams

In accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulation, 36 Code of Federal Regulation (CFR) Part 800, the United States Air Force (USAF) is providing information for your review and inviting the Upper Mattaponi Tribe to engage in government-to-government consultation regarding proposed projects at Joint Base Langley-Eustis (JBLE-Langley), Virginia.

The USAF is preparing an Environmental Assessment (EA) (attached) to evaluate potential environmental consequences associated with the following proposed actions:

Airfield Drainage and Grading, which will grade and fill areas of the airfield, including wetlands, and to reconstruct drainage structures, including installing new or repairing existing drain pipes, ditches, and culverts to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. This is required to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding.

Recreational Vehicle Storage Lot, which will construct a new Recreational Vehicle storage lot at a single, secure location that will accommodate approximately 250 RVs, trailers, and boats, including the RVs currently on the Durand Loop RV storage lot. The RV lot project is needed to improve security for valuable personally owned vehicles (POVs), reduce the risk of flooding damage to RVs stored at JBLE-Langley and improve parking efficiency and nighttime operations.

Bethel Housing Area Drainage Improvement, which will restore a stormwater drainage ditch near the Bethel Housing Area to reduce flooding, improve wetland habitat, increase habitat diversity, improve stormwater flow, and reduce streambank erosion along the ditch. This is needed to eliminate fish from becoming trapped and dying in upstream pools, reduce the presence of stagnant water where mosquitoes can breed, eliminate open-ponded reaches that attract waterfowl, and help reduce total maximum daily loads (TMDLs) in the ditch in accordance with TMDL reduction requirements set to go into effect in 2023.

The Area of Potential Effects (APE) for this undertaking includes the proposed construction areas on JBLE-Langley and Bethel Housing. There are no recorded archaeological sites within the APE. A base wide survey identified no archaeological sites in the APE and demonstrated the APE is heavily disturbed by decades of previous construction activities and use, as well as the addition of fill material in certain areas. Therefore, JBLE-Langley has concluded the undertaking will have no effect on potentially eligible archaeological sites.

The base wide survey file is too large to email, so we will send you a link to the DoD SAFE file exchange system. If you would prefer a hard copy or a disk, please let us know and we will be happy to provide these formats.

JBLE-Langley is not aware of any historic properties of religious or cultural significance located within the APE. However, we request assistance of the Upper Mattaponi Tribe in identifying the presence of these properties within the APE and any effect the undertaking may have on these properties. It is not expected that undiscovered cultural resources would be found during implementation of the proposed undertaking; however, in the event of an inadvertent discovery during ground-disturbing operations, JBLE-Langley will cease work immediately, contact a professional archaeologist and initiate additional consultations with your office.

To ensure that your responses are incorporated into our planning process for this EA, we respectfully request you provide us with any response based on your review within 30 days, though we will accept responses provided after 30 days.

If you have any questions concerning this EA, please contact Mr. David Jennings, at (757) 225-4223, david.jennings.4@us.af.mil; or 37 Sweeney Blvd., JBLE-Langley, VA 23665. Thank you in advance for your assistance in this effort.

Sincerely,

D. Keith Morrow
Deputy Commander
733d Mission Support Group
Fort Eustis, VA 23604
DSN: 826-2908
Comm: 757-878-2908
Cell: 757-272-5497
Fax: 757-878-5722
email: david.k.morrow.civ@mail.mil

D. Keith Morrow
Deputy Commander
733d Mission Support Group
Fort Eustis, VA 23604
DSN: 826-2908
Comm: 757-878-2908
Cell: 757-272-5497
Fax: 757-878-5722
email: david.k.morrow.civ@mail.mil



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 1111 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

February 9, 2021

Mr. David Jennings
NEPA Program Manager
633 CES/CEIE
37 Sweeney Boulevard
Langley Air Force Base, Virginia 23665
Via email: david.jennings.4@us.af.mil

RE: Draft Environmental Assessment and Federal Consistency Determination for
Airfield and Drainage Projects at Joint Base Langley-Eustis, U.S. Air Force, City
of Hampton and York County, DEQ 20-175F

Dear Mr. Jennings:

The Commonwealth of Virginia has completed its review of the Draft Environmental Assessment (EA) dated October 2020 (received December 16, 2020) and Federal Consistency Determination (FCD) dated December 2020 (received December 17, 2020) for the above referenced project. The Department of Environmental Quality (DEQ) is responsible for coordinating Virginia's review of EAs submitted under the National Environmental Policy Act (NEPA) and responding to appropriate federal officials on behalf of the Commonwealth. DEQ is also responsible for coordinating Virginia's review of FCDs submitted pursuant to the Coastal Zone Management Act (CZMA) and providing the state's response. The following agencies participated in the review of the EA and FCD:

Department of Environmental Quality
Department of Conservation and Recreation
Department of Wildlife Resources
Marine Resources Commission
Department of Health
Department of Historic Resources

In addition, the Hampton Roads Planning District Commission and the City of Hampton were invited to comment on the proposal.

PROJECT DESCRIPTION

The U.S. Department of the Air Force (Air Force) proposes to construct Installation

Development Projects at Joint Base Langley-Eustis, Langley Air Force Base (JBLE-Langley) in the City of Hampton and York County, Virginia. The installation is bound on three sides by the northwest and southwest branches of the Back River. Access onto the base is via four gate entrances: Armistead Avenue, LaSalle Avenue, King Street, and NASA's Durand gate. Three projects make up the Installation Development Projects:

- Airfield Storm Drainage and Grading. The proposed action of the airfield storm drainage and grading project is to grade and fill areas of the airfield, including wetlands, and to reconstruct drainage structures, including installing new or repairing existing drain pipes, ditches, and culverts. The purpose of this project is to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. The airfield storm drainage and grading project is needed to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding.
- Recreational Vehicle Storage Lot. This proposed action is to construct a new RV storage lot at a single, secure location. The purpose of the RV lot project is to provide JBLE-Langley service members with a single, secure location that will accommodate approximately 250 RVs, trailers, and boats, including the RVs currently on the Durand Loop RV storage lot. The RV lot project is needed to improve security for valuable personally owned vehicles (POVs); reduce the risk of flooding damage to RVs stored at JBLE-Langley; and improve parking efficiency and nighttime operations.
- Bethel Housing Area Drainage Improvement. The proposed action of restoring a stormwater drainage ditch near the Bethel Housing Area is to reduce flooding, improve wetland habitat, increase habitat diversity, improve stormwater flow, and reduce streambank erosion along the ditch. The purpose of the project is to improve water quality, flow, and habitat in and along the ditch. The restoration project is needed to eliminate fish becoming trapped and dying in upstream pools, reduce the presence of stagnant water where mosquitoes breed, eliminate open-ponded reaches that attract waterfowl, and help reduce total maximum daily loads (TMDLs) in the ditch in accordance with TMDL reduction requirements set to go into effect in 2023.

CONCLUSION

Provided activities are performed in accordance with the recommendations which follow in the Impacts and Mitigation section of this report, this proposal is unlikely to have significant effects on ambient air quality, water quality, wetlands, important farmland, forest resources, and historic resources. It is unlikely to adversely affect species of plants or insects listed by state agencies as rare, threatened, or endangered.

ENVIRONMENTAL IMPACTS AND MITIGATION

1. Water Quality and Wetlands. According to the EA (page 4-4), activities related to the Airfield Storm Drainage and Grading and Recreational Vehicle Storage Lot Projects would be expected to contribute minor amounts of sediment to stormwater runoff and to nearby surface waters but use of best management practices (BMPs) as specified in construction permits and the projects' Stormwater Pollution Prevention Plans (SWPPPs) would ensure minimal impacts on water quality and aquatic life. The Bethel Housing Drainage Improvement Project would result in the disturbance of soils along the ditch and the project would be expected to contribute minor amounts of sediment to stormwater runoff and to nearby surface waters. Long-term beneficial effects on water quality, wetlands, and aquatic life would be expected after completion of the project.

The Airfield Storm Drainage and Grading Project by design would result in a loss of 11.56 acres of wetlands during Phase II, consisting of 1.36 acres of tidal emergent wetlands, 4.74 acres of tidal open water ditch, 5.27 acres of palustrine emergent wetlands, and 0.19 acres of nontidal open water ditch. Phase III would result in removing 8.82 acres of wetlands, consisting of 8.29 acres of palustrine emergent wetlands and 0.53 acre of nontidal open water ditch (EA, page 2-1). JBLE-Langley received a Virginia Water Protection Permit (17-0458) effective October 1, 2018 and a U.S. Army Corps of Engineers (Corps) Permit (NOA-2017-00574), effective October 12, 2018, for impacts to jurisdictional waters from the Airfield Storm Drainage and Grading Project (EA, page 4-4).

1(a) Agency Jurisdiction.

(i) Department of Environmental Quality

The State Water Control Board promulgates Virginia's water regulations covering a variety of permits to include the [Virginia Pollutant Discharge Elimination System Permit](#) regulating point source discharges to surface waters, Virginia Pollution Abatement Permit regulating sewage sludge, storage and land application of biosolids, industrial wastes (sludge and wastewater), municipal wastewater, and animal wastes, the [Surface and Groundwater Withdrawal Permit](#), and the [Virginia Water Protection \(VWP\) Permit](#) regulating impacts to streams, wetlands, and other surface waters. The VWP permit is a state permit which governs wetlands, surface water, and surface water withdrawals and 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 VWP Permit Program is under the Office of Wetlands and Stream Protection, within the DEQ Division of Water Permitting. In addition to central office staff that review and issue VWP permits for transportation and water withdrawal projects, the six DEQ regional offices perform permit application reviews and issue permits for the covered activities:

- Clean Water Act, §401;
- Section 404(b)(i) Guidelines Mitigation Memorandum of Agreement (2/90);
- State Water Control Law, Virginia Code section 62.1-44.15:20 *et seq.*; and

- State Water Control *Regulations*, 9 VAC 25-210-10.

(ii) Virginia Marine Resources Commission

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.

1(b) Agency Findings.

(i) Department of Environmental Quality

DEQ confirms that a VWP Individual Permit (17-0458) was issued on October 1, 2018, for jurisdictional impacts related to the Airfield Storm Drainage and Grading Project. The VWP Permit Program at the DEQ Tidewater Regional Office (TRO) finds that permanent or temporary impacts to surface waters and wetlands from the remaining Development Projects may require a permit pursuant to §401 of the Clean Water Act, Virginia Code §62.1-44.15:20, and Virginia Administrative Code 9 VAC 25-210-10 *et seq.* Provided that any and all necessary permits are obtained and complied with, the project will be consistent with DEQ program requirements.

(ii) Virginia Marine Resources Commission

VMRC confirms that it received the Air Force's JPA (17-0452) for the Airfield Storm Drainage and Grading Project on March 15, 2017. After completion of the JPA review process, a No Permit Necessary determination was issued by VMRC on October 5, 2017.

VMRC finds that the proposed Bethel House Area Drainage Improvements Project may fall within VMRC's jurisdiction and may require a permit for impacts to tidal wetlands. The Bethel Housing Area Drainage Improvement Project would restore 0.5 acre of wetland along the ditch. Overall, VMRC has no objection to the Air Force's consistency finding as proposed.

1(c) Requirements. Permanent and temporary impacts to jurisdictional waters will require permitting pursuant to §401 of the Clean Water Act, Virginia Code §62.1-44.15:20, and Virginia Administrative Code 9 VAC 25-210-10 *et seq.* Impacts to tidal wetlands will require a permit from the Hampton Wetlands Board and necessary mitigation will be determined during the permitting process. The permitting process is initiated upon the submission of a Joint Permit Application (JPA) to VMRC, which serves as the clearinghouse for JPA review process. VMRC will distribute the JPA to DEQ, Hampton Wetlands Board, and the Corps for review under applicable state, local and federal laws and regulations.

1(d) Recommendations. In general, DEQ recommends that stream and wetland impacts be avoided to the maximum extent practicable. To minimize unavoidable impacts to wetlands and waterways, DEQ recommends the following practices:

- Operate machinery and construction vehicles outside of stream-beds and wetlands; use synthetic mats when in-stream work is unavoidable.
- Preserve the top 12 inches of trench material removed from wetlands for use as wetland seed and root-stock in the excavated area.
- Erosion and sediment controls should be in place prior to clearing and grading, and maintained in good working order to minimize impacts to state waters. The controls should remain in place until the area is stabilized.
- Place heavy equipment, located in temporarily impacted wetland areas, on mats, geotextile fabric, or use other suitable measures to minimize soil disturbance, to the maximum extent practicable.
- Restore all temporarily disturbed wetland areas to pre-construction conditions and plant or seed with appropriate wetlands vegetation in accordance with the cover type (emergent, scrub-shrub, or forested). The applicant should take all appropriate measures to promote revegetation of these areas. Stabilization and restoration efforts should occur immediately after the temporary disturbance of each wetland area instead of waiting until the entire project has been completed.
- Place all materials which are temporarily stockpiled in wetlands, designated for use for the immediate stabilization of wetlands, on mats, geotextile fabric in order to prevent entry in state waters. These materials should be managed in a manner that prevents leachates from entering state waters and must be entirely removed within thirty days following completion of that construction activity. The disturbed areas should be returned to their original contours, stabilized within thirty days following removal of the stockpile, and restored to the original vegetated state.
- Flag or clearly mark all non-impacted surface waters within the project or right-of-way limits that are within 50 feet of any clearing, grading, or filling activities for the life of the construction activity within that area. The project proponent should notify all contractors that these marked areas are surface waters where no activities are to occur.
- Employ measures to prevent spills of fuels or lubricants into state waters.

1(e) CZMA Federal Consistency. The Development Projects are consistent to the maximum extent practicable with the tidal and nontidal wetlands enforceable policy of the Virginia Coastal Zone Management (CZM) Program, provided all required permits and/or authorizations are obtained prior to construction (see Federal Consistency under the CZMA (pages 18 and 19) for additional information).

2. State Subaqueous Lands. In addition to the instream impacts from the Airfield Storm Drainage and Grading Project described in the previous section, the Bethel Housing Drainage Improvement Project would entail stabilizing existing drainage channels and control the grade of a stream; installation of instream structures

throughout the stream system to provide habitat diversity; improving the locations of stormwater outfalls into the stream by enhancing preformed scour holes or installing vernal pools; installing a stormwater management pool at a downstream location to treat incoming stormwater from upstream locations and to serve as additional habitat for gizzard shad (*Dorosoma cepedianum*); and the installation of a drop structure to discourage shad from moving upstream (EA, page 2-4).

2(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.

2(b) Agency Findings. VMRC received the Air Force's JPA (17-0452) for the Airfield Storm Drainage and Grading Project on March 15, 2017, and issued a No Permit Necessary determination on October 5, 2017.

VMRC finds that the proposed Bethel House Area Drainage Improvements Project may fall within VMRC's jurisdiction and may require a permit for impacts to state subaqueous lands. As proposed, VMRC has no objection to the Air Force's consistency finding.

2(c) Requirements. VMRC's eventual permit action and identification of specific permit conditions cannot be finalized until receipt of the required JPA and public interest permit review process. Any permit decision reached by the Commission will clarify the permit conditions that are necessary to insure project consistency with impacts to submerged lands.

2(d) CZMA Federal Consistency. The proposed Development Projects will be consistent to the maximum extent practicable with the subaqueous lands enforceable policy of the Virginia CZM Program provided the applicant obtains and complies with a permit issued by VMRC (see Federal Consistency under the CZMA (pages 18 and 19) for additional information).

3. Erosion and Sediment Control and Stormwater Management. The EA does not include a discussion of erosion and sediment control requirement applicable to the Development Projects. However, the Coastal Zone Federal Consistency Determination (Appendix B, page B-8) states that the Air Force would use best management practices to reduce the chance of nonpoint source impacts. Site-specific Erosion and Sediment Control Plans would be generated for DEQ approval. JBLE-Langley maintains a Stormwater Pollution Prevention Plan that is updated annually and addresses stormwater impacts and nonpoint source pollution.

3(a) Agency Jurisdiction. The DEQ [Office of Stormwater Management \(OSWM\)](#) administers the following laws and regulations governing construction activities:

- Virginia Erosion and Sediment Control Law (§ 62.1-44.15:51 *et seq.*) and *Regulations* (9 VAC 25-840) (VESCL&R);
- Virginia Stormwater Management Act (VSMA, § 62.1-44.15:24 *et seq.*);
- Virginia Stormwater Management Program (VSMP) Regulation (9 VAC 25-870); and
- 2014 General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharges of Stormwater from Construction Activities (9 VAC 25-880).

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 (9 VAC 25-890-40).

3(b) Requirements.

(i) Erosion and Sediment Control and Stormwater Management Plans

The Air Force and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with *VESCL&R* and *VSWML&R*, 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, federal consistency under the Coastal Zone Management Act). 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 2,500 square feet in Chesapeake Bay Preservation Area would be regulated by *VESCL&R*. Accordingly, the Air Force must prepare and implement erosion and sediment control (ESC) plans as individual projects are implemented to ensure compliance with state law and regulations. The ESC plans must be submitted to DEQ-TRO for review for compliance.

Land-disturbing activities that result in the total land disturbance of equal to or greater than 2,500 square feet in a Chesapeake Bay Preservation Area would be regulated by *VSWML&R*. Accordingly, the Air Force must prepare and implement a Stormwater Management (SWM) plans as individual projects are implemented to ensure compliance with state law and regulations. The SWM plans must be submitted to DEQ-TRO for review for compliance.

The Air Force 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.*]

(ii) General Permit for Discharges of Stormwater from Construction Activities (VAR10)

The owner or operator of projects involving land-disturbing activities of equal to or greater than one acre is required to apply for registration coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project-specific stormwater pollution prevention plan (SWPPP). Construction activities requiring registration also include land disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan of development will collectively disturb equal to or greater than one acre.

- The SWPPP must be prepared prior to submission of the registration statement for coverage under the General Permit.
- 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 [Construction General Permit](#) webpage. [Reference: Virginia Stormwater Management Act 62.1-44.15 *et seq.*; VSMP Permit Regulations 9 VAC 25-880 *et seq.*].

3(c) CZMA Federal Consistency. The Development Projects will be consistent to the maximum extent practicable with the nonpoint source pollution control enforceable policies of the Virginia CZM Program, provided the required permits and authorizations are obtained and complied with (see Federal Consistency under the CZMA (pages 18 and 19) for additional information).

4. Air Emissions. According to the EA (page 4-3), air emissions are expected to be generated only from temporary construction-related activities, as no new construction of permanent stationary air emissions sources is proposed. Emissions of volatile organic compounds and NO_x for the proposed actions do not exceed the General Conformity rule *de minimis* thresholds.

4(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, 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 major State projects are:

- Open burning: 9 VAC 5-130 *et seq.*
- Fugitive dust control: 9 VAC 5-50-60 *et seq.*
- Permits for fuel-burning equipment: 9 VAC 5-80-1100 *et seq.*

4(b) Agency Findings. According to the DEQ Air Division, the project sites are located in a designated ozone attainment and emission control area for volatile organic compounds (VOCs) and oxides of nitrogen (NO_x).

4(c) Recommendation. The Air Force should take all reasonable precautions to limit emissions of VOCs and NO_x, principally by controlling or limiting the burning of fossil fuels.

4(d) Requirements.

(i) Fugitive Dust

Fugitive dust must be kept to a minimum by using control methods outlined in 9 VAC 5-50-60 *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, of water or chemicals for dust control;
- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;
- Covering of open equipment for conveying materials; and
- Prompt removal of spilled or tracked dirt or other materials from paved streets and removal of dried sediments resulting from soil erosion.

(ii) Open Burning

If project activities include the open burning or use of special incineration devices for the disposal of land clearing debris, this activity must meet the requirements of 9 VAC 5-130-10 through 9 VAC 5-130-60 and 9 VAC 5-130-100 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. The Air Force should contact Hampton fire officials to determine what local requirements, if any, exist.

4(e) CZMA Federal Consistency. The Development Projects will be consistent to the maximum extent practicable with the point source air pollution enforceable policy of the Virginia CZM Program, provided any required permits are obtained and complied with

(see Federal Consistency under the CZMA (pages 18 and 19) for additional information).

5. Chesapeake Bay Preservation Areas. The EA (page 4-4) states that compliance with the Chesapeake Bay Preservation Area (CBPA) Designation and Management Regulations (9 VAC 25-830) is required. JBLE-Langley has complied with state and local CBPA requirements by submitting a Water Quality Impact Assessment for review and approval by DEQ.

5(a) Agency Jurisdiction. The [DEQ Office of Watersheds and Local Government Assistance Programs \(OWLGAP\)](#) administers the Chesapeake Bay Preservation Act (Virginia Code §62.1-44.15:67 *et seq.*) and *Chesapeake Bay Preservation Area Designation and Management Regulations* (9 VAC 25-830-10 *et seq.*). Each Tidewater locality must adopt a program based on the Bay Act and *Regulations*. The Act and *Regulations* recognize local government responsibility for land use decisions and are designed to establish a framework for compliance without dictating precisely what local programs must look like. Local governments have flexibility to develop water quality preservation programs that reflect unique local characteristics and embody other community goals. Such flexibility also facilitates innovative and creative approaches in achieving program objectives. The regulations address nonpoint source pollution by identifying and protecting certain lands called Chesapeake Bay Preservation Areas. The regulations use a resource-based approach that recognizes differences between various land forms and treats them differently.

5(b) Chesapeake Bay Preservation Areas. DEQ-OWLGAP notes that, in the City of Hampton and York 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;
- tidal shores; and
- 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.

Locally designated RMAs, if not properly managed, have the potential to degrade water quality or diminish the functional value of the RPA. The RMA in the City of Hampton starts from the RPA and expands landward another 100 feet. The RMA in York County is contiguous to and 500-feet landward from the RPA or the extent of the 100-year floodplain, whichever is greater.

5(c) Agency Findings.

(i) Airfield Storm Drainage and Grading Project

DEQ-OWLGAP finds that, based on a desktop review using the Wetland Condition Assessment Tool (WetCAT) and the documentation provided in the EA, the Airfield Storm Drainage and Grading Project would impact RPA features consisting of nontidal wetlands connected by surface flow and contiguous to tidal wetlands and water bodies with perennial flow and the adjacent 100-foot buffer area along Back River and its tributaries. The project site consists of lands analogous to locally designated RPAs and RMAs and would be subject to 9 VAC 25-830-140 and 130, respectively.

(ii) Recreational Vehicle Storage Lot Project

The Recreational Vehicle Storage Lot Project does not contain perennial streams and the nontidal wetlands on site are sporadic and unconnected, according to WetCAT and the maps provided in the EA. As such, the site does not appear to have features analogous to CBPAs in the City of Hampton and, therefore, would not be subject to the development criteria of 9 VAC 25-830-130 or -140.

(iii) Bethel Housing Area Drainage Improvement Project

The Bethel Housing Area Drainage Improvement Project site consists of a stream which conveys stormwater flows to a large wetland area and ultimately to the Northwest Branch Back River and Chesapeake Bay. Accordingly, site consists of lands analogous to locally designated RPAs and RMAs and is subject to 9 VAC 25-830-140 and -130, respectively.

5(d) Requirements. Land-disturbing activities in RPA and RMA must adhere to the general performance criteria of the *Regulations* (9 VAC 25-830-130), especially with respect to:

- minimizing land disturbance (including access and staging areas), and
- retaining indigenous vegetation and minimizing impervious cover.

For land disturbance over 2,500 square feet, the project must comply with the requirements of the *Virginia Erosion and Sediment Control Regulations* (9 VAC 25-840) and satisfy stormwater management criteria consistent with the water quality protection provisions of the *Virginia Stormwater Management Regulations* (9 VAC 25-870).

In addition to the general performance criteria, land disturbance, development, or redevelopment in locally designated RPAs shall be consistent with the development criteria in 9 VAC 25-830-140 of the *Regulations*, especially with respect to 9 VAC 25-830-140(1)(a) and -(6) that requires a water quality impact assessment (WQIA) for any proposed development within the RPA. The purpose of the WQIA is to identify the proposed impacts of land development or disturbance on water quality and lands in the

RPA consistent with the goals and objectives of the Act, the *Regulations*, and local programs, and to determine specific measures for mitigation of those impacts.

5(e) CZMA Federal Consistency. The Development Projects will be consistent to the maximum extent practicable with the Chesapeake Bay preservation areas enforceable policy of the Virginia CZM Program, provided all activities are conducted in accordance with the above requirements as administered by DEQ (see Federal Consistency under the CZMA (pages 18 and 19) for additional information).

6. Floodplain Management. The EA (page 4-5) states that no significant adverse impacts on floodplains would be expected from the projects. In accordance with EO 11988, JBLE-Langley has determined that the proposed projects would occur within the base floodplain. Most of JBLE-Langley is within the Federal Emergency Management Agency (FEMA) base floodplain. Therefore, JBLE-Langley has no practicable alternative that would avoid all floodplain impacts or further minimize impacts on floodplains, meet mission requirements and installation layout constraints, and serve the purpose of the proposed projects.

6(a) Agency Jurisdiction. The [DCR Division of Dam Safety and Floodplain Management \(DSFM\)](#) is the lead coordinating agency for the Commonwealth's floodplain management program and the National Flood Insurance Program (Executive Order 45). The National Flood Insurance Program (NFIP) is administered by the Federal Emergency Management Agency (FEMA), and communities who elect to participate in this voluntary program manage and enforce the program on the local level through that community's local floodplain ordinance. Each local floodplain ordinance must comply with the minimum standards of the NFIP, outlined in 44 CFR 60.3; however, local communities may adopt more restrictive requirements in their local floodplain ordinance, such as regulating the 0.2% annual chance flood zone (shaded Zone X).

6(b) Requirements. All development within a Special Flood Hazard Area (SFHA) or floodplain, as shown on the locality's Flood Insurance Rate Map (FIRM), must be permitted and comply with the requirements of the local floodplain ordinance. Projects conducted by federal agencies within the SFHA must comply with federal Executive Order 11988: Floodplain Management.

DCR's Floodplain Management Program does not have regulatory authority for projects in the SFHA. The applicant/developer must contact the local floodplain administrator for an official floodplain determination and comply with the community's local floodplain ordinance, including receiving a local permit. Failure to comply with the local floodplain ordinance could result in enforcement action from the locality. The Air Force is encouraged to reach out to the local floodplain administrator to ensure compliance with the local floodplain ordinance.

6(c) Recommendations. DCR recommends the Corps access the [Virginia Flood Risk Information System \(VFRIS\)](#) to find flood zone information.

For additional information, contact DCR-DSFM, Kristin Owen at (804) 786-2886 or kristin.owen@dcr.virginia.gov.

7. Solid and Hazardous Wastes and Hazardous Materials. According to the EA (page 4-7), negligible adverse effects on HAZMAT and hazardous wastes would be expected from implementing the projects. HAZMAT and hazardous waste associated with the projects would be minimal and handled and disposed of in accordance with federal, state, and local regulations and in accordance with established base procedures. The use of such materials and generated waste would be expected from the use of heavy equipment used during construction activities. Construction contractors would be responsible for preventing spills by implementing proper storage and handling procedures and by following base requirements.

7(a) Agency Jurisdiction. On behalf of the Virginia Waste Management Board, the [DEQ Division of Land Protection and Revitalization \(DEQ-DLPR\)](#) 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 (RCRA) and the Comprehensive Environmental Response Compensation Liability Act (CERCLA), commonly known as Superfund.

Virginia:

- Virginia Waste Management Act, Virginia Code § 10.1-1400 *et seq.*
- *Virginia Solid Waste Management Regulations*, 9 VAC 20-81 (9 VAC 20-81-620 applies to asbestos-containing materials)
- *Virginia Hazardous Waste Management Regulations*, 9 VAC 20-60 (9 VAC 20-60-261 applies to lead-based paints)
- *Virginia Regulations for the Transportation of Hazardous Materials*, 9 VAC 20-110.

Federal:

- Resource Conservation and Recovery Act, 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*.

DEQ-DLPR also administers 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 (9 VAC 25-91 *et seq.*) and Underground Storage Tanks (9 VAC 25-580 *et seq.* and 9 VAC 25-580-370 *et seq.*), also known as 'Virginia Tank Regulations', and § 62.1-44.34:14 *et seq.* which covers oil spills.

7(b) Agency Findings. DLPR staff conducted a search of solid and hazardous waste databases (including petroleum releases) to identify waste sites in close proximity (200-foot radius) to the project sites. The search did not identify any waste sites within the

project areas which might impact the projects.

7(c) Requirements.

(i) Solid and Hazardous Waste Management

Any soil that is suspected of contamination or wastes that are generated during construction must be tested and disposed of in accordance with applicable federal, state, and local laws and regulations. All construction waste must be characterized in accordance with the *Virginia Hazardous Waste Management Regulations* prior to management at an appropriate facility. It is the applicant's responsibility to determine if a solid waste meets the criteria of a hazardous waste and be managed appropriately.

(ii) Petroleum Release

If evidence of a petroleum release is discovered during implementation of this project, the release must be reported to DEQ-TRO in accordance with Virginia Code §62.1-44.34.8 through 19 and 9 VAC 25-580-10 *et seq.* Petroleum-contaminated soils and groundwater must be handled in accordance with DEQ regulatory guidelines.

7(d) Recommendations. DEQ encourages the implementation of 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.

Questions and additional information regarding waste comments may be directed to DEQ-DLPR, Carlos Martinez at (804) 698-4575 or carlos.martinez@deq.virginia.gov.

8. Pesticides and Herbicides. DEQ recommends that the use of herbicides or pesticides for construction or landscape maintenance should be in accordance with the principles of integrated pest management. The least toxic pesticides that are effective in controlling the target species should be used. Contact the Department of Agriculture and Consumer Services at (804) 786-3501 for more information.

9. Natural Heritage Resources. The EA (page 4-6) finds that no significant effects on biological resources would be expected. Short-term adverse effects on biological and natural resources would be expected from temporary disturbance during construction that displaces wildlife. No effects on the distribution or diversity of vegetation, listed species, bald eagles, or ospreys would be expected, nor would the projects reduce the distribution or viability of species or habitats of concern.

9(a) Agency Jurisdiction.

(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), authorizes DCR to maintain a statewide database for conservation planning and project review, protect land for the conservation of biodiversity, and 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).

(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.

9(b) Agency Findings.

(i) *Natural Heritage Resources*

DCR-DNH searched its Biotics Data System (Biotics) for occurrences of natural heritage resources from the project area. According to the information currently in Biotics, natural heritage resources have not been documented within the project boundary including a 100 foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition, the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

(ii) *State-listed Plant and Insect Species*

DCR-DNH finds that the proposed activity will not affect any documented state-listed threatened and endangered plant or insect species.

(iii) *State Natural Area Preserves*

DCR finds that there are no State Natural Area Preserves under the agency's jurisdiction in the project vicinity.

9(c) Recommendation. Contact DCR-DNH to secure updated information on natural heritage resources if the scope of the project changes and/or six months passes before

the project is implemented, since new and updated information is continually added to the Biotics Data System.

10. Wildlife Resources and Protected Species. According to the EA (page 4-6), no significant effects on biological resources would be expected. Short-term adverse effects and long-term beneficial effects on biological and natural resources would be expected. Short-term effects would result from temporary disturbance of wildlife and vegetation during construction. Long-term beneficial effects would result from replacing invasive plant species with native riparian species, increasing in-stream habitat diversity, and improving habitat for and decreasing mortality of shad. No adverse effects on listed species, bald eagles, ospreys, or the distribution or viability of species or habitats of concern would be expected.

10(a) Agency Jurisdiction. The [Virginia Department of Wildlife Resources \(DWR\)](#) (formerly the Department of Game and Inland Fisheries), 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). DWR 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. DWR 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 [DWR website](#).

10(b) Agency Findings. Based on the scope and location of the proposed work, DWR does not anticipate it to result in significant adverse impacts upon listed species or designated resources under its jurisdiction.

10(c) Recommendations.

(i) Integrated Natural Resource Management Plan and Bird Aircraft Strike Hazard Plan

DWR recommends adherence to the JBLE-Langley 's currently approved Integrated Natural Resource Management Plan (INRMP) and that the Air Force coordinate its Bird Aircraft Strike Hazard (BASH) Plan with DWR, Jeff Cooper at jeff.cooper@dwr.virginia.gov, if it has not been already.

(i) General Protection of Wildlife Resources

The following general recommendations should be considered to minimize project construction on wildlife resources:

- Adhere to a time-of-year restriction (TOYR) from March 15 through August 15 of any year, to protect resident and migratory songbird nesting from tree removal

and ground clearing.

- Adhere to erosion and sediment controls during ground disturbance.
- Use matting made from natural/organic materials such as coir fiber, jute, and/or burlap to minimize potential wildlife entanglements resulting from use of synthetic/plastic erosion and sediment control matting.
- Design stormwater controls to replicate and maintain the hydrographic condition of the site prior to the change in landscape. This should include, but not be limited to, utilizing bioretention areas, and minimizing the use of curb and gutter in favor of grassed swales. Bioretention areas (also called rain gardens) and grass swales are components of Low Impact Development (LID). They are designed to capture stormwater runoff as close to the source as possible and allow it to slowly infiltrate into the surrounding soil. They benefit natural resources by filtering pollutants and decreasing downstream runoff volumes.

10(d) Conclusion. The Development Projects are consistent to the maximum extent practicable with the wildlife and inland fisheries and commonwealth lands enforceable policies of the Virginia CZM Program, provided project activities adhere to erosion and sediment controls (see Federal Consistency under the CZMA (pages 18 and 19) for additional information).

11. Historic and Archaeological Resources. According to the EA (page 4-8), none of the projects would affect any known archaeological sites, historic structures, or National Register of Historic Places-eligible facilities. Storm drainage and grading work on the eastern portion of the airfield would occur within the Langley Field Historic District. No adverse effects on the historic district or any of the resources that contribute to it would be expected from implementing this project. A survey for archaeological sites and historic structures was conducted on JBLE-Langley in 1990-1991 (Wheaton *et al.* 1991). Based on that survey, no historic properties or buildings or structures 50 years or older are present within or adjacent to project sites for the airfield storm drainage and grading project. If any unknown cultural resources were discovered during project implementation, work would cease and the Air Force would coordinate with the State Historic Preservation Office (SHPO) and appropriate Native American tribes to avoid or mitigate potential impacts.

11(a) Agency Jurisdiction. The [Virginia Department of Historic Resources \(DHR\)](http://www.dhr.virginia.gov/StateStewardship/Index.htm) 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. Please see DHR's website for more information about applicable state and federal laws and how to submit an application for review: <http://www.dhr.virginia.gov/StateStewardship/Index.htm>.

11(b) Agency Findings. DHR notes that the Air Force has consulted with the agency

on this undertaking pursuant to Section 106 of the National Historic Preservation Act, as amended, and its implementing regulation 36 CFR Part 800. DHR concurs that there will be No Adverse Effect to historic properties as a result of this project.

For additional information, contact DHR, Marc Holma at (804) 482-6090 or marc.holma@dhr.virginia.gov.

12. Water Supply. The EA does not indicate that the Projects would impact water supply sources.

12(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). VDH administers both federal and state laws governing waterworks operation.

12(b) Agency Findings. VDH-ODW finds there are no public groundwater wells within a 1-mile radius of the Development Projects sites. The Newport News (PWS ID 3700500) Harwood Mill surface water intake is located within a 5-mile radius of the project site. The project is not within the watershed of any public surface water intakes.

12(c) Recommendations. VDH-ODW recommends that Best Management Practices should be employed, including erosion and sediment control and Spill Prevention Controls and Countermeasures on the project site. Materials should be managed while on site and during transport to prevent impacts to nearby surface water.

For additional information, contact VDH-ODW, Arlene Fields Warren at (804) 864-7781 or arlene.warren@vdh.virginia.gov.

FEDERAL CONSISTENCY UNDER THE COASTAL ZONE MANAGEMENT ACT

Pursuant to the Coastal Zone Management Act of 1972, as amended, and federal consistency regulations (15 CFR Part 930, Sub-part C, § 930.30 *et seq.*), all federal agency activities affecting any coastal use or resource will be undertaken in a manner consistent to the maximum extent practicable with the enforceable policies of the Virginia Coastal Zone Management (CZM) Program. The Virginia CZM Program consists of a network of programs administered by several agencies. DEQ coordinates the review of Federal Consistency Determinations with agencies administering the [enforceable policies and advisory policies](#) of the Virginia CZM Program. In order to be consistent with the Virginia CZM Program, all the applicable permits and approvals listed under the enforceable policies must be obtained prior to commencing the project.

A Federal Consistency Determination was submitted that includes an analysis of the enforceable policies of the Virginia CZM Program. Pursuant to 15 CFR §930.41(a), DEQ is allowed up to sixty days to conduct a coordinated review and respond to submitted consistency determinations. The sixty-day review period for the Air Force's FCD began December 28, 2020 and ends February 25, 2021.

PUBLIC PARTICIPATION

In accordance with Title 15, Code of Federal Regulations (CFR), §930.2, the public was invited to participate in the review of the FCD. Public notice of the proposed action was published in OEIR's Program Newsletter and on the DEQ website from January 4, 2021 through January 28, 2021. No public comments were received in response to the notice.

FEDERAL CONSISTENCY ANALYSIS

According to information provided in the FCD and EA, the Development Projects would have no effect on the following enforceable policies: dunes and beaches, plant pests and noxious weeds, commonwealth lands, point source water pollution, and shoreline sanitation. The resource agencies responsible for the administration of the enforceable policies of the Virginia CZM Program generally agree with the findings of the FCD. The Air Force must ensure that the proposed action is consistent with the aforementioned policies. In addition, in accordance with 15 CFR, Subpart C, §930.39(c), DEQ encourages the Air Force to consider project impacts on the advisory policies of the Virginia CZM Program.

FEDERAL CONSISTENCY CONCURRENCE

Based on our review of the FCD, EA and the comments and recommendations submitted by agencies administering the enforceable policies of the Virginia CZM Program, DEQ concurs that the Development Projects are consistent with the Virginia CZM Program, provided the Air Force obtains and complies with all applicable permits and approvals associated with the enforceable policies of the Virginia CZM Program. If, prior to construction, the activities should change significantly and any of the enforceable policies of the Virginia CZM Program would be affected, pursuant to 15 CFR 930.46, the Air Force must submit supplemental consistency determination to DEQ for review and concurrence. Other state approvals which may apply to this project are not included in this FCD. Therefore, the Air Force must ensure that the projects are constructed and operated in accordance with all applicable federal, state, and local laws and regulations.

REGULATORY AND COORDINATION NEEDS

1. Surface Waters and Wetlands. A VWP Permit from DEQ-TRO may be required for anticipated impacts to jurisdictional waters pursuant to Virginia Code §62.1-44.15:20 *et seq.* Tidal wetland impacts may require authorization from VMRC. The submission of a JPA to VMRC for any proposed impacts to jurisdictional waters will initiate reviews by DEQ, VMRC, Corps and the local wetlands board. For additional information and coordination, contact the DEQ-TRO VWP Permit program, Jeff Hannah at (757) 518-2146 or jeff.hannah@deq.virginia.gov and/or VMRC, Allison Lay at (757) 247-2254 or allison.lay@mrc.virginia.gov.

2. Subaqueous Lands Management. The Air Force must coordinate with VMRC pursuant to Virginia Code §28.2-1200 through 1400, to obtain authorization for potential impacts to state subaqueous lands. For additional information and coordination, contact VMRC, Allison Lay at (757) 247-2254 or allison.lay@mrc.virginia.gov.

3. Nonpoint Source Pollution Control.

3(a) Erosion and Sediment Control and Stormwater Management. The Development Projects must comply with Virginia's *Erosion and Sediment Control Law* (Virginia Code § 62.1-44.15:61) and *Regulations* (9 VAC 25-840-30 *et seq.*) and *Stormwater Management Law* (Virginia Code § 62.1-44.15:31) and *Regulations* (9 VAC 25-870-210 *et seq.*) as administered by DEQ in Virginia. Activities that disturb 2,500 square feet or more in CBPAs would be regulated by *VESCL&R* and *VSWML&R*. Erosion and sediment control and stormwater management requirements should be coordinated with DEQ-TRO, Courtney Smith at (757) 493-1072 or courtney.smith@deq.virginia.gov.

3(b) General Permit for Stormwater Discharges from Construction Activities (VAR10). For land-disturbing activities of equal to or greater than one acre, the Air Force is required to apply for registration coverage under the Virginia Stormwater Management Program General Permit for Discharges of Stormwater from Construction Activities (9 VAC 25-880-1 *et seq.*). Specific questions regarding the Stormwater Management Program requirements should be directed to DEQ-TRO, Courtney Smith at (757) 493-1072 or courtney.smith@deq.virginia.gov.

4. Air Quality Regulation. The Development Projects may be subject to air quality regulations administered by DEQ. Guidance on minimizing the emission of volatile organic compounds (VOCs) and oxides of nitrogen (NO_x) during construction may be obtained from DEQ-TRO staff. The following sections of Virginia Administrative Code may apply:

- fugitive dust and emissions control (9 VAC 5-50-60 *et seq.*); and
- open burning restrictions (9 VAC 5-130).

Contact local fire officials for information on any local requirements pertaining to open burning if applicable. For additional information and coordination, contact DEQ-TRO, John Brandt at (757) 518-2010 or john.brandt@deq.virginia.gov.

5. Chesapeake Bay Preservation Areas. Project activities impacting RPA and RMA must comply with the *Regulations* (9 VAC 25-830-130 and 9 VAC 25-830-140) as administered by DEQ. In addition, land disturbance in RPAs shall be consistent with the development criteria in 9 VAC 25-830-140, with respect to 9 VAC 25-830-140(1)(a) and -(6) that requires a water quality impact assessment (WQIA) for development within the RPA. To ensure compliance with the *Regulations*, contact DEQ-OWLGAP, Amber Foster at (804) 698-4086 or amber.foster@deq.virginia.gov.

6. Floodplain Management. The Development Projects must comply with local floodplain ordinances. Local floodplain administrator contact information may be found in DCR's [Local Floodplain Management Directory](#).

7. Solid and Hazardous Wastes.

7(a) Waste Management. All solid waste, hazardous waste, and hazardous materials must be managed in accordance with all applicable federal, state, and local environmental regulations. Contact DEQ-TRO, Sean Priest at (757) 518-2141 or sean.priest@deq.virginia.gov, for information on the location and availability of suitable waste management facilities in the project area or if free product, discolored soils, or other evidence of contaminated soils are encountered.

7(b) Petroleum Contamination. If evidence of a petroleum release is discovered during implementation of the Development Projects, contact the local fire marshal with any personal safety concerns and report the contamination to DEQ-TRO, Melinda Woodruff at (757) 518-2174 or melinda.woodruff@deq.virginia.gov (Virginia Code §62.1-44.34.8 through 9 and 9 VAC 25-580-10 *et seq.*).

8. Natural Heritage Resources. Contact DCR-DNH, Rene Hypes at (804) 371-2708 or rene.hypes@dcv.virginia.gov, to secure updated information on natural heritage resources if the scope of the projects change and/or six months passes before the Development Projects are implemented, since new and updated information is continually added to the Biotics Data System.

9. Wildlife Resources. Contact DWR, Amy Ewing at (804) 367-2211 or amy.ewing@dwr.virginia.gov, on recommendations for the protection of aquatic and wildlife resources associated with the proposal.

Thank you for the opportunity to review and respond to the EA and FCD for the Airfield and Drainage Projects at JBLE-Langley in the City of Hampton and York County. Detailed comments of reviewing agencies are attached for your review. Please contact me at (804) 698-4204 or John Fisher at (804) 698-4339 for clarification of these comments.

Sincerely,



Bettina Rayfield, Program Manager
Environmental Impact Review and Long-Range
Priorities

Enclosures

Ec: Robbie Rhur, DCR
Amy Ewing, DWR
Emily Hein, VMRC
Roger Kirchen, DHR
Arlene Fields Warren, VDH
Michael Hayes, City of Hampton
Ben McFarlane, HRPDC



MEMORANDUM

TO: John Fisher, DEQ/EIR Environmental Program Planner

FROM: Carlos A. Martinez, Division of Land Protection & Revitalization Review Coordinator

DATE: January 12, 2021

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

SUBJECT: Environmental Impact Review: 20-175F Airfield and Drainage Projects at Joint Base Langley-Eustis in Hampton, Virginia.

The Division of Land Protection & Revitalization (DLPR) has completed its review of the DOD/U.S. Air Force's December 17, 2020 EIR for Airfield and Drainage Projects at Joint Base Langley-Eustis in Hampton, Virginia.

DLPR staff conducted a search (200 ft. radius) of the project area of solid and hazardous waste databases (including petroleum releases) to identify waste sites in close proximity to the project area. DLPR search did not identify any waste sites within the project area which might impact the project.

DLPR staff has reviewed the submittal and offers the following comments:

Hazardous Waste/RCRA Facilities – none in close proximity to the project area

CERCLA Sites – none in close proximity to the project area

Formerly Used Defense Sites (FUDS) – none in close proximity to the project area.

Solid Waste – none in close proximity to the project area

Virginia Remediation Program (VRP) – none in close proximity to the project area

Petroleum Releases – none in close proximity to the project area

PROJECT SPECIFIC COMMENTS

None

GENERAL COMMENTS

Soil, Sediment, Groundwater, and Waste Management

Any soil, sediment or groundwater 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 Carlos A. Martinez by phone at (804) 698-4575 or email carlos.martinez@deq.virginia.gov.

Re: NEW PROJECT AIR FORCE Airfield & Drainage Projects at JBLE, DEQ #20-175F

1 message

Gavan, Lawrence <larry.gavan@deq.virginia.gov>
To: "Fisher, John" <john.fisher@deq.virginia.gov>

Thu, Dec 17, 2020 at 2:54 PM

(a) Agency Jurisdiction. The Department of Environmental Quality (DEQ) administers the *Virginia Erosion and Sediment Control Law and Regulations (VESCL&R)* and *Virginia Stormwater Management Law and Regulations (VSWML&R)*.

(b) 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 *VSWML&R*, 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, federal consistency under the Coastal Zone Management Act). 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 (2,500 square feet in Chesapeake Bay Preservation Area) 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. Land-disturbing activities that result in the total land disturbance of equal to or greater than 1 acre (2,500 square feet in Chesapeake Bay Preservation Area) would be regulated by *VSWML&R*. Accordingly, the Applicant must prepare and implement a Stormwater Management (SWM) plan to ensure compliance with state law and regulations. The ESC/SWM 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.*]

(c) General Permit for Stormwater Discharges from Construction Activities (VAR10). DEQ is responsible for the issuance, denial, revocation, termination and enforcement of the Virginia Stormwater Management Program (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.

The owner or operator of projects involving land-disturbing activities 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. Construction activities requiring registration also include land disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan of development will collectively disturb equal to or greater than one acre. 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 at: <http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx>

[Reference: Virginia Stormwater Management Act 62.1-44.15 et seq.; VSMP Permit Regulations 9VAC25-880 et seq.]



Commonwealth of Virginia
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

1111 E. Main Street, Suite 1400, Richmond, Virginia 23219
P.O. Box 1105, Richmond, Virginia 23218
(800) 592-5482
www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources
(804) 698-4000

MEMORANDUM

TO: John Fisher, DEQ Office of Environmental Impact Review

FROM: Amber Foster, DEQ Principal Environmental Planner

DATE: January 14, 2021

SUBJECT: DEQ #20-175F – DOD Airfield and Drainage Projects at Joint Base Langley-Eustis (JBLE), City of Hampton and York County

We have reviewed the Environmental Assessment (EA) for the proposed projects and offer the following comments regarding consistency with the provisions of the *Chesapeake Bay Preservation Area Designation and Management Regulations* (Regulations):

In the City of Hampton and York County, areas protected by the Chesapeake Bay Preservation Act (Bay Act), as locally implemented, require conformance with specific performance criteria. These areas include Resource Protection Areas (RPAs), Resource Management Areas (RMAs), and Intensely Developed Areas (IDAs), as designated. In both the City of Hampton and York County, the RPA includes tidal wetlands, certain non-tidal wetlands, tidal shores, and 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.

Locally designated RMAs, if not properly managed, have the potential to degrade water quality or diminish the functional value of the RPA. The RMA in the City of Hampton starts from the RPA and expands landward another 100 feet. The RMA in York County is contiguous to and 500-feet landward from the RPA or the extent of the 100-year floodplain, whichever is greater.

Pursuant to the *Coastal Zone Management Act of 1972*, as amended, federal activities affecting Virginia's coastal resources or coastal uses must be consistent with Virginia's Coastal Zone Management Program (CZM Program) (see § 307(c)(1) of the *Coastal Zone Management Act* and 15 CFR Part 930, subpart C of the Federal Consistency Regulations) to the maximum extent practicable.

While CBPAs are not locally designated on federal lands, this does not preclude federal agencies of their responsibility to be consistent with the provisions of the Regulations, § 9 VAC 25-830-10 et seq., as one of the enforceable programs of the CZM Program. 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 CBPAs. Projects that include land disturbing activity must adhere to the performance criteria, especially with respect to minimizing land disturbance (including access and staging areas), retaining indigenous vegetation, and minimizing impervious cover. For land disturbance over 2,500 square feet, the project must also comply with the requirements of the *Virginia Erosion and Sediment Control Handbook*, Third Edition, 1992. Additionally, stormwater management criteria consistent with water quality protection provisions of the *Virginia Stormwater Management Regulations*, § 4 VAC 50-60-10, shall be satisfied.

As stated in the EA, the proposed action consists of three projects: 1) Airfield Storm Drainage and Grading Project (City of Hampton); 2) Recreational Vehicle Storage Lot Project (City of Hampton); and 3) Bethel Housing Area Drainage Improvement Project (York County). The proposed action of the airfield storm drainage and grading project is to grade and fill areas of the airfield, including wetlands, and to reconstruct drainage structures, including installing new or repairing existing drainpipes, ditches, and culverts. The purpose of this project is to eliminate obstructions, abrupt grade changes, open ditches, and standing water on the airfield primary surface. The airfield storm drainage and grading project is necessary to meet Unified Facilities Criteria (UFC) requirements for airfield grade, meet JBLE Bird Aircraft Strike Hazard (BASH) Plan goals, improve airfield safety for military personnel, reduce the occurrence of wildlife on the airfield, and eliminate airfield flooding.

Based on a desktop review using the Wetland Condition Assessment Tool (WetCAT) and the documentation provided in the EA submittal, the proposed project would impact RPA features consisting of nontidal wetlands connected by surface flow and contiguous to tidal wetlands and water bodies with perennial flow and the adjacent 100-foot buffer area along Back River and its tributaries. This project site consists of lands analogous to locally designated RPAs and RMAs and would be subject to §§ 9 VAC 25-830-140 and -130, respectively.

The recreational vehicle (RV) storage lot project as proposed includes the construction of a new RV storage. The purpose of the RV lot project is to provide JBLE-Langley service members with a single, secure location that will accommodate approximately 250 RVs, trailers, and boats, including the RVs currently on the Durand Loop RV storage lot. The RV lot project is needed to improve security for valuable personally owned vehicles (POVs); reduce the risk of flooding damage to RVs stored at JBLE-Langley; and improve parking efficiency and nighttime operations.

Based on a desktop review using WetCAT and the maps provided in the EA submittal, the RV storage lot site shows no perennial streams present and the nontidal wetlands are sporadic and unconnected. As such, this site does not appear to be analogous to CBPAs in the City of Hampton and therefore would not be subject to the development criteria of §§ 9 VAC 25-830-130 or -140.

The proposed action of the Bethel Housing Area drainage improvement project is the restoration of a stream located north and northeast of the Housing Area that conveys stormwater to a marsh southeast of the Housing Area. The purpose of the project is to improve water quality, flow, and habitat in and along the stream.

Based on a desktop review using WetCAT, the data indicate the stream conveying the stormwater flows to a large wetland area and ultimately to the Northwest Branch Back River and Chesapeake Bay. The subject property consists of lands analogous to locally designated RPAs and RMAs and would be subject to §§ 9 VAC 25-830-140 and -130, respectively.

Provided adherence to the above requirements, particularly as it relates to the requirements to minimize land disturbance, retain existing vegetation and minimize impervious cover, the proposed activity would be consistent with the *Chesapeake Bay Preservation Act* and Regulations.

**DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE**

Environmental Impact Review
Coordination Review

To: Office of Environmental Impact Review
From: Craig Nicol, Regional Director
Date: January 14, 2021
Project: Air Force Airfield Drainage Projects, DEQ 20-175F

As requested, the DEQ Tidewater Regional Office has reviewed the supplied information and offers the following comments:

Air Compliance Program :

The following air regulations may be applicable: Virginia Administrative Code 9 VAC 5-50-60 *et seq.* which addresses the abatement of visible emissions and fugitive dust emissions, and Virginia Administrative Code 9 VAC 5-130-10 *et seq.* which addresses open burning. For additional information, contact John Brandt, DEQ-TRO at (757) 518-2010.

Land Program (Solid and Hazardous Waste):

All construction and demolition waste, including any excess soil, must be characterized in accordance with the Virginia Hazardous Waste Management Regulations and disposed of at an appropriate facility as applicable.

For additional information, contact Sean Priest, DEQ-TRO at (757)518-2141 or jonathan.priest@deq.virginia.gov .

Stormwater:

A construction general permit (CGP) is required prior to commencement of land disturbing activities greater than 1 acre for the discharge of sediment from construction activities. An approved Erosion and Sediment Control Plan (<1 acre of land disturbance) or an approved Stormwater Management Plan (>1 acre of land disturbance) is required prior to commencement of any land disturbing activities. In addition, DEQ is the review authority for state and federal plan review and approval, within the Tidewater Region, to coincide with permit application processing. For additional information, contact Courtney Smith, DEQ-TRO at (757)493-1072.

Virginia Water Protection Permit Program (VWPP):

Potential adverse impacts to water quality and wetlands resulting from surface runoff due to construction activities must be minimized. This can be achieved by using Best Management Practices (BMPs). Permanent or temporary impacts to surface waters and wetlands may require a permit pursuant to §401 of the Clean Water Act, Virginia Code §62.1-44.15:20, and Virginia Administrative Code 9 VAC 25-210-10 *et seq.* Provided that any and all necessary

permits are obtained and complied with, the project will be consistent with DEQ program requirements. For additional information, contact Jeff Hannah, DEQ-TRO at (757)518-2146.

Water Permit Program (VPDES):

No comments as there does not appear to be any point source discharges of process water or wastewater associated with this project that would necessitate a VPDES permit.

Petroleum Storage Tank Program:

DEQ records do not indicate any reported petroleum releases along the proposed project footprint. If evidence of a petroleum release is discovered during implementation of this project, it must be reported to DEQ, as authorized by CODE # 62.1-44.34.8 through 19 and 9 VAC 25-580-10 et seq. Contact Ms. Melinda Woodruff at (757) 518-2174. Petroleum-contaminated soils and ground water generated during implementation of this project must be properly characterized and disposed of properly.

Based on the submitted information, it appears the proposed project will result in a *[Level of impact]* environmental impact.

Airfield & Drainage projects at Langley AFB (DEQ 20-175F/DHR 2020-4875)

1 message

Holma, Marc <marc.holma@dhr.virginia.gov>
To: John Fisher <john.fisher@deq.virginia.gov>

Tue, Dec 22, 2020 at 10:26 AM

John,

The Air Force has already consulted with DHR on this undertaking pursuant to Section 106 of the National Historic Preservation Act, as amended, and its implementing regulation 36 CFR Part 800. We concurred that there will be No Adverse Effect to historic properties as a result of this project.

Sincerely,
Marc

--

Marc Holma
Architectural Historian
Division of Review and Compliance
(804) 482-6090
marc.holma@dhr.virginia.gov

ESSLog# 41040_20-175F_JBLEDrainage_DWR_AME20210115

1 message

Ewing, Amy <amy.ewing@dwr.virginia.gov>
To: John Fisher <john.fisher@deq.virginia.gov>

Fri, Jan 15, 2021 at 12:46 PM

John,

We have reviewed the subject project that proposes to fill wetlands and make drainage improvements at JBLE in Hampton. Based on the scope and location of the proposed work, we do not anticipate it to result in significant adverse impacts upon listed species or designated resources under our jurisdiction. We recommend adherence to the currently approved INRMP for the base and that the BASH plan be coordinated with Jeff Cooper, DWR Bird Biologist, at Jeff.Cooper@DWR.virginia.gov, if it has not been already.

We recommend that the stormwater controls for this project be designed to replicate and maintain the hydrographic condition of the site prior to the change in landscape. This should include, but not be limited to, utilizing bioretention areas, and minimizing the use of curb and gutter in favor of grassed swales. Bioretention areas (also called rain gardens) and grass swales are components of Low Impact Development (LID). They are designed to capture stormwater runoff as close to the source as possible and allow it to slowly infiltrate into the surrounding soil. They benefit natural resources by filtering pollutants and decreasing downstream runoff volumes.

We recommend that all tree removal and ground clearing adhere to a time of year restriction (TOYR) 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. To minimize potential wildlife entanglements resulting from use of synthetic/plastic erosion and sediment control matting, we recommend use of matting made from natural/organic materials such as coir fiber, jute, and/or burlap.

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 protection of these resources.

Assuming strict adherence to best management practices for erosion and sediment control is maintained, we find this project to be consistent with the Wildlife and Inland Fisheries and Commonwealth Lands Enforceable Policies of the Coastal Zone Management Program.

Thanks, Amy

**Amy Martin Ewing***Environmental Services Biologist
Manager, Wildlife Information***P** 804.367.2211**Department of Wildlife Resources***CONSERVE. CONNECT. PROTECT.***A** 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228**www.VirginiaWildlife.gov**

Re: NEW PROJECT AIR FORCE Airfield & Drainage Projects at JBLE, DEQ #20-175F

1 message

Warren, Arlene <arlene.warren@vdh.virginia.gov>
To: John Fisher <john.fisher@deq.virginia.gov>
Cc: rr Environmental Impact Review <eir@deq.virginia.gov>

Mon, Jan 11, 2021 at 11:11 AM

Project Name: Airfield and Drainage Projects at Joint Base Langley-Eustis**Project #: 20-175 F**

UPC #: N/A

Location: City of Hampton

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:

PWS ID Number	System Name	Facility Name
3700500	NEWPORT NEWS_ CITY OF	HARWOOD MILL

The project is not within the watershed of any public surface water intakes.

- ***Environmental Epidemiology, Mr. Dwight Flammia, Ph.D. State Public Health Toxicologist had no comments.***

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

Materials should be managed while on site and during transport to prevent impacts to nearby surface water.

The Virginia Department of Health – Office of Drinking Water appreciates the opportunity to provide comments. If you have any questions, please let me know.

Best Regards,

Arlene Fields Warren

GIS Program Support Technician

Office of Drinking Water

Virginia Department of Health

109 Governor Street

Richmond, VA 23219

(804) 864-7781



COMMONWEALTH of VIRGINIA

Marine Resources Commission
380 Fenwick Road
Bldg 96
Fort Monroe, VA 23651-1064

Matthew J. Strickler
Secretary of Natural Resources

Steven G. Bowman
Commissioner

February 4, 2021

Department of Environmental Quality
Office of Environmental Impact Review
Attn: John Fisher
1111 East Main Street
Richmond, VA 23219

Re: Air Force Airfield & Drainage Projects at JBLE
DEQ #20-175F

Dear Mr. Fisher,

This will respond to the request for comments regarding the Environmental Assessment and Federal Consistency Determination for the Airfield and Drainage Projects at Joint Base Langley-Eustis (DEQ #20-175F) on behalf of the U.S. Department of the Air Force. Specifically, the Air Force is proposing three airfield drainage and stream restoration projects with approximately 20 acres of streambed and wetland impacts. The project area is located at Langley Air Force Base in Hampton, Virginia.

We received the applicant's information regarding the Airfield Storm Drainage and Grading Project on March 15, 2017, JPA #17-0452. After completion of our JPA review process, a No Permit Necessary determination was issued by the agency on October 5, 2017. We reviewed the additional provided information on the proposed RV Storage Lot and Bethel House Area Drainage Improvements Projects and found that they may fall within the jurisdictional areas of the Virginia Marine Resources Commission (VMRC) and may require a permit from this agency for the impacts to submerged lands and tidal wetlands.

Please be advised that the VMRC, pursuant to §28.2-1200 et seq of the Code of Virginia, has jurisdiction over any encroachments in, on, or over the beds of the bays, ocean, rivers, streams, or creeks which are the property of the Commonwealth. Accordingly, if any portion of the subject project involves any encroachments channelward of ordinary high water along non-tidal, natural rivers and streams with a drainage area greater than 5-square miles, a permit may be required from our agency. Any permit issued by the VMRC will specify necessary special conditions for the project.

Additionally, the VMRC administers the enforceable policies of fisheries management, subaqueous lands, tidal wetlands, and coastal primary sand dunes and beaches, which comprise some of Virginia's Coastal Zone Management Program. VMRC staff has reviewed the submittal and offers the following comments:

Fisheries and Shellfish: the Bethel Housing Area Drainage Improvement Project may have temporary impacts to fisheries. Erosion and run-off controls should be in place to prevent impacts to marine

An Agency of the Natural Resources Secretariat

www.mrc.virginia.gov

Telephone (757) 247-2200 (757) 247-2292 V/TDD Information and Emergency Hotline 1-800-541-4646 V/TDD

Department of Environmental Quality
February 4, 2021
Page Two

fisheries. A time of year restriction for project construction may be required.

State-Owned Submerged Lands: the Bethel Housing Area Drainage Improvement Project would impact a streambed. Impacts will need to be evaluated and permitted during the application process.

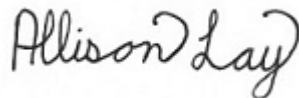
Tidal Wetlands: the Bethel Housing Area Drainage Improvement Project would result in a loss of intertidal emergent wetlands and intertidal ditch, and would restore 0.5 acre of wetland along the ditch. Impacts to tidal wetlands will require a permit from the Hampton Wetlands Board and necessary mitigation will be determined during the permitting process.

Beaches and Coastal Primary Sand Dunes: none in close proximity to the project area.

As proposed, we have no objection to the consistency findings provided by the applicant. Should the proposed project change, a new review by this agency may be required relative to these jurisdictional areas.

If you have any questions, please contact me at 757-247-2254 or by email at allison.lay@mrc.virginia.gov. Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in black ink that reads "Allison Lay". The signature is written in a cursive, flowing style.

Allison Lay
Environmental Engineer, Habitat Management

AEL/tlb
HM

Matthew J. Strickler
Secretary of Natural Resources

Clyde E. Cristman
Director



Rochelle Altholz
*Deputy Director of
Administration and Finance*

Russell W. Baxter
*Deputy Director of
Dam Safety & Floodplain
Management and Soil & Water
Conservation*

Nathan Burrell
*Deputy Director of
Government and Community Relations*

Thomas L. Smith
*Deputy Director of
Operations*

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

MEMORANDUM

DATE: January 13, 2021
TO: John Fisher, DEQ
FROM: Roberta Rhur, Environmental Impact Review Coordinator
SUBJECT: DEQ 20-175F, Air Force Airfield and Drainage Projects at JBLE

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 Biotics, natural heritage resources have not been documented within the submitted project boundary including a 100 foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition, the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

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@dwr.virginia.gov.

Division of Dam Safety and Floodplain Management

Floodplain Management Program:

The National Flood Insurance Program (NFIP) is administered by the Federal Emergency Management Agency (FEMA), and communities who elect to participate in this voluntary program manage and enforce the program on the local level through that community's local floodplain ordinance. Each local floodplain ordinance must comply with the minimum standards of the NFIP, outlined in 44 CFR 60.3; however, local communities may adopt more restrictive requirements in their local floodplain ordinance, such as regulating the 0.2% annual chance flood zone (Shaded X Zone).

All development within a Special Flood Hazard Area (SFHA), as shown on the locality's Flood Insurance Rate Map (FIRM), must be permitted and comply with the requirements of the local floodplain ordinance.

State Agency Projects Only

[Executive Order 45](#), signed by Governor Northam and effective on November 15, 2019, establishes mandatory standards for development of state-owned properties in Flood-Prone Areas, which include Special Flood Hazard Areas, Shaded X Zones, and the Sea Level Rise Inundation Area. These standards shall apply to all state agencies.

1. Development in Special Flood Hazard Areas and Shaded X Zones

- A. All development, including buildings, on state-owned property shall comply with the locally-adopted floodplain management ordinance of the community in which the state-owned property is located and any flood-related standards identified in the Virginia Uniform Statewide Building Code.
- B. If any state-owned property is located in a community that does not participate in the NFIP, all development, including buildings, on such state-owned property shall comply with the NFIP requirements as defined in 44 CFR §§ 60.3, 60.4, and 60.5 and any flood-related standards identified in the Virginia Uniform Statewide Building Code.
 - (1) These projects shall be submitted to the Department of General Services (DGS), for review and approval.
 - (2) DGS shall not approve any project until the State NFIP Coordinator has reviewed and approved the application for NFIP compliance.
 - (3) DGS shall provide a written determination on project requests to the applicant and the State NFIP Coordinator. The State NFIP Coordinator shall maintain all documentation associated with the project in perpetuity.
- C. No new state-owned buildings, or buildings constructed on state-owned property, shall be constructed, reconstructed, purchased, or acquired by the Commonwealth within a Special Flood Hazard Area or Shaded X Zone in any community unless a variance is granted by the Director of DGS, as outlined in this Order.

The following definitions are from Executive Order 45:

Development for NFIP purposes is defined in 44 CFR § 59.1 as "Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials."

The Special Flood Hazard Area may also be referred to as the 1% annual chance floodplain or the 100-year floodplain, as identified on the effective Flood Insurance Rate Map and Flood Insurance Study. This includes the following flood zones: A, AO, AH, AE, A99, AR, AR/AE, AR/AO, AR/AH, AR/A, VO, VE, or V.

The Shaded X Zone may also be referred to as the 0.2% annual chance floodplain or the 500- year floodplain, as identified on the effective Flood Insurance Rate Map and Flood Insurance Study.

The Sea Level Rise Inundation Area referenced in this Order shall be mapped based on the National Oceanic and Atmospheric Administration Intermediate-High scenario curve for 2100, last updated in 2017, and is intended to denote the maximum inland boundary of anticipated sea level rise.

“State agency” shall mean all entities in the executive branch, including agencies, offices, authorities, commissions, departments, and all institutions of higher education.

“Reconstructed” means a building that has been substantially damaged or substantially improved, as defined by the NFIP and the Virginia Uniform Statewide Building Code.

Federal Agency Projects Only

Projects conducted by federal agencies within the SFHA must comply with federal Executive Order 11988: Floodplain Management.

DCR’s Floodplain Management Program does not have regulatory authority for projects in the SFHA. The applicant/developer must contact the local floodplain administrator for an official floodplain determination and comply with the community’s local floodplain ordinance, including receiving a local permit. Failure to comply with the local floodplain ordinance could result in enforcement action from the locality. For state projects, DCR recommends that compliance documentation be provided prior to the project being funded. For federal projects, the applicant/developer is encouraged reach out to the local floodplain administrator and comply with the community’s local floodplain ordinance.

To find flood zone information, use the Virginia Flood Risk Information System (VFRIS): www.dcr.virginia.gov/vfris

To find community NFIP participation and local floodplain administrator contact information, use DCR’s Local Floodplain Management Directory: www.dcr.virginia.gov/dam-safety-and-floodplains/floodplain-directory

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

**DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR PROGRAM COORDINATION**

ENVIRONMENTAL REVIEW COMMENTS APPLICABLE TO AIR QUALITY

TO: John Fisher

We thank **OEIR** for providing DEQ-AIR an opportunity to review the following project:

Document Type: **Environmental Assessment**

Project Sponsor: **DOD/U.S. Air Force**

Project Title: **Airfield and Drainage Projects at Joint Base Langley-Eustis**

Location: **City of Hampton**

Project Number: **DEQ #20-175F**

Accordingly, I am providing following comments for consideration.

PROJECT LOCATION: **X OZONE ATTAINMENT
AND EMISSION CONTROL AREA FOR NOX & VOC**

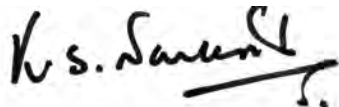
REGULATORY REQUIREMENTS MAY BE APPLICABLE TO: **X CONSTRUCTION
 ☐ OPERATION**

STATE AIR POLLUTION CONTROL BOARD REGULATIONS THAT MAY APPLY:

1. ☐ 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 E – STAGE I
2. ☐ 9 VAC 5-45-760 et seq. – Asphalt Paving operations
3. **X 9 VAC 5-130 et seq. – Open Burning**
4. **X 9 VAC 5-50-60 et seq. Fugitive Dust Emissions**
5. ☐ 9 VAC 5-50-130 et seq. - Odorous Emissions; Applicable to _____
6. ☐ 9 VAC 5-60-300 et seq. – Standards of Performance for Toxic Pollutants
7. ☐ 9 VAC 5-50-400 Subpart _____, Standards of Performance for New Stationary Sources, designates standards of performance for the _____
8. ☐ 9 VAC 5-80-1100 et seq. of the regulations – Permits for Stationary Sources
9. ☐ 9 VAC 5-80-1605 et seq. Of the regulations – Major or Modified Sources located in PSD areas. This rule may be applicable to the _____
10. ☐ 9 VAC 5-80-2000 et seq. of the regulations – New and modified sources located in non-attainment areas
11. ☐ 9 VAC 5-80-800 et seq. Of the regulations – State Operating Permits. This rule may be applicable to _____

COMMENTS SPECIFIC TO THE PROJECT:

All precautions are necessary to restrict the emissions of volatile organic compounds (VOC) and oxides of nitrogen (NO_x).



(Kotur S. Narasimhan)
Office of Air Data Analysis

DATE: December 17, 2020



DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

December 15, 2020

Southern Virginia Regulatory Section
NAO-2017-00574 (Airfield Drainage and Grading)
NAO-1993- 01227(Bethel Housing Area Drainage Improvement)
NAO-2020-02309 (RV Storage Lot)

Ms. Brenda Cook, DAFC
Deputy Base Civil Engineer
Joint Base Langley-Eustis, Langley Air Force Base
37 Sweeney Boulevard
JBLE-Langley, Virginia 23665-2107

Dear Ms. Cook:

This letter is in response to your letter dated November 10, 2020 soliciting comments for a Draft Environmental Assessment (EA) you have undertaken to evaluate Airfield and Drainage Projects at Joint Base Langley-Eustis, Langley Air Force Base (JBLE-Langley), Virginia. In accordance with the National Environmental Policy Act (NEPA), an Environmental Assessment (EA) is being prepared with the United States Air Force (USAF) as the lead federal agency.

The Norfolk District Army Corps of Engineers issued a Provisional Individual Permit on June 18, 2018 authorizing the discharge of fill material into wetlands and waters associated with the Airfield Drainage and Grading project. Therefore, no additional comments regarding this project are provided in this letter. Should the previously authorized plans change, or if you are unable to adhere to the project specific, special and general conditions incorporated in the permit, then a permit modification may be required for the improvements.

As proposed, it does appear that the RV Storage Lot and Bethel Housing Area Drainage Improvement projects will impact waters and/or wetlands regulated by the Norfolk District Army Corps of Engineers (USACE) under Section 10 of the Rivers and Harbors Act of 1899 and/or Section 404 of the Clean Water Act (33 U.S.C. 1344). Should a permit be required, USACE cannot agree to the evaluation of only one alternative for the proposed project if wetlands and/or waters of the U.S. are expected to be impacted.

USACE will participate as a cooperating agency in the preparation of the Environmental Assessment (EA). We recommend coordination with the Cooperating Agencies of draft sections of the EA prior to publishing the document. Such coordination will help to minimize future delays or problems that

can be addressed earlier in the process. We wish to participate in any interagency meetings and field reviews for this project to the extent possible.

We would like to emphasize that before you develop and evaluate alternatives, waters and wetlands should be identified and mapped, and you should document how impacts to aquatic resources are avoided and minimized by the preliminary alternatives you identify. We request regular coordination with the appropriate state and Federal agencies prior to making any decisions regarding the range and elimination of alternatives. While USACE recommends a jurisdictional determination, you should consider, at a minimum, all available information such as aerial photography, U.S.G.S. quad sheets, National Wetland Inventory (NWI) maps, and soil mapping of the study area, as well as review of aerial photography (including color infrared aerials) by a qualified reviewer. Should USAF perform the assessment of jurisdictional areas through remote sensing, USACE recommends field verification of any areas which USAF notes need further evaluation. The more accurate the delineation, the better for the purposes of alternative analysis and project development that incorporates avoidance and minimization of aquatic resources. USACE understands that due to the purpose of improving existing facilities, alternative options may be constrained, however, additional alternatives must be developed and examined.

Our regulations require that we consider a full range of public interest factors and conduct an alternatives analysis in order to identify the least environmentally damaging practicable alternative (LEDPA), which is the only alternative we can authorize.

In addition to wetland and waters impacts, we must consider factors such as land use (including displacements of homes and businesses), floodplain hazards and values, water supply and conservation, water quality, safety, cost, economics, threatened and endangered species, historic and cultural resources, and environmental justice.

Should project plans result in impacts to waters or wetlands, identifying potential compensation for stream and wetland impacts early in the process of project development is critical. Wetland impacts are typically compensated at 2:1 for forested, 1:5:1 for scrub/shrub, and 1:1 for emergent. Typically, we require stream compensation for unavoidable stream impacts to greater than 300 linear feet of stream at a crossing. However, we also consider the cumulative impacts to streams from a given project, and may require compensation for shorter lengths of stream if there are many impacts at close proximity, or if there are multiple impacts to the same stream and/or its direct tributaries. We encourage natural channel design to the extent practicable for streams that must be relocated. We utilize the Unified Stream Methodology for determining how much stream compensation is required for projects. The use of mitigation bank credits or Virginia Aquatic Resources Trust Fund released credits within the watershed are the preferred methods for providing compensation for stream and wetland

impacts, however, given the historic low availability of mitigation credits within the watershed of the projects study area, we advise early investigation into permittee responsible mitigation options to avoid permitting delays. This proposed study area encompasses one watershed, Hampton Roads, HUC 02080108.

As part of the Corps of Engineers designation of lead federal agency authority, please note the following:

The proposed project may affect historic and cultural resources. Many projects funded by the USAF require permits from the Corps of Engineers. These projects are subject to compliance with Section 106 of the National Historic Preservation Act of 1966.

According to 36 CFR 800.2(a)(2):

“...If more than one Federal agency is involved in an undertaking, some or all [of] the agencies may designate a lead Federal agency, which shall identify the appropriate official to serve as the agency official who shall act on their behalf, fulfilling their collective responsibilities under section 106. Those Federal agencies that do not designate a lead Federal agency remain individually responsible for their compliance with this part.”

Pursuant to the above provision, USAF is hereby designated as the lead federal agency to fulfill the collective Federal responsibilities under Section 106 for the following undertakings:

Langley AFB- Recreation Vehicle (RV) Storage Lot
Langley AFB- Bethel Housing Area Drainage Improvement

The Corps authorizes USAF to conduct Section 106 coordination on its behalf, including all required tribal coordination. Any Memorandum of Agreement prepared by USAF under 36 CFR 800.6 should include the following clause in the introductory text:

“WHEREAS, pursuant to Section 10 and/or Section 404 of the Clean Water Act, a Department of the Army permit will likely be required from the Corps of Engineers for this project, and the Corps has designated USAF as the lead federal agency to fulfill federal responsibilities under Section 106; and

In accordance with 50 CFR 401.07, USAF is also designated as the lead Federal agency for consultation with the U. S. Fish and Wildlife Service and the National Marine Fisheries Service (NMFS) concerning potential effects to Federally-listed threatened and endangered species.

In addition, USAF is designated as the lead Federal agency for consultation with NMFS for Essential Fish Habitat, as required under Section 305(b)(2) of the Magnuson Stevens Fishery Conservation and Management Act.

We appreciate your consideration including USACE in the early planning stages of this study and look forward to working with you.

Should you have any questions, you may contact Nicole Woodward at 757-201-7122 or nicole.l.woodward@usace.army.mil.

Sincerely,

A handwritten signature in black ink that reads "Todd M. Miller". The script is cursive and fluid.

Todd Miller
Chief, Southern Virginia
Regulatory Section

cc:
Virginia Department of Historic Resources
U.S. Environmental Protection Agency
U.S. Fish and Wildlife Service
Virginia Department of Environmental Quality

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