

**North Base Industrial Area
Development Plan
Environmental Assessment**



Langley Air Force Base, Virginia

**U.S. Air Force
Air Combat Command
1st Fighter Wing**

March 2006

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14. ABSTRACT The Proposed Action consists of the redevelopment of the North Base Industrial Area. The redevelopment includes the construction of; Auto/Skills Center, Explosive Ordnance Disposal Operations Center, and a Vehicle Maintenance Complex, a new Hazardous Waste Storage Facility and an Outdoor Recreational Center with recreational vehicle storage area. Four existing buildings (1329, 1330, 1331 and 1332) would be demolished as part of the redevelopment proposal. The entrance into Durand Loop will be modified to allow expansion into the area between Durand Loop and Lee Road. Additional recreational vehicle parking would be constructed in the undeveloped area at the south comer outside Durand Loop. Existing facilities (Buildings 1346 and 1352) within the North Base Industrial Area would remain. Nine resource categories received thorough evaluation to identify potential environmental consequences. As indicated Chapter 4.0, none of the alternatives considered would result in significant impacts to any resource category analyzed.					
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ACRONYMS AND ABBREVIATIONS

1 FW	1st Fighter Wing	NASA	National Aeronautics and Space Administration
AAFES	Army and Air Force Exchange Service	NEPA	National Environmental Policy Act
ACC	Air Combat Command	NFPA	National Fire Protection Association
ACHP	Advisory Council on Historic Preservation	NHPA	National Historic Preservation Act
ACM	asbestos-containing material	NO ₂	nitrogen dioxide
ADA	Americans With Disabilities Act	NO _x	nitrogen oxide
ADP	Area Development Plan	NRHP	National Register of Historic Places
AFB	Air Force Base	O ₃	ozone
AFI	Air Force Instruction	OSHA	Occupational Safety and Health Administration
AICUZ	Air Installation Compatible Use Zone	Pb	lead
Air Force	United States Air Force	PCB	poly chlorinated biphenyl
AQCR	Air Quality Control Region	PM ₁₀	particulate matter equal to or less than 10 micrometers in diameter
CAA	Clean Air Act	PM _{2.5}	particulate matter equal to or less than 2.5 micrometers in diameter
CEQ	Council on Environmental Quality	QD	quantity-distance
CFR	Code of Federal Regulations	RCRA	Resource Conservation and Recovery Act
CO	carbon monoxide	RMA	Resource Management Area
CZMA	Coastal Zone Management Act	ROI	Region of Influence
dB	decibel	RPA	Resource Protection Area
DNL	Day-Night Average Sound Level	RUL	Remaining Useful Life
DoD	Department of Defense	SIP	State Implementation Plan
DVP	Dominion Virginia Power	SO ₂	sulfur dioxide
EA	Environmental Assessment	SR	State Route
EIAP	Environmental Impact Analysis Process	SWPPP	Storm Water Pollution Prevention Plan
EO	Executive Order	U.S.	United States
EOD	Explosive Ordnance Disposal	UPH	Unaccompanied Personnel Housing
ERP	Environmental Restoration Program	USACE	U.S. Army Corps of Engineers
ESA	Endangered Species Act	UFC	Unified Facilities Criteria
FONPA	Finding of No Practicable Alternative	USC	United States Code
FONSI	Finding of No Significant Impact	USEPA	U.S. Environmental Protection Agency
FY	Fiscal Year	USFWS	United States Fish and Wildlife Service
HAZMART	Hazardous Materials Pharmacy	VDEQ	Virginia Department of Environmental Quality
HRSD	Hampton Roads Sanitation District	VMRC	Virginia Marine Resources Commission
I-64	Interstate 64	VOC	Volatile Organic Compound
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning	VWPP	Virginia Water Protection Permit
kVA	kilovolt-ampere	WRM	War Reserve Materiel
MFH	Military Family Housing	WTP	Waste Treatment Plant
MGD	million gallons per day		
MILCON	Military Construction		
MSL	mean sea level		
NAAQS	National Ambient Air Quality Standards		

**FINDING OF NO SIGNIFICANT IMPACT/
FINDING OF NO PRACTICABLE ALTERNATIVE**

NAME OF THE PROPOSED ACTION

Development of the North Base Industrial Area at Langley Air Force Base (AFB), Virginia, as identified in the North Base Industrial Area Development Plan.

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

The Proposed Action consists of the redevelopment of the North Base Industrial Area. The redevelopment includes the construction of: Auto/Skills Center, Explosive Ordnance Disposal Operations Center, and a Vehicle Maintenance Complex, Hazardous Waste Storage Facility and Outdoor Recreational Center with recreational vehicle storage area. Four existing buildings (1329, 1330, 1331, and 1332) would be demolished as part of the development proposal. The entrance into Durand Loop will be modified to allow expansion into the area between Durand Loop and Lee Road. Additional recreational vehicle parking would be constructed in the undeveloped area at the south corner outside Durand Loop. Existing facilities (Buildings 1346 and 1352) within the North Base Industrial Area would remain.

SUMMARY OF ENVIRONMENTAL CONSEQUENCES

Proposed Action and Alternatives: This Environmental Assessment (EA) provides an analysis of the potential environmental consequences associated with the Proposed Action, the Poplar Road alternative location, and the No-Action alternative. Nine resource categories received thorough evaluation to identify potential environmental consequences. As indicated in Chapter 4.0, none of the alternatives would result in significant impacts to any resource area.

Land Use Resources: Redevelopment of the North Base Industrial Area at the Proposed Action location would be consistent with the Langley General Plan, and the goals of the Coastal Zone Management Act (CZMA) to the maximum extent practicable. Construction at the Proposed Action location would require removal of approximately 7 acres of forested lands. No significant adverse environmental consequences would be expected with the implementation of the Proposed Action. Approximately 5 acres of forested lands would require removal at the Poplar Road location and the land use would not be consistent with the recreational facilities located to the west and north of the site. Adverse environmental consequences to land use would be expected to be negligible at this location.

With the installation of an improved intersection for Lee Road and Durand Loop as part of the Proposed Action, traffic would operate at acceptable levels of service. Construction at the Poplar Road location would not include any new traffic improvements. Truck traffic associated with the site preparation and construction at either location may increase congestion at the West Gate and hasten the degradation of the road pavements. No adverse environmental consequences would be expected to transportation resources.

Visual resources at the Proposed Action location would not be affected by the redevelopment of the North Base Industrial Area as forested areas would be left intact to provide a visual buffer. Industrial development would be consistent with past use of the property. Development of the North Base Industrial Area at the Poplar Road location would require removal of approximately 5 acres of forested lands and the proposed buildings would be visible from the golf course to the west of the site and north of Weyland Road. Adverse environmental consequences to visual resources would be expected to be negligible at this location.

Socioeconomics: Employment and earnings associated with the Proposed Action and Poplar Road alternative are not expected to have any significant adverse environmental consequences. There would be a slight beneficial increase in regional economic activity with the implementation of either the Proposed Action or the Poplar Road alternative.

Cultural Resources: Construction activities for the North Base Industrial Area are not expected to impact cultural resources at the proposed or alternative sites. Both sites have been inventoried for archaeological resources and no significant resources have been identified. No significant architectural resources have been identified at the proposed or alternative sites. Construction under this proposal would not take place in or near the Langley Field Historic District. If resources were inadvertently discovered, construction activities would be halted, the State Historic Preservation Office (SHPO) would be notified, and procedures outlined in the National Historic Preservation Act would be followed. Consultation with the State Historic Preservation Office would take place once Langley AFB has available project designs and funding for each project.

Biological Resources: Construction activities would have no adverse effects to individual species or native plants or animals at either location since the only plant or animal species likely to be displaced from this marginal habitat are individuals of common and locally abundant species. Approximately 7 acres of forested lands would be removed if the Proposed Action location were chosen. If the Poplar Road alternative location was chosen about 5 acres of forested lands would be removed. No wetlands would be affected by the Proposed Action; however 0.26 acres of wetlands would be filled at the Poplar Road alternative site. If the Poplar Road alternative site were implemented, then wetland mitigation measures will be needed to arrive at a Finding of No Significant Impact (FONSI) or a Finding of No Practicable Alternative (FONPA) and permitting in accordance with section 404 of the Clean Water Act. One of the compensation remedies for any wetlands lost would be off-base mitigation banking. A wetland mitigation plan would be required within 90 days of FONSI/FONPA signature. No threatened, endangered, or special species/communities would be adversely affected by the Proposed Action or the Poplar Road alternative. Incidentally occurring listed, proposed, or candidate species are not likely to be adversely affected because no critical habitat exists on Langley AFB.

Water Resources: Construction and operation of the North Base Industrial Area at the Proposed Action site would not be expected to significantly affect the water quality of the Back River and Chesapeake Bay. Sediment control practices would be in accordance with the requirements from the Virginia Department of Conservation and Recreation, and a General Permit for Discharges of Storm Water from Construction Activities would be required from the agency. No adverse environmental consequences are anticipated from the development at either site. The majority of Langley AFB, including both sites, is located within the 100-year floodplain. There is no practicable alternative, however, that would not involve construction in the floodplain.

Air Quality: Construction-related air emissions would be generated both on base and within the region with the hauling of fill material and construction materials to the base regardless of the location chosen. Air emissions from the construction at the Poplar Road location would be slightly greater as a result of the site preparation activities and the need for 30 percent more fill at that location. In either case, these emissions would be less than 1 percent of emissions in the Hampton Air Quality Control Region (AQCR). Langley AFB is located in a marginal nonattainment area for ozone (O₃); however, the Proposed Action would not contribute O₃-related emissions above United States Environmental Protection Agency (USEPA) established *de minimis* levels for O₃. Therefore, a formal air quality conformity determination is not required.

Hazardous Materials and Waste Management: For the Proposed Action and Poplar Road alternative locations, existing hazardous waste management practices would continue to be used to comply with Virginia regulations. Hazardous waste generation is expected with the operation of the Vehicle Maintenance Complex and would be managed in accordance with the Base Hazardous Waste Management Plan. Redevelopment of the North Base Industrial Area at the Proposed Action site would not directly affect any Environmental Restoration Program (ERP) sites. Coordinated with the Langley AFB ERP Manager would be necessary for construction at the Poplar Road alternative location because activities would take place over ERP Range site ED 147/AOC 147 – a former bombing range. The Langley AFB ERP Manager would coordinate a waiver from ACC policy concerning any construction disturbances near ERP Site SS-19 and OT-38a. Waivers would identify the appropriate control measures that would be necessary for the activities at the ERP sites and no long-term adverse environmental consequences are anticipated. Demolition activities associated with the Proposed Action would generate approximately 5,133 yards of construction debris. If not recycled, these materials would be disposed of at landfills that have adequate capacity without having a significant effect on the overall capacity.

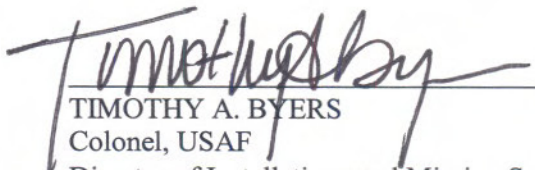
Safety: Implementation of either the Proposed Action or the Poplar Road alternative would increase safety risks during the construction and demolition phases; however, these risks would be reduced with implementation of standard construction and demolition safety practices. No significant adverse environmental consequences are anticipated.

Noise: Construction noise associated with the Proposed Action or the Poplar Road alternative would generate temporary, localized noise during the construction and/or demolition phases. These localized noise increases may disrupt base personnel in nearby structures, but the noise disruptions would be temporary and limited to daytime hours; therefore, impacts are considered insignificant. Aircraft noise from on-going airfield operations would continue to generate average noise levels of 75 decibels (dB) to 85 dB at the Proposed Action site and 75 to 80 dB at the Poplar Road alternative site. These noise levels should not adversely affect proposed industrial activities. The new industrial office facilities would include features to attenuate the aircraft noise and ensure a safe working environment for base personnel.

No-Action Alternative: Under the No-Action alternative, redevelopment of the North Base Industrial Area would not occur.

CONCLUSION

Based on the findings of the EA, no significant impact is anticipated from implementation of the Proposed Action, the Poplar Road alternative, or the No-Action alternative. Therefore, issuance of a finding of no significant impact is warranted, and an environmental impact statement is not required. Pursuant to Executive Order 11988 (Floodplain Management) and Executive Order 11990 (Protection of Wetlands), the authority delegated in Secretary of the Air Force Order 791.1, and taking the above information into account, I find that there is no practicable alternative to this action and that the proposed action includes all practicable measures to minimize harm to the environment.


TIMOTHY A. BYERS
Colonel, USAF
Director of Installations and Mission Support (A7)

7 MAR 06
DATE

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Environmental Assessment**

Langley Air Force Base, Virginia

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Air Combat Command
1st Fighter Wing**

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EXECUTIVE SUMMARY

This Environmental Assessment (EA) describes the potential environmental consequences resulting from a proposal to redevelop the North Base Industrial Area at Langley Air Force Base (AFB), Virginia, as identified in the North Base Area Development Plan.

ENVIRONMENTAL IMPACT ANALYSIS PROCESS

This EA has been prepared by the United States Air Force (Air Force), Air Combat Command (ACC) and the 1st Fighter Wing (1 FW) in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations implementing NEPA, and 32 Code of Federal Regulations [CFR] Part 989).

PURPOSE AND NEED FOR ACTION

The purpose of this action is to redevelop an industrial area as recommended in the North Base Area Development Plan (ADP) study. This study identified the need to establish a light industrial area on the north side of the runway so that various facilities/missions that exist on valuable land south of the runway, no longer compatible with surrounding land uses, could be moved to this new industrial area.

Redevelopment of this area is needed to provide adequate space for these various facilities/missions that currently exist on valuable land south of the runway. The current facilities within the North Base Area are in need of constant repair and do not adequately support current and future mission requirements, Force Protection requirements as contained in Unified Facilities Criteria (UFC) 4-010-01 (Department of Defense [DoD] Minimum Antiterrorism Standards for Buildings) or the requirements contained in the Americans With Disabilities Act (ADA).

PROPOSED ACTION AND ALTERNATIVES

Langley AFB proposes the redevelopment of the North Base Industrial Area. The industrial area would include constructing new facilities and expansion of the recreational vehicle storage area. New facilities would include approximately 90,000 square feet of industrial space and associated vehicle parking and storage facilities. This EA analyzes the impacts at the Proposed Action location and at an alternative location along Poplar Road. The No-Action alternative was also evaluated.

SUMMARY OF ENVIRONMENTAL CONSEQUENCES

This EA provides an analysis of the potential environmental consequences associated with the construction of a new industrial area at the Proposed Action site, at the Poplar Road alternative site, and the No-Action alternative. Nine resource categories received thorough evaluation to

identify potential environmental consequences. As indicated in Chapter 4.0, construction of the North Base Industrial Area at either of the locations would not result in significant impacts to any resource area.

Land Use Resources: Redevelopment of the North Base Industrial Area at the Proposed Action location would be consistent with the Langley General Plan, the ACC zoning initiative, and the goals of the Coastal Zone Management Act (CZMA). No adverse environmental consequences would be expected with the implementation of the Proposed Action. Construction at the Proposed Action location would require removal of approximately 7 acres of forested lands. Approximately 5 acres of forested lands would require removal at the Poplar Road location and the land use would not be consistent with the recreational facilities located to the west and north of the site. Adverse environmental consequences to land use would be expected to be negligible at this location.

With the installation of an improved intersection for Lee Road and Durand Loop as part of the Proposed Action, traffic would operate at acceptable levels of service. Construction at the Poplar Road location would not include any new traffic improvements. Truck traffic associated with the site preparation and construction at either location may increase congestion at the West Gate and hasten the degradation of the road pavements. No significant adverse environmental consequences would be expected to transportation resources.

Visual resources at the Proposed Action location would not be affected by the redevelopment of the North Base Industrial Area as forested areas would be left intact to provide a visual buffer. Industrial development would be consistent with past use of the property. Development of the North Base Industrial Area at the Poplar Road location would require removal of approximately 5 acres of forested lands and the proposed buildings would be visible from the golf course to the west of the site and north of Weyland Road. Adverse environmental consequences to visual resources would be expected to be negligible at this location.

Socioeconomics: Construction activity, employment, and earnings associated with the Proposed Action and the Poplar Road alternative would be very similar. No adverse environmental consequences would be expected and there would be a slight beneficial affect from the expenditure of project funds.

Cultural Resources: Construction activities for the North Base Industrial Area are not expected to impact cultural resources at the proposed or alternative sites. Both sites have been inventoried for archaeological resources and no significant resources have been identified. No significant architectural resources have been identified at the proposed or alternative sites. Construction under this proposal would not take place in or near the Langley Field Historic District. Consultation with the State Historic Preservation Office would take place once Langley AFB has available project designs and funding for each project.

Biological Resources: Construction activities would have no adverse effects to individual species or native plants or animals at either location since the only plant or animal species likely to be displaced from this marginal habitat are individuals of common and locally abundant

species. Approximately 7 acres of forested lands would be removed if the Proposed Action location were chosen. If the Poplar Road alternative location was chosen about 5 acres of forested lands would be removed. No wetlands would be affected by the Proposed Action; however, 0.26 acres of wetlands would be filled at the Poplar Road Alternative site. If the Poplar Road Alternative site were chosen, then wetland mitigation measures will be needed to arrive at a Finding of No Significant Impact (FONSI) or a Finding of No Practicable Alternative (FONPA) and permitting in accordance with section 404 of the Clean Water Act. One of the compensation remedies for any wetlands lost would be off-base mitigation banking. A wetland mitigation plan would be required within 90 days of FONSI/FONPA signature. No threatened, endangered, or special species/communities would be adversely affected by the Proposed Action or the Poplar Road alternative. Incidentally occurring listed, proposed, or candidate species are not likely to be adversely affected because no critical habitat exists on Langley AFB.

Water Resources: Construction and operation of the North Base Industrial Area at the Proposed Action site would not be expected to significantly affect the water quality of the Back River and Chesapeake Bay. No adverse environmental consequences are anticipated from the development at either site. The majority of Langley AFB, including both sites, is located within the 100-year floodplain. There is no practicable alternative, however, that would not involve construction in the floodplain.

Air Quality: Construction-related air emissions would be generated both on base and within the region with the hauling of fill material and construction materials to the base regardless of the location chosen. Air emissions from the construction at the Poplar Road location would be slightly greater as a result of the site preparation activities and the need for 30 percent more fill at that location. In either case, these emissions would be less than 1 percent of emissions in the Hampton Air Quality Control Region (AQCR). Langley AFB is located in a marginal nonattainment area for ozone (O₃); however, the Proposed Action would not contribute O₃-related emissions above United States Environmental Protection Agency (USEPA) established *de minimis* levels for O₃. Therefore, a formal air quality conformity determination is not required.

Hazardous Materials and Waste Management: No appreciable new hazardous waste generation is expected with the operation of the North Base Industrial Area at either site. Redevelopment of the North Base Industrial Area at the Proposed Action site would not directly affect any Environmental Restoration Program (ERP) sites. Coordination with the Langley AFB ERP Manager would be necessary for construction at the Poplar Road alternative location because activities would take place over ERP Range site ED 147/AOC 147 – a former bombing range. The Langley AFB ERP Manager would coordinate a waiver from ACC policy concerning any construction disturbances near ERP Site SS-19 and OT-38a. Waivers would identify the appropriate control measures that would be necessary for the activities at the ERP sites and no long-term adverse environmental consequences are anticipated.

Safety: Construction of the North Base Industrial Area at either site would increase safety risks during the construction phase; however, these risks and no adverse environmental consequences are anticipated.

Noise: Construction of the North Base Industrial Area at either site would have temporary, localized noise effects during the construction phase. These localized noise increases may disrupt workers in nearby structures, however, the noise disruptions would be temporary and would be limited to daytime hours; therefore, impacts are considered insignificant. Aircraft noise from on-going airfield operations would continue to generate average noise levels of 75 decibels (dB) to 85 dB at the Proposed Action site and 75 to 80 dB at the Poplar Road alternative site. These noise levels should not adversely affect proposed industrial activities. The new industrial office facilities would include features to attenuate the aircraft noise and ensure a safe working environment for base personnel.

1.0 PURPOSE AND NEED FOR ACTION

1.1 INTRODUCTION

The United States Air Force (Air Force), 1st Fighter Wing (1 FW) proposes to redevelop the North Base Industrial Area at Langley Air Force Base (AFB), Virginia. This Environmental Assessment (EA) has been prepared to analyze the potential environmental consequences associated with the Proposed Action and alternatives in accordance with the requirements of the National Environmental Policy Act (NEPA) (42 United States Code [USC] 4321 *et seq.*). This document was prepared in accordance with the following:

- Requirements of NEPA (42 USC 4321-4347).
- Regulations established by the Council on Environmental Quality (CEQ) (40 Code of Federal Regulations [CFR] 1500-1508).
- 32 CFR Part 989, *et seq.*, *Environmental Impact Analysis Process* (EIAP).

This EA also provides an evaluation of potential coastal zone impacts pursuant to National Oceanic and Atmospheric Administration Coastal Zone Management regulations (15 CFR Part 930). Consequently, this EA serves as coastal consistency determination documentation with respect to implementation of the Proposed Action or alternatives.

Section 1.2 provides background information that briefly describes Langley AFB. The purpose and need for the Proposed Action are described in Section 1.3. Section 1.4 provides a summary of permits and regulatory requirements that may apply to the Proposed Action.

A detailed description of the Proposed Action, Poplar Road alternative, and the No-Action alternative is provided in Chapter 2.0. Chapter 3.0 describes the existing conditions of various environmental resources that could be affected if the proposal were implemented. Chapter 4.0 describes how those resources would be affected by implementation of the Proposed Action and alternative, or the No-Action alternative. Chapter 5.0 addresses the cumulative effects of the Proposed Action, as well as other recent past, current, and future actions that may be implemented in the region of influence (ROI) for the Proposed Action.

1.2 BACKGROUND

Langley AFB is located approximately 175 miles south of Washington, D.C., near the south end of the lower Virginia Peninsula on the Back River, a tributary of the Chesapeake Bay. Langley AFB is situated in the Hampton Roads Standard Metropolitan Statistical Area, in the City of Hampton, Virginia (Figure 1-1). As shown in Figure 1-2, the main base occupies an area between the Northwest and Southwest Branches of the Back River.

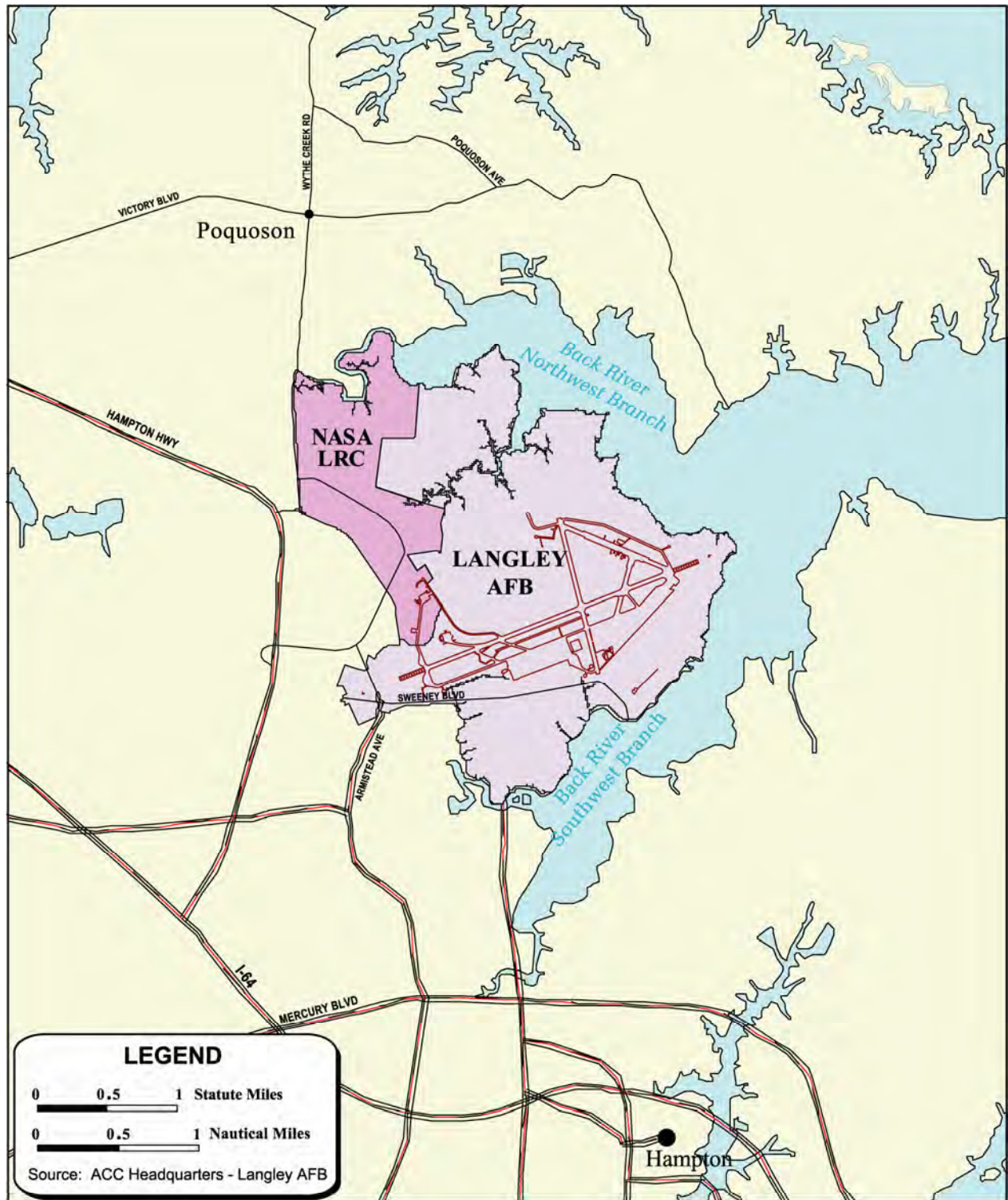


Figure 1-1.
Langley AFB, Virginia



Figure 1-2. Site Map

Langley AFB is headquarters for Air Combat Command (ACC) and home of the 1 FW. ACC is one of eight major commands in the Air Force and is responsible for organizing, equipping, training, and maintaining combat-ready forces at the highest level of readiness. The primary mission of Langley AFB is to provide air operational support to a broad spectrum of aircraft in both peacetime and combat environments. General goals of the base are to sustain the resources and relationships deemed appropriate to pursue national interests, and provide for the command, control, and communications necessary to execute the missions of the Air Force, ACC, and the 1 FW.

1.3 PURPOSE AND NEED

The purpose of this action is to redevelop an industrial area as recommended in the North Base Area Development Plan (ADP) study. This study identified the need to establish a light industrial area on the north side of the runway so that various facilities/missions that exist on valuable land south of the runway, no longer compatible with surrounding land uses, could be moved to this new industrial area.

Redevelopment of this area is needed to provide adequate space for these various industrial and non-administrative or flightline oriented facilities/missions that currently exist on valuable land south of the runway. The current facilities within the North Base area are in need of constant repair and do not adequately support current and future mission requirements, Force Protection requirements as contained in Unified Facilities Criteria (UFC) 4-010-01 (Department of Defense [DoD] Minimum Antiterrorism Standards for Buildings) or the requirements contained in the Americans With Disabilities Act (ADA).

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

The 1 FW proposes to redevelop the North Base Industrial Area as an area supporting base operations and maintenance activities at Langley AFB. In addition to the Proposed Action, this EA evaluated one alternative location for the industrial area and the No-Action alternative. Figure 2-1 depicts the site of the proposed action.

2.1 PROPOSED ACTION

The Proposed Action consists of the redevelopment of the North Base Industrial Area. The redevelopment encompasses the 1300 Area and includes the demolition and construction of new facilities. Four existing buildings (1329, 1330, 1331, and 1332) totaling 11, 550 square feet would be demolished as part of the development proposal. New construction totaling 90,089 square feet would include: Auto/Skills Center, Explosive Ordnance Disposal (EOD) Operations Center, a Vehicle Maintenance Complex, a new Hazardous Waste Storage Facility, and an Outdoor Recreational Center with recreational vehicle storage area. Additional parking areas would also be added for the new facilities. The entrance into Durand Loop would be modified to allow expansion into the area between Durand Loop and Lee Road. Additional recreational vehicle parking would be constructed in the undeveloped area at the south corner outside Durand Loop. Buildings 1334, 1346, and 1352 would remain in place. A description of the proposed facilities follows.

Auto/ Skills Development Center. A Fiscal Year (FY) 2009 Non-Appropriated Funds project, the action would relocate the Auto/Skills Development Center from Building 77 in the Community Center portion of the base to a new 21, 721-square foot facility. In addition to administrative space, the facility would consist of an Auto Skills Development Center with 25 vehicle stalls, paint prep booth, paint booth, and machine shop. The Skills Development Center will include a frame shop, wood shop, pottery shop, and laser engraving area. Thirty parking spaces for personnel using the Auto/ Skills Development Center would be provided along with a 150-space Auto Resale Lot.

Transportation Vehicle Maintenance Complex. A FY 2011 Military Construction (MILCON) project includes construction of a new 26,000-square foot shop in order to relocate the Transportation Vehicle Maintenance shop from an incompatible land use area to an area more suited for light industrial uses. The facility would include administrative offices, classrooms for vehicle maintenance instruction including space for hands-on vehicle training mock ups, parts storage, corrosion control paint area with two paint booths, as well as areas for welding, upholstery repair, and parts fabrication. Also included would be a dynamometer facility for vehicle emission testing and lube oil and filter bays. In addition to the building, a parking area for approximately 70 vehicles would also be constructed. A construction start date has not been set, but construction is anticipated to take approximately 18 months.

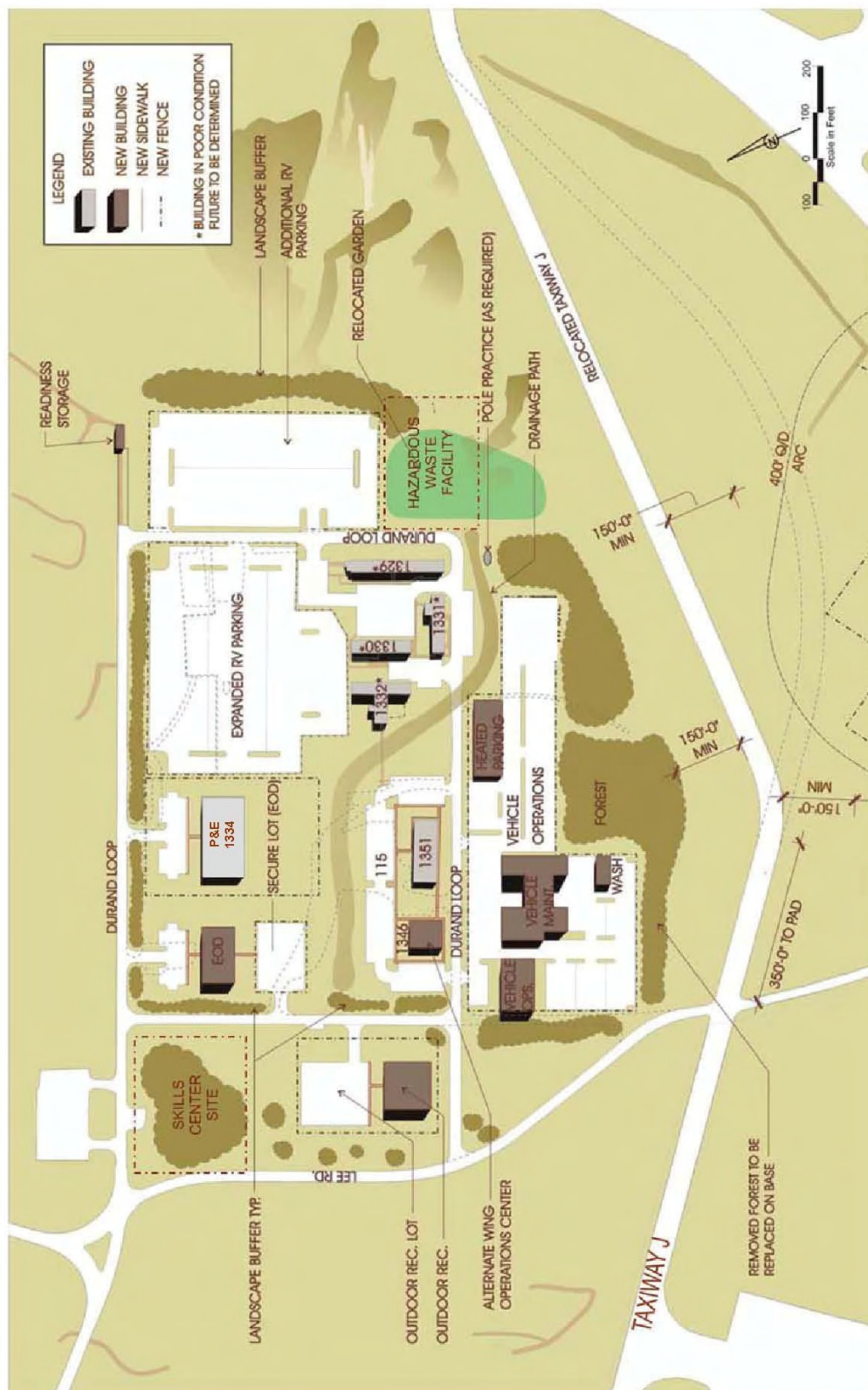


Figure 2-1. Proposed Action

Hazardous Waste Storage Facility. A FY 2006 base construction project would build a new Hazardous Waste Storage Facility to replace the current facility (1390/1395) on Poplar Road. The facility would occupy approximately 1,800 square feet and provide both administrative and hazardous waste storage space for the Langley AFB hazardous waste management program. The Hazardous Waste Storage Facility would store hazardous wastes for less than 90 days prior to the wastes being transported off-base for treatment and disposal. The facility would comply with all state and federal requirements of the Resource Conservation and Recovery Act (RCRA) and the Occupational Safety and Health Administration (OSHA).

EOD Operations Center. This project proposes construction of a new 29,998-square foot facility. Existing EOD control center, maintenance, and classroom training operations currently in Building 340 would move to a location that is more suited for their mission and designated for industrial use. The facility would contain a new operational control center to support the EOD emergency response mission. It would also provide a maintenance area to perform general maintenance on assigned equipment and robotic platforms. An EOD training classroom to conduct classified training would also be provided. In addition to the building, a parking area for approximately 66 vehicles, including emergency response equipment, would be constructed.

Outdoor Recreational Center. A FY 2009 Non-Appropriated Fund MILCON project proposes construction of a new 10,570-square foot outdoor recreation equipment loan/rental center so that existing operations can be moved from Building 276 which is shared with the Army and Air Force Exchange Service (AAFES) Class VI Shoppette and the Medical War Reserve Materiel (WRM) Warehouse. The current facility is too small and does not have adequate design and space to serve customers. Also included in the construction plan is a 30 vehicle parking lot.

For all of the proposed construction within the North Base Industrial Area, water service would be provided by the recently upgraded drinking water system. Wastewater generated by industrial users would flow to the existing sanitary sewer system. Electric and natural gas connections to the existing system are already available in the North Base Industrial Area.

Standard Construction Practices. Construction of the new facilities would conform to criteria in Military Handbook 1190 (Facility Planning and Design Guide); Air Force Instruction (AFI) 32-1023 (Design and Construction Standards and Execution of Construction Projects); AFI 32-1084 (Facilities requirements); and UFC 3-600-1 (Fire Protection Engineering for Facilities). New facilities would also adhere to Langley AFB architectural and landscaping standards and designs would include the goals of low environmental impact, optimal and efficient use and reuse of materials and resources using the Leadership in Energy and Environmental Design Green Building Rating system.

Prior to the initiation of construction, silt fences, storm drain inlet and outlet protection, tree protection, and other appropriate standard management practices would be instituted. Directing runoff to existing storm drainage structures would control storm water runoff and

soil erosion from the site. Construction would occur within the 100-year floodplain. The total fill amount needed to have the first floor elevations of the new facilities constructed above the 100-year flood elevation, of 9 feet above mean sea level, is estimated to be approximately 3,350 cubic yards.

2.1.1 Selection Criteria

Selection criteria for construction of the facilities within the North Base Industrial Area were established by 1 FW and included the following objectives:

- Match the facility/mission requirements to the land use.
- Meet proposed base/mission space requirements.
- Relocate facilities that would be compatible with the airfield environment.
- Avoid construction within wetlands.

The selection criteria and their applicability to the alternatives are shown in Table 2-1.

Table 2-1. Selection Criteria

<i>Location</i>	<i>Match Existing Land Use</i>	<i>Meet Space Requirements</i>	<i>Compatible with airfield environment</i>	<i>Avoid construction within wetlands</i>
Proposed Action	✓	✓	✓	✓
Poplar Road Alternative	✓	✓	✓	✗
No-Action Alternative	✗	✗	✗	✓

Notes: ✓ = Meets Selection Criteria
✗ = Selection Criteria Not Met

2.2 POPLAR ROAD ALTERNATIVE

The alternative site is approximately 5.4 acres in size and is depicted in Figure 1-2. Site preparation would include clearing approximately 5 acres of forested land located at the west corner of Weyland Road and Poplar Road. Under this alternative, the size of the industrial facilities and parking areas constructed would be similar to the Proposed Action. Access to the facilities would be from Poplar Road. The total fill amount needed to construct the first floor elevations of the new facilities above the 100-year flood elevation of 9 feet above mean sea level is estimated to be approximately 4,460 cubic yards.

2.3 NO-ACTION ALTERNATIVE

Under the No-Action alternative, the proposed development of the industrial area would not occur. All activities proposed for relocation would remain and continue to support their current missions.

2.4 ENVIRONMENTAL IMPACT ANALYSIS PROCESS

The EIAP includes the review of all information pertinent to the Proposed Action and reasonable alternatives and provides a full and fair discussion of potential consequences to the natural and human environment. The process includes involvement with the public and agencies to identify possible consequences of an action, as well as the focusing of analysis on environmental resources potentially affected by the proposed action or alternatives.

2.4.1 Public and Agency Involvement

Through the scoping process, the Air Force obtained information regarding pertinent environmental issues the agencies felt should be addressed in the environmental impact analysis. Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, requires intergovernmental notifications prior to making any detailed statement of environmental impacts. Through the process of Interagency and Intergovernmental Coordination for Environmental Planning (IICEP), the proponent must notify concerned federal, state, and local agencies and allow them sufficient time to evaluate potential environmental impacts of a proposed action. Agency consultations were undertaken with regard to biological and cultural resources, primarily for compliance with the Endangered Species Act (ESA) and with the National Historic Preservation Act (NHPA). Appendix A identifies agencies contacted as part of the IICEP process and includes agency responses.

The Air Force prepared and published a newspaper advertisement on November 27, 2005 in *The Daily Press* announcing the availability of the Draft EA in local libraries for a 30-day public review. A copy of the newspaper advertisement is included in Appendix A. No comments were received from the public during the 30-day review period. Copies of the Draft EA were provided to the VDEQ Single Point of Contact to allow for distribution and review by appropriate state and local agencies. A copy of the comments provided by VDEQ are included in Appendix A. No comments were received that required additional analysis that would have resulted in changes to the impacts identified in the Draft EA.

2.4.2 Regulatory Compliance

This EA has been prepared to analyze the potential environmental consequences associated with the Proposed Action and alternatives in accordance with the requirements of NEPA (42 USC 4321 *et seq.*). The intent of NEPA is to protect, restore, and enhance the environment through well-informed federal decisions. This document was prepared in accordance with the following:

- Requirements of NEPA (42 USC 4321-4347).

-
- Regulations established by the CEQ (40 CFR 1500-1508).
 - 32 CFR Part 989, et seq., *Environmental Impact Analysis Process*.

In addition, this document was prepared in accordance with AFI 32-7061, which implements the requirements of NEPA within the Air Force.

Implementation of the Proposed Action or an alternative would require concurrence from several regulatory agencies. Compliance with the ESA involves communication with the Department of the Interior (delegated to the United States Fish and Wildlife Service [USFWS]) in cases where a federal action could affect the listed threatened or endangered species, species proposed for listing, or species that could be candidates for listing. A letter was sent to the appropriate USFWS agencies, as well as their state counterparts, informing them of the Proposed Action and alternatives and requesting data regarding applicable protected species.

Appendix A includes copies of relevant coordination letters and letters regarding protected species provided by interested agencies.

2.4.3 Permit Requirements

This EA has been prepared in compliance with NEPA; other federal statutes, such as the Clean Air Act (CAA) and the Clean Water Act, EOs, and applicable state statutes and regulations. Table 2-2 summarizes applicable federal, state, and local permits and the potential for change to the permits due to the proposed action or alternatives.

In addition to this EA being prepared for the decision maker and the interested public, it is also a tool for Air Force personnel to ensure compliance with all regulatory requirements from proposal through project implementation.

2.5 MITIGATION MEASURES

In accordance with 32 CFR Part 989.22, the Air Force must indicate if any mitigation measures would be needed to implement this proposal at the Proposed Action or Poplar Road alternative sites. If the Poplar Road alternative site were implemented, then wetland mitigation measures will be needed to arrive at a FONSI or a FONPA and a wetland mitigation plan would be required within 90 days of FONSI/FONPA signature.

Mitigation would be achieved through creation, restoration, or enhancement of wetlands, usually on site or at a selected off-site location. Regulations require a minimum compensation ratio of one to one, or one unit of wetland mitigation for each unit of impact based on the functional value of the impacted wetland. The steps for implementing a mitigation plan include the following: 1) a site selection and feasibility; 2) development of a conceptual design for USACE review and approval; 3) agreement with the USACE regarding details of the plan; 4) preparation of the design specifications; 5) contractor selection; 6) construction implementation and oversight; 7) as-built reports; 8) annual monitoring reports to the USACE for a three to five year period; 9) post construction maintenance and corrective measures; and 10) final delineation report to demonstrate permit compliance.

Table 2-2. Environmental Related Permitting

<i>Type of Permit or Regulatory Requirement</i>	<i>Requirement</i>	<i>Agency</i>
Endangered Species Act	Required to consult on impacts of project implementation on federally listed or proposed threatened and endangered species	USFWS; Commonwealth of Virginia, Department of Conservation and Recreation; Department of Game and Inland Fisheries
Clean Water Act	General Permit for Discharges of Stormwater From Construction Activities	Commonwealth of Virginia, Department of Conservation and Recreation
United States Army Corps of Engineers (USACE) Section 404/Virginia Water Protection Permit	Required for authorizing fill within waters or wetlands regulated by state and/or federal law and regulation	USACE, Norfolk District; City of Hampton; Virginia Department of Environmental Quality (VDEQ), and Virginia Marine Resources Commission (VMRC)
Coastal Consistency Determination	Determine consistency with enforceable policies of Commonwealth's Coastal Zone Management Program	VDEQ
Clean Air Act	Potential modification to Langley AFB synthetic minor permit	VDEQ, Tidewater Regional Office

2.6 COMPARISON OF ALTERNATIVES

Table 2-3 summarizes the potential environmental impacts of the Proposed Action and alternatives, based on the detailed impact analyses presented in Chapter 4.0. In no instance would the potential environmental consequences be significant with the implementation of the proposed action or alternatives.

**Table 2-3. Summary of Potential Environmental Impacts of
Proposed Action and Alternatives**

<i>Resource</i>	<i>Proposed Action</i>	<i>Poplar Road Alternative</i>	<i>No-Action Alternative</i>
Land Use Resources	+	-	0
Socioeconomics	+	+	0
Cultural Resources	0	0	0
Biological Resources	-	-	0
Water Resources	-	-	0
Air Quality	-	-	0
Hazardous Materials and Waste Management	-	-	0
Safety	-	-	0
Noise	-	-	0

- = Adverse, but not significant, impact

+ = Positive/beneficial impact

0 = No change

3.0 AFFECTED ENVIRONMENT

This chapter describes relevant environmental conditions at Langley AFB for resources potentially affected by the Proposed Action, Poplar Road alternative, and No-Action alternative described in Chapter 2.0. In compliance with guidelines contained in the NEPA, CEQ regulations, and AFI 32-7061, the description of the existing environment focuses on those environmental resources potentially subject to impacts. For the EIAP, the resources to be analyzed are identified and the expected geographic scope of potential impacts, known as the ROI, is defined. The environment includes all areas and lands that might be affected, as well as the natural, cultural, and socioeconomic resources they contain or support. In the following sections, the existing environmental conditions for each of the environmental resources are presented.

RESOURCES ELIMINATED FROM DETAILED CONSIDERATION

Two resources were not evaluated in this EA because it was determined that implementation of the Proposed Action is unlikely to affect them. These resources include airspace and environmental justice. A brief explanation of the reasons why each resource has been eliminated from further consideration in this EA is provided below.

Airspace. Airspace was eliminated from further consideration since neither the Proposed Action nor alternatives would impact aircraft operations or modifications to airspace.

Environmental Justice. Environmental justice concerns the disproportionate effect of a federal action on low-income or minority populations. The existence of disproportionately high and significant impacts depends on the nature and magnitude of the effects identified for each of the individual resources. If implementation of the Proposed Action and the alternatives were to have the potential to significantly affect people, these effects would have to be evaluated for how they adversely or disproportionately affect low-income or minority communities. Because no significant effects would result from the Proposed Action or the alternatives, neither minority nor low-income groups would be affected disproportionately. Therefore, environmental justice issues were eliminated from further analysis.

3.1 LAND USE RESOURCES

The attributes of land use addressed in this analysis include land use, transportation, and visual resources. Land use focuses on general land use patterns, as well as management plans, policies, ordinances, and regulations. These provisions determine the types of uses that are allowable and identify appropriate design and development standards to address specially designated or environmentally sensitive areas. Transportation addresses roads and circulation. Visual resources present the natural and manufactured features that constitute the aesthetic qualities of an area. The ROI for land use resources consists of Langley AFB.

3.1.1 Land Use

Land uses on Langley AFB are grouped by function in distinct geographic areas. For example, aircraft operations and maintenance facilities are located in the southern portion of the base. The residential areas on base are located along the Back River in the southeastern and northeastern portions of the base. The Proposed Action and Poplar Road alternative sites are located on the north side of the base. This area abuts the National Aeronautics and Space Administration's (NASA) Langley Research Center. The Langley AFB 36-hole Golf Course, an alert aircraft hanger, and a few isolated industrial facilities dominate current activities on the north side of the base. The Proposed Action site has been occupied by Langley AFB facilities for over 40 years and is currently a mix of new, renovated, and original facilities. The area also includes approximately 10 acres of forest. The Poplar Road site, also currently forested, has not been constructed on, but was an open field in aerial photographs taken in the late 1960's.

Adopted plans and programs guide land use planning on Langley AFB. Base plans and studies present factors affecting both on- and off-base land use and include recommendations to assist on-base officials and local community leaders in ensuring compatible development. Area development plans, part of the General Plan, provide focused information on the future organization and circulation of personnel, buildings, and equipment within portions of the base. As part of a new ACC initiative to zone lands within each base, both the Proposed Action and the alternative locations are designated for light industrial use. The base's *Integrated Natural Resource Management Plan* (Air Force 1998a) is used to coordinate natural resource management.

The Coastal Zone Management Act (CZMA) was enacted to develop a national coastal management program that comprehensively manages and balances competing uses of land impacts to any coastal use or resource. The CZMA federal consistency requirement (CZMA Section 307) mandates that federal agency activities be consistent, to the maximum extent practicable, with the enforceable policies of a state management program. The federal consistency requirement applies when any federal activity, regardless of location, affects any land or water use or natural resource of the coastal zone. The question of whether a specific federal agency activity may affect any natural resource, land use, or water use in the coastal zone is determined by the federal agency.

VDEQ oversees activities in the coastal zone of the commonwealth through a number of enforceable programs. In reviewing this proposal, VDEQ may require agencies to coordinate with its specific divisions or other agencies for consultation or to obtain permits; it also may comment on environmental impacts and mitigation. VDEQ enforceable programs and policies pertain to fisheries management, subaqueous lands management, wetlands management, dunes management, non-point-source pollution control, point-source pollution control, shoreline sanitation, air pollution control, and coastal lands management. The Chesapeake Bay Local Assistance Department regulates activities in the Chesapeake Bay Resource Management Areas

(RMA) and Resource Protection Areas (RPA). Neither the Proposed Action nor the Poplar Road alternative sites are within areas designated as RMA or RPA.

3.1.2 Transportation

Access to Langley AFB is provided from Interstate 64 (I-64) via Armistead Avenue to the west of the base, and from Mercury Boulevard (United States [U.S.] Route 258/Virginia State Route [SR] 32), via LaSalle Avenue (SR 167) or King Street (SR 278). Langley AFB has a network of streets that provide access to all base facilities. Nealy Avenue begins at the Main Gate and continues northeast through the installation. Sweeney Boulevard is the primary east west corridor linking directly to the West Gate at Armistead Avenue. It has three lanes (center lane reversible) from the gate to the intersection with Nealy Avenue/Hammond Avenue. Parking in some on-base areas is limited. Access to the North Base Industrial Area and the Poplar Road alternative locations is from a combination of Ward Road, Clarke Avenue, Weyland Road, and Lee Road. These roads act as the “perimeter road” and provide access to the north side of the base. This two lane road provides access to the North Base Industrial Area with two entrances to Durand Loop.

3.1.3 Visual Resources

Langley AFB is located in the city of Hampton near the southern end of the lower Virginia Peninsula, between the Northwest and Southwest Branches of the Back River, a branch of the Chesapeake Bay. The base is in the Coastal Plain Physiographic province on Hampton Flat, a nearly flat plain that gently slopes toward the east, with elevations between 5 and 11 feet above mean sea level (MSL).

The main base occupies 2,883 acres of the total site. The largest structures on base are the aircraft operations and maintenance facilities located in the southern portion of the base. NASA operates a facility complex in the northwestern, southern, and southeastern portion of the base. The large wind tunnels and aeronautical test equipment that comprise the NASA facility resemble a large industrial area. A number of older buildings on base, 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 (circa 1916). Towering oak trees are the dominant species of trees in the Langley Field Historic District. They have been used mainly as street plantings and as decorative plantings around many buildings. The uniformity of size and shape, as well as the fairly regular placement of these trees, are a unifying factor throughout the base, giving it a distinctive character. These trees, along with a number of smaller species, play a major role in breaking up open areas and providing shade for buildings, parking, and lawn areas. The tidal salt marshes and estuaries surrounding the base are prominent elements of the installation’s open space.

3.2 SOCIOECONOMICS

The socioeconomic resources of the potentially affected region, represented as the ROI, are characterized in terms of population and housing, economic activity, community services, and infrastructure. Because these resources would be interrelated in their response to the proposed actions at Langley AFB, their current condition is assessed in order to provide a basis for analyzing potential socioeconomic impacts. A change in employment, for example, may lead to population movements into or out of a region and, in turn, lead to changes in demand for housing and public services. The significance of these estimated impacts is then evaluated by comparing their characteristics to the baseline conditions described in this section.

3.2.1 Existing Conditions

Langley AFB is located in Hampton, Virginia, in a large metropolitan area made up of independent cities and counties in the southeast corner of Virginia. The entire area, which is known as Hampton Roads, is divided by the James River into two geographic regions. The northern portion is called the Virginia Peninsula and the southern portion is called South Hampton Roads.

Virginia is unique in that cities that have reached a certain size become independent governmental jurisdictions from the counties in which they are geographically located. The Virginia Peninsula is made up of the counties of James City, Gloucester, Matthews, and York and the independent cities of Williamsburg, Newport News, Poquoson, and Hampton. South Hampton Roads includes Isle of Wight County and the independent cities of Norfolk, Suffolk, Portsmouth, Chesapeake, and Virginia Beach. The center of the area, in which Langley AFB is situated, is highly urbanized, while the outer regions tend to be more rural.

The ROI for this analysis includes York County and the independent cities of Hampton, Newport News, and Poquoson, which are the areas surrounding Langley AFB. It is expected that any potential socioeconomic impacts of the Proposed Action would be concentrated in this region. The Proposed Action would be contained within the confines of Langley AFB.

POPULATION AND HOUSING

The 2000 Census established the ROI population as 394,450 persons, an increase of 10.4 percent from the 1990 population of 357,265 (see Table 3-1). By 2003, population in the ROI had grown to 401,317 persons, a 1.7 percent increase since 2000. The current population in the ROI accounts for 5.6 percent of the Virginia population of 7.4 million persons.

Population density in the ROI is 1,630 persons per square mile, ranging from 533 persons per square mile in York County to over 2,800 persons per square mile in the City of Hampton. Overall, the state has a population density of 179 persons per square mile. The combined regional population is projected to increase at an average annual rate of 0.5 percent, reaching

414,500 persons by the year 2010. By the years 2020 and 2030, the population of the region is expected to grow to 432,000 and 449,300 persons, respectively.

Table 3-1. Regional Demographics

	<i>Hampton</i>	<i>Newport News</i>	<i>Poquoson</i>	<i>York County</i>	<i>ROI</i>
2003 Population	146,878	181,647	11,844	60,948	401,317
2000 Population	146,437	180,150	11,566	56,297	394,450
1990 Population	133,793	170,045	11,005	42,422	357,265
Population Density	2828.0	2637.9	745.4	532.9	1630.0
2010 Projection	149,600	184,100	12,000	68,800	414,500
2020 Projection	152,600	187,100	12,300	80,000	432,000
2030 Projection	155,600	190,100	12,600	91,000	449,300

Sources: U.S. Bureau of Census 2000, 2004; Virginia Employment Commission 2003.

Based on Langley AFB population figures for FY 2002, the base-related population amounts to approximately 26,845 individuals (see Table 3-2). Of this total, 18,539 persons are military and family members, and the remaining 8,306 persons are civilian employees and family members. Information regarding military retirees residing in the region was not available. The total Langley AFB population represents 6.7 percent of the ROI population.

Table 3-2. Langley AFB Population

	<i>September 2002</i>
Military assigned	8,470
Living on-base	1,373
Living off-base	7,097
Military family members	10,069
Living on-base	6,244
Living off-base	3,825
Civilians	8,306
Appropriated fund civilians	2,074
Other civilians ¹	1,037
Civilian family members ²	5,195

Notes: 1. This figure represents non-appropriated fund contract civilians and private business.

2. This figure calculated based on Census average household size for the ROI.

Source: Air Force 2002.

According to the 2000 Census, there were 156,429 housing units in the ROI, of which 147,739 were occupied (see Table 3-3). An estimated 83,916 of the occupied units (57 percent) were owner-occupied, while the remaining 63,823 (43 percent) were renter-occupied. The vacancy

rate in the ROI is 5.56 percent compared to 7.06 percent in the state. Approximately one-quarter of the 8,690 vacant homes are recreation homes, seasonal homes, and other housing classifications. Over one-third of the housing in the ROI is located in Hampton (37 percent), with Newport News accounting for almost half (47 percent). The median value of housing units in 2000 ranged from a low of \$91,100 in Hampton to a high of \$153,400 in Poquoson, compared to the state median home value of \$125,400.

Table 3-3. Housing Characteristics

	<i>Hampton</i>	<i>Newport News</i>	<i>Poquoson</i>	<i>York County</i>	<i>ROI</i>
Total Housing Units	57,311	74,117	4,300	20,701	156,429
Occupied Units	53,887	69,686	4,166	20,000	147,739
Vacancy Rate	5.97 %	5.98 %	3.12 %	3.39 %	5.56 %
Ownership Rate	58.6 %	52.4 %	84.1 %	75.8 %	58.6 %
Average Household	2.49	2.50	2.75	2.78	2.67
Median Value	91,100	96,400	153,400	152,700	--

Source: U.S. Bureau of Census 2000.

There are approximately 3,000 on-base housing units at Langley AFB, including both military family housing (MFH) units and unaccompanied personnel housing (UPH) units. The UPH inventory includes permanent party dormitory space, visiting officer quarters, and visiting airmen quarters.

ECONOMIC ACTIVITY

The regional economy has been expanding since the last recession in 1991; however, it began to slow in 2001 and 2002. Employment in the region has been growing at 2.3 percent annually over the past twenty years, slightly higher than the national rate (Hampton Roads Planning District Commission 2003). The military and defense contractors, including those on and associated with Langley AFB, provide a significant portion of Hampton and Newport News employment. The Hampton Roads region, which includes the ROI, has one of the most highly concentrated military populations in the U.S., with military employment comprising 11.5 percent of total regional employment.

Langley AFB is a major consumer in the local economy, not only due to the purchase of goods and services to support its day-to-day operations, but also because of the household spending of its military and civilian personnel and their families. Besides purchases and wages, Langley AFB is responsible for other economic activity in the ROI. Federal impact funds are provided to defray some of the community educational costs for military dependents receiving education in the civilian community. In addition, many military and DoD civilian retirees and their families live in the region, with their retirement pay contributing to the local economy.

EMPLOYMENT

The most recent labor market information indicates that the civilian labor force in the ROI stands at 200,138 (see Table 3-4). The civilian labor force grew 11.9 percent during the 1990s, and has grown an additional 6.0 percent since the year 2000. The 2004 regional unemployment rate is 4.5 percent, compared to the state unemployment rate of 3.6 percent. In 1990, the regional unemployment rate was 5.0 percent, and declined over the decade to a low of 2.5 percent in 2000.

Table 3-4. Labor Market Information

	<i>Hampton</i>	<i>Newport News</i>	<i>Poquoson</i>	<i>York County</i>	<i>ROI</i>
Labor Force 2004	74,038	88,997	6,436	30,667	200,138
2000	70,593	84,242	6,128	27,880	188,843
1990	63,667	79,447	--	25,672 ¹	168,789
Unemployment 2004	4.7 %	5.1 %	2.8 %	2.6 %	4.5 %
2000	2.7 %	2.8 %	1.7 %	1.6 %	2.5 %
1990	5.3 %	5.3 %	--	3.4 % ¹	5.0 %

Notes: 1. 1990 Data for York County includes data for the City of Poquoson.

Source: Virginia Employment Commission 2004.

Employment in the region amounted to 169,143 jobs in 2003 (see Table 3-5). The services industry is by far the largest employment sector, accounting for 37.0 percent of regional employment. Government and government enterprises contribute 19.8 percent of all jobs in the ROI.

Table 3-5. Employment by Industry (2003)

	<i>Hampton</i>	<i>Newport News</i>	<i>Poquoson</i>	<i>York County</i>	<i>ROI</i>
Natural Resources & Mining	0	1	*	19	20
Construction	2,401	3,906	187	2,119	8,613
Trade	8,978	11,915	340	3,096	24,329
Transportation & Utilities	613	2,424	*	242	3,279
Manufacturing	3,680	22,285	24	595	26,584
Information	1,778	2,099	0	65	3,942
Financial	1,752	3,770	75	660	6,257
Services	22,263	32,663	619	7,126	62,671
Government	15,143	13,877	524	3,904	33,448
TOTAL EMPLOYMENT	56,608	92,940	1,769	17,826	169,143

Notes: * Denotes non-disclosed data.

Source: Virginia Economic Development Partnership 2004.

Of total government employment, approximately 40 percent are military, 20 percent are federal civilians, and 40 percent are state and local government employees. Manufacturing is the third largest sector in the region, accounting for 15.7 percent of total employment.

Personnel associated with Langley AFB total 11,581 employees in FY 2002 (Air Force 2002). Military personnel account for 8,470 jobs and appropriated fund civilians account for 2,074 jobs. Other civilians, including non-appropriated fund civilians, Base Exchange/Commissary employees, branch bank/credit union employees and other concessionaires, account for the remaining 1,037 jobs. Additional private contracted personnel may contribute to total base employment. Economic activity generated by Langley AFB supports an estimated 6,195 indirect jobs in the region, with an average annual earnings impact of \$185 million.

INCOME AND EXPENDITURES

Earnings in the ROI totaled approximately \$7 billion in 2002 (United States Bureau of Economic Analysis 2004). The distribution of earnings across industries is essentially the same as the distribution of employment, with services and government representing the largest income producers. Earnings per job ranged from \$24,345 in York County to \$36,991 in Newport News, with average earnings per job in the ROI of \$35,328 (see Table 3-6). Median family income in the ROI in 2000 ranged from \$36,597 in Newport News to \$60,920 in Poquoson (U.S. Bureau of the Census 2000). Per capita income was \$19,738, almost 20 percent lower than the state per capita income of \$23,975.

Table 3-6. Earnings and Income

	<i>Hampton</i>	<i>Newport News</i>	<i>Poquoson</i>	<i>York County</i>	<i>ROI</i>
Median Family Income	\$39,532	36,597	60,920	57,956	--
Per Capita Income	19,774	17,843	25,336	24,560	19,738
Earnings per Job	36,991	36,915	-- ¹	24,345	35,328
Poverty Rate	11.3	13.8	4.5	3.5	11.1

Notes: 1. Job earnings data for City of Poquoson included in York County.

Source: U.S. Bureau of the Census 2000, United States Bureau of Economic Analysis 2004.

In FY 2002, total payrolls associated with the 11,581 military and federal civilian personnel amounted to \$600 million (see Table 3-7). Other expenditures during FY 2002 included \$128 million in construction costs, \$134 million for service contracts, \$7 million in impact aid and tuition assistance, and \$9 million in health-related expenditures. Total Langley AFB expenditures in FY 2002 amounted to \$1.1 billion.

Table 3-7. Langley AFB Payroll and Expenditures (FY 2002)

	ANNUAL PAYROLL AND EXPENDITURES (IN MILLIONS)	
	<i>Subtotal</i>	<i>Total</i>
Annual Payroll		\$ 599.5
Military	\$ 447.9	
AF Civilians	136.1	
NAF and other Civilians	15.5	
Expenditures		\$ 538.1
Construction	\$ 127.6	
Services	133.6	
Materials, Equipment, Supplies	276.9	
Total Payroll and Expenditures		\$ 1,137.6

Source: Air Force 2002.

INFRASTRUCTURE

Potable Water. The Langley AFB water system is classified by the Virginia Department of Health as a community water system (Public Water Supply ID Number VA3650305). A community water system is defined as “a waterworks which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.”

Langley AFB’s sole potable water source is the Newport News Waterworks. Langley AFB has several non-potable water sources of water that can be used for contingency purposes. Three potable water treatment facilities, Harwood’s Mill Water Treatment Plant (WTP), Lee Hall WTP, and a reverse osmosis well field currently make up the Newport News Waterworks with a maximum production capability of 108 million gallons per day (MGD).

There are three potable water storage tanks available at Langley AFB. Tank 1374 is currently in use and the remaining two tanks (66 and 1000) are off line. The total active tank storage capacity of the Langley AFB system is 2.5 million gallons (Air Force 2004a). Potable water demand at Langley AFB has varied from 0.90 MGD to 1.20 MGD during FY 1999 – FY 2002.

The base Capital Improvement Plan contains several storage tank, pump station, and distribution system improvements during the next several years. Once these improvements are brought on line, the base will be able to more fully utilize storage capacity, operate the distribution system at higher pressures, and will provide enhanced water system reliability.

Wastewater Treatment. Wastewater generated at the base is discharged through the sanitary sewer system to the Hampton Roads Sanitation District (HRSD). The base has an HRSD

Industrial Wastewater Discharge Permit (No. 0011) effective through 1 October 2006 that regulates the amount of pollutants that can be discharged to the sanitary sewer system.

Electric Power and Natural Gas. Electric power is provided from the Back River substation to the base by Dominion Virginia Power (DVP). Currently, Langley AFB is in the process of installing a new contractor owned and maintained electrical distribution system. This new and improved system will include the construction of a new 8-mile direct buried underground 34.5-kilovolt loop express feeder system. Additionally, ten new transformers, (5 megavolt-amp each), and associated electrical switching devices will be installed. Upon completion of the 3rd and final phase, estimated by June 2006, of the Repair Electrical Distribution project with DVP, Langley AFB will receive electricity directly from DVP through a service connection limited to 30,000 kilovolt-ampere (kVA). Langley's current facility planning identifies a peak electrical load of 28,800 kVA.

Natural gas is provided by Virginia Natural Gas through an underground main that extends along Sweeney Boulevard. The natural gas system is adequate to meet existing and short-term projected demand.

3.3 CULTURAL RESOURCES

Cultural resources are defined as any prehistoric or historic district, site, building, structure, or object considered important to a culture, subculture, or community for scientific, traditional, or religious reasons. Cultural resources may be divided into three categories: archaeological; architectural/engineering; and traditional. Archaeological resources are locations where prehistoric, historic activity measurably altered the earth or produced deposits of physical remains. Architectural and engineering resources include standing buildings, dams, canals, bridges, and other structures of historical significance. Architectural resources generally must be more than 50 years old to be considered for inclusion in the National Register of Historic Places (NRHP). However, more recent structures, such as Cold War era resources, may warrant protection if they manifest "exceptional significance" or the potential to gain significance in the future. Traditional resources are resources associated with cultural practices and beliefs of a living community that are rooted in its history and are important in maintaining the continuing cultural identity of the community.

The ROI for cultural resources is the area within which the Proposed Action or alternatives have the potential to affect existing or potentially occurring cultural resources. For the Proposed Action, the ROI is defined as Langley AFB.

3.3.1 Archaeological Resources

Archaeological surveys at Langley AFB have examined 821 acres (28 percent) of the base, locating a total of 18 archaeological sites (USACE 2004a, Air Force 2004b). The North Base area has been the focus of extensive archaeological investigations in the past (USACE 1998). Six

archaeological sites are located within the North Base area, although none is within the present project area.

3.3.2 Architectural Resources

Many historic architectural resources have been identified at Langley AFB, particularly within the NRHP-eligible Langley Field Historic District that encompasses most of the eastern base (USACE 1998). It includes nearly 250 contributing and non-contributing historic properties. The Historic District is located over 3,500 feet to the east across a large expanse of airfield. In this vicinity, Cold War inventory of the base identified the Fighter Alert Facility (Facility 1362), constructed in 1953, as eligible for the NRHP for its exceptional importance within the base and national Cold War contexts (Roxlau et al. 1997). The Fighter Alert Facility is outside and south of the area of the Proposed Action and alternative. Within the project area, the buildings were constructed from 1942 (Buildings 1329, 1330, 1331, 1332) through the present and include two used for hazardous waste storage (1390, 1395).

There are five National Historic Landmarks on Langley AFB, all of which were designated on the merit of their contributions to the aeronautics and space program between 1915 and 1972. They include three wind tunnels and two training facilities (NASA Langley Research Center 2005). None of these are located within the project area or alternative location.

3.3.3 Traditional Resources

Native American resources were discovered during a 2004 Cultural Resources Survey; however, none is within the present project area (USACE 2004a). No federally recognized Indian tribes or lands are located in Virginia.

3.4 BIOLOGICAL RESOURCES

For purposes of the impact analysis, biological resources are divided into three major categories: (1) terrestrial communities, (2) wetland and freshwater aquatic communities, and (3) threatened, endangered, and special status species/communities. The ROI for biological resources includes Langley AFB and the specific areas associated with the proposed action and alternatives.

3.4.1 Terrestrial Communities

Only a relatively small portion of Langley AFB is forested or remains in its natural state. Plant communities include approximately 250 acres of mixed oak-hickory hardwood forests, 60 acres of 60-year-old planted loblolly pine forests, 450 acres of tidal salt marshes, and an undetermined amount of old-field successional areas. The remaining portions of the base consist of managed lawns and developed areas of buildings, structures, and pavement. The majority of Poplar Road alternative site and a 10 acre portion of the Proposed Action site is covered with a mixture of hardwoods and pines.

Wildlife on the base are widespread species that are habitat generalists or tolerant of disturbance. This includes a wide variety of game and furbearing species, small mammals, waterfowl, songbirds, raptors, amphibians, reptiles, and fish. The proximity of the base to estuarine and marine habitats of Chesapeake Bay provides habitat for a variety of neotropical migrants and waterfowl.

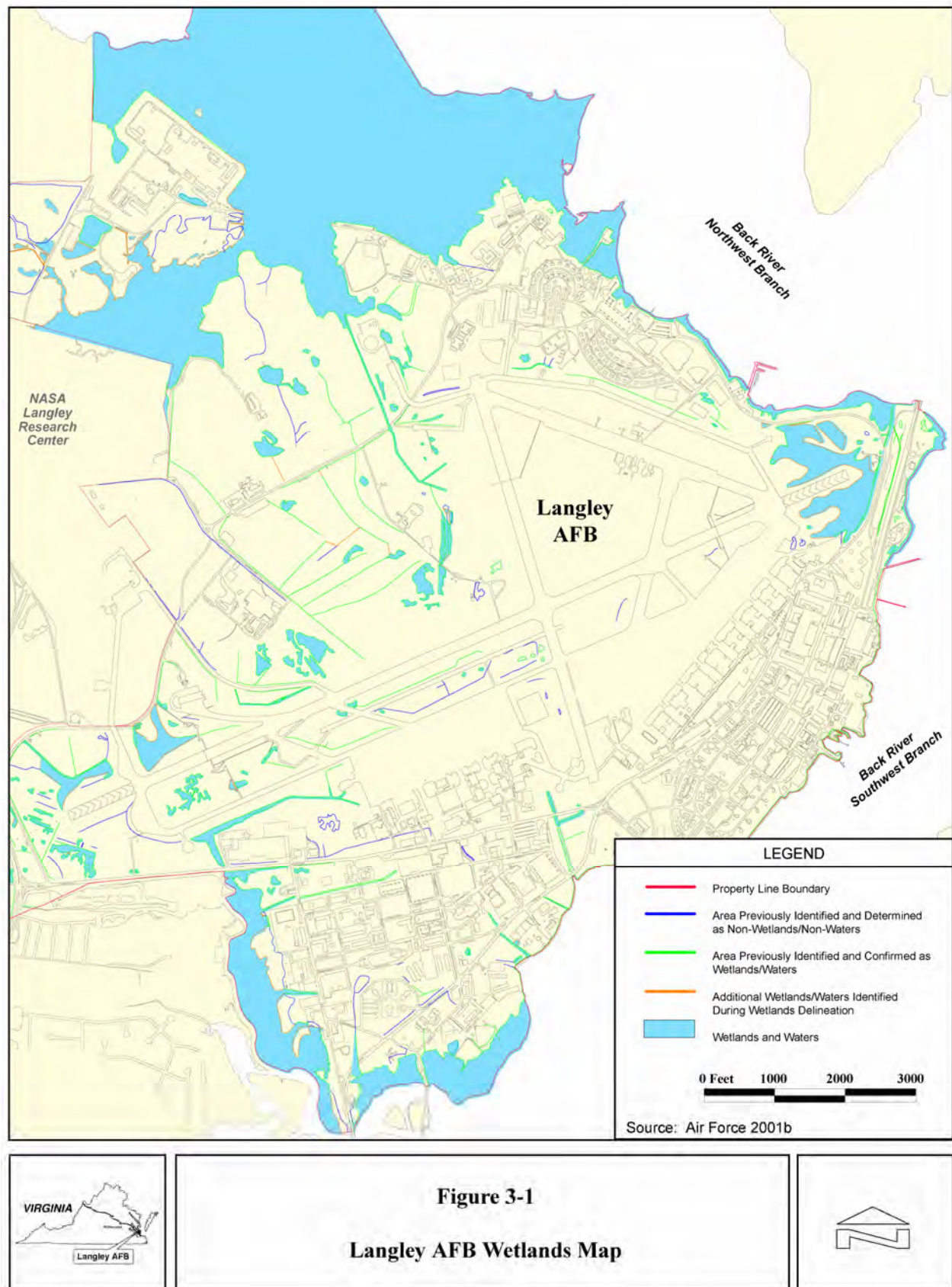
3.4.2 Wetland and Freshwater Aquatic Communities

Wetlands are areas of transition between terrestrial and aquatic systems where the water table is usually at, or near, the surface, or the land is covered by shallow water (USFWS 1979). Wetlands are often categorized by water patterns (the frequency or duration of flooding) and location in relation to upland areas and water bodies. Wetland hydrology is considered one of the most important factors in establishing and maintaining wetland processes (Mitsch 2000).

Wetlands are defined in the USACE Wetlands Delineation Manual as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (Environmental Laboratory 1987). These resources are protected under Section 404 of the federal Clean Water Act (33 USC Section 1344) and at the State level by the Tidal Wetlands Act and for nontidal wetlands through the Virginia Water Protection Permit (VWPP) program. The VMRC in conjunction with the USACE administers tidal wetlands, while the VDEQ Division of Water Quality, Office of Wetland and Water Protection/Compliance regulate state waters, including wetlands under the VWPP program (9 VAC 25-210). Wetlands on federal lands are further protected under EO 11990, which states "...each federal agency shall provide leadership and shall take action to minimize the destruction, loss or degradation of wetlands..."

Langley AFB supports a total (influenced by seasonal fluctuations) of 652 acres of wetlands, of which 462 acres are Estuarine wetlands and 190 acres are Palustrine wetlands (Air Force 1998a). Wetlands are very beneficial because of their ability to store and filter storm water, provide habitat, and naturally control shoreline and stream bank erosion. These areas are usually characterized by poorly-drained soils and exhibit vegetation characteristics of wet environments. A wetland delineation of the entire base was conducted in late 2000 and verified by the USACE-Norfolk District on January 22, 2004 under Project Number 01-R-2076 (Air Force 2001, USACE 2004b). This study revealed the various Emergent (saline/brackish/freshwater), Scrub/Shrub, and Forested wetland systems at Langley AFB. Wetland and freshwater aquatic communities are depicted in Figure 3-1. No wetlands are located within the Proposed Action location. An area measuring approximately 0.26 acres (11, 325 square feet) of palustrine, emergent wetland is located within the Poplar Road alternative site.

Langley AFB has restored and stabilized portions of the shoreline adjacent to Northwest and Southwest Branches of Back River using non-invasive, emergent vegetation such as saltmarsh cordgrass (*Spartina alterniflora*) and saltmeadow cordgrass (*Spartina patens*) (personal communication, Goss 2005).



3.4.3 Threatened, Endangered, and Special Status Species/Communities

Table 3-8 presents threatened, endangered, and special status species that have the potential to occur within a 10 mile radius of Langley AFB. No critical habitat occurs on base.

Langley AFB provides habitat for one federally listed threatened species: the bald eagle. Surveys conducted in 1993 and 1994 indicated that foraging by bald eagles occurs to a limited extent within creeks and marshes of the base. Habitat suitable for nesting or roosting occurs among the loblolly pines on the northern side of the base, but no nesting or long-term roosting has ever been observed. Uniform age/size structure of loblolly pine stands may limit use of the base as nesting or roosting habitat (Barrera 1995). The bald eagle has nested within 3 miles of the base in recent years. A nest was about 3 miles west of the base in 1997 and 1998. This nest has not been active since 1998 (personal communication, Wilcox 2001). An active bald eagle nest site is 3 miles directly east of the base. This nest has been active for the last two breeding seasons (personal communication, Davis 2001). Also, a federally listed threatened species, the northeastern beach tiger beetle, has no record of occurrence on base; it typically inhabits broad sandy beaches and has become a species of concern within the Chesapeake Bay ecosystem. Additionally, the federally listed threatened species, the piping plover, is associated with sandy beaches, which are not found on Langley AFB.

Virginia threatened and endangered species include eight state threatened and six endangered species as shown in Table 3-8. The Canebrake rattlesnake has been found along the shore of the southwest branch of the Back River and is not expected to occur within the project area.

The following federal and commonwealth agencies were consulted concerning threatened, endangered, and special status species/communities. These agencies included the USFWS, Virginia Field Office, the Virginia Department of Game and Inland Fisheries; and the Department of Conservation and Recreation, Division of Natural Heritage. Copies of consultation letters and correspondence are provided in Appendix A.

3.5 WATER RESOURCES

Water resources include surface and groundwater features located within the base as well as watershed areas affected by existing and potential runoff from the base, including floodplains. The ROI is defined as the base and the immediate vicinity.

**Table 3-8. Threatened, Endangered, and Special-Status Species/
Communities that Occur or Potentially Occur on Langley AFB**

<i>Species</i>	<i>Status</i>	<i>Areas of Occurrence</i>
Plants		
Harper's fimbriatilis <i>Fimbristylis perpusill</i>	SE	Coastal seasonal ponds.
Virginia least trillium <i>Trillium pusillum var. virginianum</i>	FSC	Forested wetlands and mesic woods including the "green sea" wetlands. Recorded from the City of Hampton.
Invertebrates		
Northeastern beach tiger beetle <i>Cicindela dorsalis dorsalis</i>	FT	Broad beaches with well-developed sand dunes.
Amphibians		
Barking treefrog <i>Hyla gratiosa</i>	ST	Breeds in coastal seasonal freshwater ponds. Needs fish-free breeding habitat. Base at northern edge of range. Spends warm months in treetops, seeks moisture during dry periods by burrowing among tree roots and clumps of vegetation.
Mabee's salamander <i>Ambystoma mabeei</i>	ST	Breeds in coastal seasonal freshwater ponds. Needs fish-free breeding habitat. Tupelo and cypress bottoms in pine woods, open fields, and lowland deciduous forest.
Reptiles		
Canebrake rattlesnake <i>Crotalus horridus atricaudatus</i>	SE	Meadows, canebrake or "green sea" wetlands. At risk because of wetland loss. Swampy areas, canebrake thickets, and floodplains.
Birds		
Bald eagle <i>Haliaeetus leucocephalus</i>	FT/SE	Forages occasionally on base. Nests within three miles of the base.
Foster's tern <i>Sterna forsteri</i>	SS	Coastal and marshland bird that fishes the waters of the region.
Glossy ibis <i>Plegadis falcinellus</i>	SS	Wades in marshes and fishes the waters of the region.
Great egret <i>Asmerodius albus</i>	SC	Palustrine and estuarine wetlands; marshes.
Night-heron yellow-crowned <i>Nyctanassa violacea violacea</i>	SS	Wades in marshes and fishes the waters of the region.
Northern harrier <i>Circus cyaneus</i>	SS	Hunts over marshes and fields and is known to nest in the area.
Least tern <i>Sterna antillarum</i>	SS	Found feeding or nesting on beaches in the area.
Peregrine falcon <i>Falco peregrinus</i>	SE	Observed foraging over salt marshes on base. Open wetlands near cliffs.
Piping plover <i>Charadrius melodus</i>	FT/ST	Prefers areas with expansive sand or mudflats (for foraging) in close proximity to a sand beach (for roosting). Fifty-two designated critical habitat units from North Carolina south to northern Florida along mainland beaches and barrier islands.

Notes: FSC = Federal Species of Concern SE = State Endangered
 FT = Federal Threatened SS = State Sensitive
 SC = State Candidate ST = State Threatened

Source: Virginia Fish and Wildlife Information Service 2005.

3.5.1 Existing Conditions

Langley AFB occupies a flat lowland peninsula with a gentle eastward slope of 1 foot per mile and elevations of 5 to 11 feet MSL within the Atlantic Coastal Plain physiographic province. The base is bounded on the northeast side by the northwest branch of the Back River and on the southeast side by the southwest branch of the Back River, which flows into the Chesapeake Bay. Storm water drainage is carried by a series of pipes, box culverts, and open ditches to 56 outfalls with 21 outfalls associated with areas that contain industrial operations. The base has been issued a Virginia Pollutant Discharge Permit (No. VA0083194) that expires on May 2, 2010. This permit identifies effluent limitations and requires semi-annual sampling at only 10 of the outfalls and management of industrial runoff.

In the Langley AFB area, groundwater occurs in a shallow water table aquifer, an upper artesian aquifer system, and the principal artesian aquifer system. All three aquifers in this area contain water of moderate to poor quality due to high salinity and total dissolved solids; the aquifers have little or no potential for a conventional water supply (Air Force 2000).

Due to its proximity to the Back River and the Chesapeake Bay, much of Langley AFB lies within the 100-year floodplain. Langley AFB is susceptible to high tide surges during storms and spring tides, and flooding is sometimes severe on the base. Figure 3-2 illustrates the extent of the 100-year floodplain on Langley AFB.

The Proposed Action and the Poplar Road alternative sites evaluated in this EA are located in the 100-year floodplain. An examination of Figure 3-2 indicates that there are no alternative locations available within the area that is above the 100-year floodplain. Areas above the 100-year floodplain are located within the clear zone on the western end of the runway and at a few small locations on the north side of the base, away from existing infrastructure.

3.6 AIR QUALITY

Air quality is described by the atmospheric concentrations of six pollutants: ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter that is less than 10 micrometers (PM₁₀) and less than 2.5 micrometers (PM_{2.5}) in diameter, and lead (Pb).

3.6.1 Existing Conditions

Langley AFB is located in the city of Hampton, Virginia, which is within the Hampton Roads Intrastate Air Quality Control Region (AQCR) #223. The Hampton Roads AQCR includes four counties (York, James City, Isle of Wright, and Southampton), as well as nine independent cities (Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg). This area includes substantial industry, several military and commercial airfields, and a large population that generates air quality emissions.

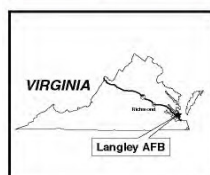
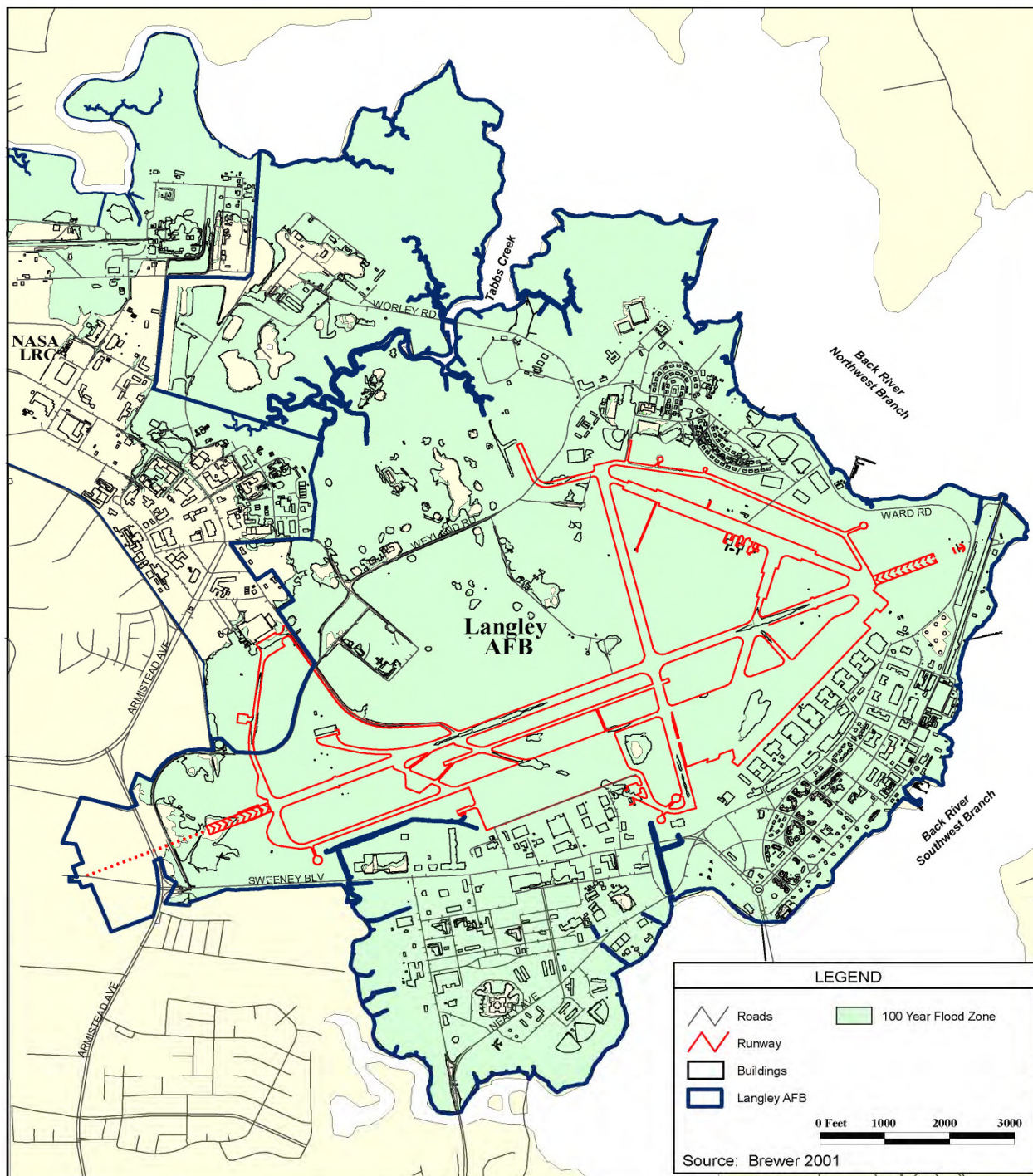
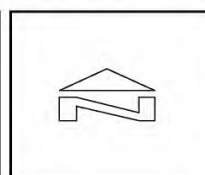


Figure 3-2

Langley AFB Floodplain Map



Air quality in the Hampton Roads AQCR is currently designated as attainment or unclassifiable/attainment for all pollutants except the new O₃ standard. On April 15, 2004, the United States Environmental Protection Agency (USEPA) designated the Hampton Roads AQCR to be in nonattainment for the newly established 8-hour O₃ standard effective as of June 15, 2004 (USEPA 2004a). Hampton Roads AQCR has until June 2007 to reach attainment. Based on monitoring data for the years 2001-2003, USEPA designated the City of Hampton as in attainment of the new PM_{2.5} standard on December 17, 2004 (USEPA 2004b).

Table 3-9 summarizes the baseline emissions (stationary and mobile) of criteria pollutants and precursor emissions for this AQCR. Baseline emissions for Langley AFB are incorporated into the totals for the AQCR. For each criteria pollutant, Langley AFB contributes less than 1 percent of the regional emissions. Langley AFB is regulated by VDEQ, which has issued a synthetic minor permit for the base that limits the facility wide NO_x emissions below the major source thresholds of the Title V operating permits program.

Table 3-9. Baseline Emissions for Langley AFB Affected Environment

<i>Emissions</i>	<i>Pollutants (tons per year)</i>				
	CO	VOCs	NO _x	SO ₂	PM ₁₀
Hampton Roads AQCR ¹	257,325	79,750	83,560	110,220	49,860
Langley AFB ²	68.3	48.33	46.47	6.47	10.9
---Stationary Sources	19.3	43.2	37.6	1.93	4.23
---Mobile Sources	49	5.13	8.87	0.43	6.67

VOC = volatile organic compound

NO_x = nitrogen oxides

Sources: 1. Federal Register (629123) 26 June 1997.

2. Air Force 2005.

The CAA Section 176(c), General Conformity, establishes certain statutory requirements for federal agencies with proposed federal activities to demonstrate conformity of the proposed activities with each state's State Implementation Plan (SIP) for achieving attainment of the health-protective National Ambient Air Quality Standards (NAAQS). The USEPA's General Conformity Rule requires that federal activities must not (1) cause or contribute to any new violation; (2) increase the frequency or severity of any existing violation; or (3) delay timely attainment of any standard, interim emission reductions, or milestones in conformity to a SIP's purpose of eliminating or reducing the severity and number of NAAQS violations or achieving attainment of NAAQS.

General conformity applies only to nonattainment and maintenance areas. Since the project is located in an O₃ nonattainment area, the General Conformity Rule applies to the project. If the emissions from a federal action proposed in such an area exceed annual emission thresholds identified in the rule (*de minimis* levels) or are deemed to be regionally significant (identified as equal to, or more than, 10 percent of the emissions inventory for the region), a conformity

determination is required for that action. The thresholds become more restrictive as the severity of the nonattainment status of the region increases

3.7 HAZARDOUS MATERIALS AND WASTE MANAGEMENT

Hazardous materials are identified and regulated under the Comprehensive Environmental Response, Compensation, and Liability Act; OSHA; and the Emergency Planning and Community Right-to-Know Act. Hazardous materials have been defined in AFI 32-7086, *Hazardous Materials Management*, to include any substance with special characteristics that could harm people, plants, or animals. Hazardous waste is defined in RCRA as any solid, liquid, contained gaseous or semisolid waste, or any combination of wastes that could or do pose a substantial hazard to human health or the environment. Waste may be classified as hazardous because of its toxicity, reactivity, ignitability, or corrosivity. In addition, certain types of waste are “listed” or identified as hazardous in 40 CFR 263. The ROI for this resource is defined as Langley AFB.

3.7.1 Hazardous Materials

The majority of hazardous materials used by Air Force and contractor personnel at Langley AFB are controlled through an Air Force pollution prevention process called Hazardous Materials Pharmacy (HAZMART). This process provides centralized management of the procurement, handling, storage, and issuing of hazardous materials and turn-in, recovery, reuse, or recycling of hazardous materials. The HAZMART process includes review and approval by Air Force personnel to ensure users are aware of exposure and safety risks. Pollution prevention measures are likely to minimize chemical exposure to employees, reduce potential environmental impacts, and reduce costs for material purchasing and waste disposal.

An asbestos management plan provides guidance for the identification of asbestos-containing materials (ACMs) and the management of asbestos. The 1 FW *Asbestos Management and Operations Plan* provides guidance on the management of asbestos. An asbestos facility register is maintained by Civil Engineering. Persons inspecting, designing, or conducting asbestos response actions in public or commercial buildings must be properly trained and accredited through an applicable asbestos training program. The design of building alteration projects and requests for self-help projects are reviewed to determine if asbestos contaminated materials are present in the proposed work area and, if so, are disposed of in an off base permitted landfill.

The 1 FW *Lead-Based Paint Management and Operations Plan* contains policies and procedures associated with the management of lead-based paint. The plan is designed to establish operations and management organizational responsibilities and procedures so that personnel at Langley AFB are not exposed to excessive levels of lead-contaminated dust or soils. Plan components identify management actions for worker training, notification, and labeling, the Langley AFB Work Request program, record-keeping, personal protective equipment, construction inspection, the disposal of lead-based paint-containing wastes, and lead toxicity investigations (Air Force 2003).

3.7.2 Hazardous Waste

Langley AFB is a large-quantity hazardous waste generator. Hazardous wastes generated during operations and maintenance activities include solvents, metal-contaminated spent acids, and sludge from wash racks. Langley AFB recycles all lubricating fluids, batteries, oil filters, and shop rags. Hazardous wastes are managed in accordance with the *Langley AFB Hazardous Waste Management Plan*, dated 15 May 2005. Facility 1390/1395 serves as a less than 90-day facility to collect hazardous waste from all initial accumulation points (personal communication, Hailey 2004).

There are no known aboveground fuel storage tanks in the North Base Industrial location. Three 1,000-gallon underground fuel tanks associated with Buildings 1329, 1331 and 1332 were removed in February 2004 (personal communication, Wiker 2005). There are no known operating underground storage tanks associated with the North Base Industrial location. There are no known aboveground or underground fuel storage tanks in the Poplar Road alternative location.

Langley AFB has a Spill Prevention and Facility Response Plan (certified in August 2004). The plan meets the Federal Spill Prevention Control and Countermeasures requirements, the Virginia Oil Discharge Contingency Plan requirements, and the Coast Guard requirements

3.7.3 Environmental Restoration Program

The DoD developed the Environmental Restoration Program (ERP) to identify, investigate, and remediate potentially hazardous material disposal sites that existed on DoD property prior to 1984. Forty-eight ERP sites, including one at Bethel Manor Housing, have been identified since the ERP began at Langley AFB. Thirty-seven sites have been closed or require no further action. The remaining 11 sites are regulated under the Comprehensive Environmental Response, Compensation, and Liability Act. The *Langley AFB Management Action Plan* (Air Force 2004c) summarizes the current status of the base environmental programs and presents a comprehensive strategy for implementing actions necessary to protect human health and the environment. This strategy integrates activities under the ERP and the associated environmental compliance programs that support full restoration of the base.

ACC policy requires that any proposed project on or near a Langley AFB ERP site be coordinated through the Langley ERP Manager. Located south of buildings 1329 and 1331 and at the edge of the proposed industrial area is ERP Site OT-38a. ERP Site OT-38a is one of four waste oil and trash burn areas base-wide. No documentation exists that indicates what was disposed at the sites. However, interviews indicated that waste oils and solvents were burned in four pits from early 1917 to 1960. This site was reported to have been located close to the Recreational Vehicle Storage Compound, just northwest of the main runway and was reportedly used from 1945 to 1950. The area is now flat and grass covered; there is no visible evidence of the former burn pits at this location. Contamination from waste oil, solvents, and

residuals from trash burning is possible. There is no future work scheduled on this site, a Record of Decision was signed in January 1999 and these ERP sites are considered closed.

ERP Site SS-19, Transformer Storage Area, approximately 3 acres in size, is located within the Proposed Action area. The site was a storage area for out-of service electrical transformers containing polychlorinated biphenyls (PCBs). A site investigation was completed and a removal action implemented in September 1998. A Decision Document was signed on December 2, 1998 and the site is considered closed (Air Force 2004c).

ERP Site OT-64 is an operable unit that addresses base-wide ground water contamination from 23 ERP sites and an additional six areas of concern. In general, the contaminants of concern in the groundwater are volatile organic carbons, semi-volatile organic carbons, pesticides, herbicides, and some metals depending on the individual site of contamination. A groundwater monitoring program is underway for all associated sites. A data gap summary was finalized in July, 2001. An Engineering Evaluation has been drafted for three of the 23 ERP sites and a Feasibility Study is in progress.

The Poplar Road alternative site is located within an area that includes ERP site ED 147/AOC 147. ERP Range Site ED 147/AOC 147 is a former bombing range that has been acknowledged since the inception of the ERP. This range is located in the north-central part of the base and includes the areas occupied by the golf course clubhouse, maintenance building, and the driving range. Groundwater associated with this ERP site is included in ERP Site OT-64.

3.7.4 Solid Waste Management

Solid waste generated on Langley AFB is removed by contract services to either the Big Bethel Sanitary Landfill or to the Hampton Waste-to-Energy facility for incineration. In FY 2002, the base generated 8,021 tons of solid waste and diverted 1,830 tons through recycling and composting activities. The base also generated 4,707 tons of construction and demolition debris and was able to recycle 566 tons of the debris. Big Bethel is a sanitary landfill, but also accepts construction and demolition waste. In 2004, this facility received 609,143 tons of waste of all types. With a total capacity of about 26,180,000 tons, it has a remaining useful life of about 50 years (VDEQ 2005). In addition, there are four dedicated construction/demolition waste disposal landfills in the Hampton Roads area (Table 3-10). Their combined capacity is 1,419,017 tons. These facilities together received 385,360 tons of construction and demolition waste in 2004, and have a collective remaining useful life of about 3.7 years.

Table 3-10. Capacity, Disposal Rates, and Remaining Useful Life (RUL) for Construction-Demolition Waste Disposal Facilities in Hampton Roads

<i>Name</i>	<i>Permit</i>	<i>Location</i>	<i>Capacity (tons)</i>	<i>2004 Disposal (tons)</i>	<i>RUL</i>
Higgerson-Buchanan Inc.	493	Chesapeake	346,060	261,394	3.0
Craney Island Landfill	401	Portsmouth	1,019,071	53,770	21.0
T & L Disposal	322	James City	3,886	2,536	1.6
Wolftrap Properties LTD.	436	York	50,000	67, 660	1.0
Total for Hampton Roads			1,419,017	385,360	3.7
Total for Virginia			22,854,892	3,259,210	7.0

Note: 1. This is the combined (average) RUL for the four facilities, not the sum of their individual RUL's.
Source: VDEQ 2005.

3.8 SAFETY

This section addresses ground and explosive safety issues associated with activities conducted by units stationed at, or operating from, Langley AFB. Ground safety considers issues associated with operations and maintenance activities that support base and flight operations, including fire and crash response. Explosive safety discusses the management and use of ordnance or munitions associated with airbase operations and training activities conducted in various elements of training airspace. The ROI for safety includes Langley AFB and the immediate vicinity.

3.8.1 Existing Conditions

GROUND SAFETY

Day-to-day operations and maintenance activities conducted on Langley AFB are performed in accordance with applicable Air Force safety regulations, published Air Force technical orders, and standards prescribed by Air Force Occupational Safety and Health requirements. Safety issues related to the proposed action focus on factors affecting demolition. All contractors performing demolition and construction on Langley AFB are responsible for following safety regulations and worker compensation programs and are required to conduct construction or demolition activities in a manner that does not pose a risk to their workers or Langley AFB personnel. In addition, Langley AFB has established an industrial hygiene program that addresses exposure to hazardous materials, use of personal protective equipment, and the availability of material safety data sheets. Contractor personnel are required to follow this program.

EXPLOSIVES SAFETY

Defense Department Explosives Safety Board 6055.9-STD and Air Force Manual 91-201 Explosives Safety Standards represents DoD and the Air Force guidelines for complying with explosives safety. These regulations, as well as AFI 91-204, identify explosive safety mishaps involved in both explosive and chemical agents. Explosives include ammunition, propellants (solid and liquid), pyrotechnics, explosives, warheads, explosive devices, and chemical agent substances and associated components presenting real or potential hazards to life, property, or the environment.

Siting requirements for munitions and ammunition storage and handling facilities are based on safety and security criteria. Defense Department Explosives Safety Board 6055.9 STD and Air Force Manual 91-201 Explosives Safety Standards require that defined distances be maintained between munitions storage areas and a variety of other types of facilities. These distances, called quantity-distance (QD) arcs, are determined by the type and quantity of explosive material to be stored. Each explosive material storage or handling facility has QD arcs extending outward from its sides and corners for a prescribed distance. Within these QD arcs, development is either restricted or prohibited altogether in order to ensure safety of personnel and minimize potential for damage to other facilities in the event of an accident. In addition, explosive material storage and handling facilities must be located in areas where security of the munitions can be maintained at all times. Identifying the QD arcs ensures that construction does not occur within these areas.

3.9 NOISE

Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise annoying. Human response to noise varies according to the type and characteristics of the noise source distance between source and receptor, receptor sensitivity, and time of day. The ROI for noise includes the area surrounding the project location.

3.9.1 Existing Conditions

At Langley AFB, noise contributions from aircraft operations and ground engine run-ups at the airfield have been calculated using the NOISEMAP model, the standard noise estimation methodology used for military airfields. NOISEMAP uses the following data to develop noise contours: aircraft types, runway utilization patterns, engine power settings, airspeeds, altitude profiles, flight track locations, number of operations per flight track, engine run-ups, and time of day. The Air Installation Compatible Use Zone (AICUZ) study indicates that the Proposed Action location is in the 75 to 80 and 80 to 85 Day-Night Average Sound Level (DNL) noise contours. The Poplar Road alternative site is located in the 70 to 75 and 75 to 80 Day-Night Average Sound Level (DNL) noise contours.

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4.0 ENVIRONMENTAL CONSEQUENCES

Chapter 4.0 presents the environmental consequences of the Proposed Action and alternatives at Langley AFB for each of the resource areas discussed in Chapter 3.0. To define the consequences, this chapter evaluates the project elements described in Chapter 2.0 against the affected environment provided in Chapter 3.0. Cumulative effects of the Proposed Action with other foreseeable future actions are presented in Chapter 5.0.

4.1 LAND USE RESOURCES

4.1.1 Proposed Action

LAND USE

The Proposed Action is consistent with surrounding land uses and is identified in Langley AFB General Plan, dated September 2002. Implementation of the Proposed Action would also require removal of approximately 7 acres of undeveloped forested lands. As part of a new ACC initiative to zone lands within each base, the Proposed Action location is designated for light industrial use. Implementation of the Proposed Action would provide a cohesive theme to an underdeveloped portion of the base and an area available for non-administrative and facilities not oriented to flightline operations and that comply with the designated zoning. This action would be in accordance with the Enforceable Regulatory Programs of the Virginia Coastal Resources Management Program. This project would not have any component that would affect any of the following sections of the Enforceable Regulatory Program: Fisheries Management, Subaqueous Lands Management, Dunes Management, Point Source Pollution Control, Shoreline Sanitation, and Coastal Lands Management. Area development plans, part of the General Plan, provide focused information on the future organization and circulation of personnel, buildings, and equipment within portions of the base.

TRANSPORTATION

With the implementation of the Proposed Action, the western portion of Durand Loop would be extended to the northwest to form a new 90-degree intersection with Lee Road. Workers and equipment would no longer have to travel through the congested Headquarters ACC administrative and housing areas to reach the Civil Engineering shop currently located in Building 633. Truck traffic associated with the placement of 3,350 cubic yards of fill would be directed through the West Gate and along Lee/Weyland Roads. It is possible that this truck traffic may lead to some degradation of these road surfaces and occasional congestion at the West Gate. These adverse effects would be short-term and not significant.

VISUAL RESOURCES

Construction of the North Base Industrial Area in the proposed location would occur within an area that has been occupied by various temporary industrial and office facilities in the past.

With the implementation of the Proposed Action, the base would be able to concentrate development of an industrial park-like setting within one area versus scattering them throughout the base and forested areas would be left intact to provide a visual buffer. In cases where the construction disturbs the existing vegetation or other ground surface, the contractor would revegetate the areas as approved by the base or restore the surface as directed by the base. Any trees slated to remain in construction areas would be visibly marked and fenced at least to the dripline or the end of the root system to avoid any damage to trees. Stockpiling of soil would take place away from any trees to avoid damage to tree root systems. It would also be covered to avoid soil erosion and fugitive dust. All parking and stacking of heavy equipment would take place offsite as the weight and vibration causes soil compaction, which affects root growth, water and nutrient uptake, and gas exchange of vegetation and trees. This development, with a consistent architectural design, will improve the visual facade within the study area off of Durand Loop; thereby benefiting the visual resources of the base with minimal effect of the existing visual and natural character of the base.

4.1.2 Poplar Road Alternative

LAND USE

The Poplar Road alternative site would also be consistent with land uses to the east of this site. The site would not be consistent with the golf course and other recreational facilities west and north of this alternative location. Implementation of the Poplar Road Alternative would also require removal of approximately 5 acres of undeveloped forested lands. This alternative is in compliance with the Enforceable Regulatory Programs of the Virginia Coastal Resources Management Program to the maximum extent practicable. This alternative would not have any component that would affect any of the following sections of the Enforceable Regulatory Program: Fisheries Management, Subaqueous Lands Management, Dunes Management, Point Source Pollution Control, Shoreline Sanitation, and Coastal Lands Management. During construction, standard construction practices would be instituted to control sedimentation and erosion into the drainage ditch along the eastern edge of the site. As previously noted, the Poplar Road Alternative is zoned for light industrial use.

TRANSPORTATION

Under this alternative, no changes to the transportation system are anticipated. Access to the industrial area would be from Poplar Road. No improvements would be proposed for the intersection of Poplar Road and Weyland Road. Truck traffic associated with the removal of approximately 5 acres of forest and the placement of 4,460 cubic yards of fill would be directed through the West Gate and along Lee/Weyland Roads. It is possible that this truck traffic may lead to degradation of these pavements and occasional congestion at the West Gate. These adverse effects would be short-term and not significant.

VISUAL RESOURCES

Implementation of the Poplar Road alternative would also provide the base with an industrial park-like setting; however, it would require the removal of approximately 5 acres of forested lands. The construction and operation of industrial facilities would also be immediately adjacent to the base golf course and may not be compatible with the park-like setting offered by the course. This adverse effect is not considered significant because the view would be typical at a military installation.

4.1.3 No-Action Alternative

No impacts to transportation or visual resources are anticipated under the No-Action alternative since the new construction would not occur and all existing structures and uses would remain unchanged. However, the No-Action alternative would result in facilities remaining in an area not designated for light industrial use.

4.2 SOCIOECONOMICS

Socioeconomic analysis focuses on the potential effects of construction and demolition activities associated with the Proposed Action and their alternatives.

4.2.1 Proposed Action

Construction and demolition activity associated with the four projects associated with the Proposed Action would occur in FY 2009-FY 2011. The total expenditures for these projects are expected to be approximately \$22 million. It is anticipated that local construction/demolition companies would be contracted to work on the projects contained in the Proposed Action. It is estimated that these projects would result in a short term increase of approximately 138 construction/demolition jobs and 101 secondary jobs, for a total positive short-term employment effect of 239. This number of jobs comprises less than 0.1 percent of the Calendar Year 2003 level of regional employment (Virginia Employment Commission 2004) and would, therefore, have an insignificant impact. Personnel numbers will not increase or decrease as a result of the North Base Industrial Area projects and the proposed actions would not result in an increase in long-term base or regional employment levels. No long-term economic changes would occur as a result of implementing any of the preferred alternatives.

Interconnections to the existing Langley AFB utility infrastructure are available to support the construction associated with the North Base Industrial facilities. Consumption of potable water and electricity would increase with the operation of these facilities; the demand for water can be met through the existing and upgraded infrastructure, but the demand for electricity will exceed the capacity of the single service connection from DVP to the base. No significant adverse environmental consequences are anticipated from the construction and operation of these facilities.

4.2.2 Poplar Road Alternative

Construction activity and earnings associated with this alternative would be very similar to that of the Proposed Action providing a slight increase in economic activity in the region. Therefore, no adverse environmental consequences are anticipated with the construction at this location.

Interconnections to the existing Langley AFB utility infrastructure are available to support the construction associated with the North Base Industrial facilities. Consumption of potable water and electricity would increase with the operation of these facilities; the demand for water can be met through the existing and upgraded infrastructure, but the demand for electricity will exceed the capacity of the single service connection from DVP to the base. No significant adverse environmental consequences are anticipated from the construction and operation of these facilities.

4.2.3 No-Action Alternative

Under the No-Action alternative, the North Base Industrial Area would not be redeveloped and the needs of the mission would continue to be met by existing facilities. There would be no environmental consequence to this resource.

4.3 CULTURAL RESOURCES

Cultural resources are subject to review under both federal and state laws and regulations. Section 106 of the NHPA of 1966 empowers the Advisory Council on Historic Preservation (ACHP) to comment on federally initiated, licensed, or permitted projects affecting cultural sites listed or eligible for inclusion on the NRHP. Significance evaluation is the process by which resources are assessed relative to NRHP significance criteria for scientific or historic research, for the general public, and for traditional cultural groups. Those cultural resources determined to be significant are protected under the NHPA.

Analysis of potential impacts to cultural resources considers both direct and indirect impacts. Direct impacts may occur by physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; introducing visual or audible elements that are out of character with the property or alter its setting; or neglecting the resource to the extent that it deteriorates or is destroyed. Direct impacts are assessed by identifying the types and locations of proposed activity and determining the exact location of cultural resources that could be affected. Indirect impacts result primarily from the effects of project-induced population increases.

4.3.1 Proposed Action

Impacts to cultural resources are not expected under the Proposed Action. The majority of the parcel is considered to be disturbed with a low potential for archaeological resources (Wheaton et al. 1991). Archaeological inventory of the Proposed Action site did not locate cultural

deposits in the area (Wheaton et al. 1991). Construction of all facilities include ground-disturbing activities where there is a possibility of encountering previously unrecorded and unknown archaeological resources. In the event of inadvertent discoveries of cultural resources during any project-related activities, all activities at that location would be halted until the find is evaluated by a qualified professional archaeologist in compliance with the *Langley Cultural Resources Management Plan* (Air Force 2004d) and Federal regulations. Four buildings will be demolished as a result of the implementation of this alternative (1329, 1330, 1331, and 1332). None of these buildings are considered eligible for nomination to the NRHP, nor has ongoing survey work to identify architectural/engineering resources related to the Cold War era identified any of these structures as NRHP-eligible (USACE 2004a). In addition, proposed construction would take place outside the Langley Field Historic District. Consultation with the State Historic Preservation Office (SHPO) would take place once Langley AFB has available project designs and funding for each project.

Impacts to traditional resources are not expected under the Proposed Action. There are no federally recognized Indian lands or resources at Langley AFB, and no issues have been identified by federally recognized or other Indian groups in Virginia.

4.3.2 Poplar Road Alternative

Impacts to cultural resources are not expected under this alternative. The Poplar Road alternative site lies in an area of low sensitivity for archaeological resources. Architectural resources would not be affected by this alternative. In addition, proposed construction at the Poplar Road alternative location would take place outside the Langley Field Historic District. Consultation with the SHPO would take place once Langley AFB has available project designs and funding for each project.

There are no federally recognized Indian lands at Langley AFB, and no issues have been identified by federally recognized or other Indian groups in Virginia.

4.3.3 No-Action Alternative

Under the No-Action alternative, no construction would occur. No impacts to cultural resources are expected under this alternative. Resources would continue to be managed in compliance with AFI and Federal regulation.

4.4 BIOLOGICAL RESOURCES

4.4.1 Proposed Action

Under the Proposed Action, construction would disturb an area that is previously developed or landscaped, currently experiences high levels of continual human activity, lacks native terrestrial habitat, and exhibits a low level of biodiversity. The only plant or animal species

likely to be displaced from this marginal habitat are individuals of common and locally abundant species. The overall ecological effect would therefore be insignificant.

There would be no impacts to wetlands from the implementation of the Proposed Action and the Proposed Action would not conflict with the wetlands management program associated with the Virginia Coastal Zone Management Program. Standard construction practices would be applied to control sedimentation and erosion during construction, thereby avoiding secondary effects to any wetlands or freshwater aquatic communities. With the implementation of these practices during construction, no adverse environmental consequences are anticipated.

Species listed, proposed for listing, or candidates for listing as threatened and endangered in accordance with the ESA of 1973 (87 Stat. 884, as amended; 16 USC 1531 *et seq.*) are not anticipated to be adversely affected by the Proposed Action. Consultation with federal (USFWS) and Commonwealth agencies (see Appendix A) has been initiated. Critical habitat for the bald eagle does not exist on base. Habitat suitable for nesting or roosting occurs among the loblolly pines on the northern side of the base, but no nesting or long-term roosting has ever been observed. Redevelopment of the North Base Industrial Area would remove a approximately 7 acres of the wooded area located between the Alert Area and the North Base Industrial Area including some loblolly pines. Since no nesting or long-term roosting has ever been observed in the area to be developed no adverse impact is anticipated.

State-protected species would also not be adversely affected by the Proposed Action because their habitat would not be altered and because changes in base activities are not expected to be biologically significant. At Langley AFB, no special species or sensitive habitats are expected to be impacted.

4.4.2 Poplar Road Alternative

Construction of the North Base Industrial Area at this location would require the removal of approximately 5 acres of forested lands. Plant or animal species likely to be displaced from this habitat are individuals of common and locally abundant species. As noted, foraging by bald eagles occurs to a limited extent within creeks and marshes of the base. Habitat suitable for nesting or roosting occurs among the loblolly pines on the northern side of the base, but no nesting or long-term roosting has ever been observed and this area is not within the Poplar Road alternative site. The overall ecological effect would therefore be insignificant. No threatened, endangered, and special species or sensitive habitats are expected to be affected.

Approximately 0.26 acres of palustrine emergent wetlands would be filled to accommodate the proposal at the Poplar Road alternative site. The area represents approximately 0.34 percent of all palustrine emergent wetlands on base and 0.04 percent of all wetlands identified on base. A permit from the USACE is required and wetlands impacted would likely require mitigation to prevent net loss of existing wetland acreage and function. One of the compensation remedies for any wetlands lost would be off-base mitigation banking. With the implementation of standard soil erosion construction practices and the mitigation of affected wetlands, no adverse

consequences are anticipated. Selection of this alternative site would require a wetland mitigation plan within 90 days of FONSI/FONPA signature.

4.4.3 No-Action Alternative

Under the No-Action alternative, a new industrial area would not be constructed and the needs of the mission would continue to be met by existing facilities. There would be no environmental consequences to this resource.

4.5 WATER RESOURCES

4.5.1 Proposed Action

Construction of the North Base Industrial Area would be within the 100-year floodplain. First floor elevations would be raised above the 100-year floodplain elevation. As shown in Figure 3-2, there are no developable locations within the base that are above the 100-year floodplain elevation.

Construction activities that disturb more than 10,000 square feet would be regulated by the Virginia Erosion and Sediment Control Law and Regulations and those that disturb 1 acre or greater would be covered by the Virginia Storm Water Management Law and Regulations. The construction contractor would prepare and implement erosion and sediment control and storm water management plans that identify standard construction practices to be implemented to eliminate or reduce sediment and non-storm water discharges. Filtration would control storm water runoff and soil erosion from the site. Prior to the start of construction, silt fences, storm drain inlet and outlet protection, and other appropriate standard construction practices would be instituted. These control measures are outlined in *Virginia Erosion and Sediment Control Handbook* administered by the Virginia Department of Conservation and Recreation. A VPDES General Permit for Discharges of Storm Water from Construction Activities would be obtained by the construction contractor for construction activities that disturb 1 acre or more. With the implementation of the plans and the standard practices, environmental consequences from erosion and sedimentation would be negligible.

There would be no impacts to water resources from point source or non-point sources with implementation of the Proposed Action, and the Proposed Action would not conflict with point source or non-point source pollution control objectives associated with the Virginia Coastal Zone Management Program.

4.5.2 Poplar Road Alternative

Construction of the North Base Industrial Area at alternative site would also be in the 100-year floodplain. First floor elevations would be raised above the 100-year floodplain elevation. Prior to construction, silt fences, storm drain inlet and outlet protection, and other appropriate standard construction practices would be instituted.

Construction activities that disturb more than 10,000 square feet would be regulated by the Virginia Erosion and Sediment Control Law and Regulations and those that disturb 1 acre or greater would be covered by the Virginia Stormwater Management Law and Regulations. The construction contractor would prepare and implement erosion and sediment control and storm water management plans that identify standard construction practices to be implemented to eliminate or reduce sediment and non-storm water discharges. Filtration would control storm water runoff and soil erosion from the site. Prior to the start of construction, silt fences, storm drain inlet and outlet protection, and other appropriate standard construction practices would be instituted. These control measures are outlined in *Virginia Erosion and Sediment Control Handbook* administered by the Virginia Department of Conservation and Recreation. A VPDES General Permit for Discharges of Storm Water from Construction Activities would be obtained by the construction contractor for construction activities that disturb one acre or more. With the implementation of the Storm Water Pollution Prevention Plan (SWPPP) and the standard construction techniques, environmental consequences from erosion and sedimentation would be minor, but not adverse, and would not conflict with point source or non-point source pollution control objectives associated with the Virginia Coastal Zone Management Program. As shown in Figure 3-2, there are no developable locations within the base that are above the 100-year floodplain.

4.5.3 No-Action Alternative

Under the No-Action alternative, a new industrial area would not be constructed and base requirements would continue to be met by existing facilities. There would be no environmental consequences to this resource.

4.6 AIR QUALITY

4.6.1 Proposed Action

The air quality analysis for the Proposed Action at Langley AFB quantifies the changes due to the construction. To assess the affects of the Proposed Action, analysis must include direct and indirect emissions from all activities that would affect the regional air quality. Emissions from the Proposed Action are either “presumed to conform” (based on emissions levels that are considered insignificant in the context of overall regional emissions) or must demonstrate conformity with approved SIP provisions.

While construction activities are of short duration, emissions during the construction period were quantified to determine their impacts on regional air quality. The construction phase would span a 18-month period. These emissions were compared to existing baseline emissions and federal conformity *de minimis* thresholds for O₃ precursors (VOCs and NO_x). Emissions of VOC, NO_x, CO, and PM₁₀ from construction activities were calculated using emission factors from the *California Environmental Quality Act Air Quality Handbook* (South Coast Air Quality Management District 1993). The emission factors included contributions from exhaust emissions (i.e., on-site construction equipment, material handling, and workers’ travel) and

fugitive dust emissions (e.g., from grading activities). Emissions from trucks making 230 round trips of 60 miles to bring fill material to the facility were calculated using emission factors for heavy duty diesel vehicles complied in *Air Emissions Inventory Guidance Document for Mobile Sources at Air Force Installations* (O'Brien and Wade 2002). The emissions, in tons per construction period, from construction and demolition projects under the proposed action are presented in Table 4-1.

Table 4-1. Project Emissions – Proposed Action

<i>Criteria Pollutants</i>	<i>Langley AFB Baseline Emissions (tons per year)</i>	<i>Hampton Roads AQCR (tons per year)</i>	<i>Temporary Construction Emissions (tons)</i>	<i>Percent of Regional Contribution</i>
CO	68.3	257,325	9.2	<0.01
VOCs	48.33	79,750	2.4	<0.01
NO _x	46.47	83,560	25.2	<0.01
SO ₂	6.47	110,220	0.5	<0.01
PM ₁₀	10.9	49,860	2.2	<0.01

Total construction emissions generated on base and within the Hampton Roads AQCR are less than 1 percent when compared to regional emissions and are below the 100 tons per year *de minimis* federal conformity thresholds for NO_x and VOCs. Emissions generated by construction projects are temporary in nature and would end when construction is complete. The emissions from fugitive dust (PM₁₀) would be significantly less due to the implementation of control measures in accordance with standard construction practices. For instance, frequent spraying of water on exposed soil during construction, proper soil stockpiling methods, and prompt replacement of ground cover or pavement are standard landscaping procedures that could be used to minimize the amount of dust generated during construction.

Air emissions after the Proposed Action is completed are expected to be virtually identical to or less than current operations, as sources that are removed due to the shutdown of current facilities would be replaced by similar air emission sources at the new facilities. New heating equipment would be more efficient and have lower air pollutant emissions than the boilers and heaters that would be removed. Similarly, vehicle maintenance facilities would be constructed with modern equipment designed to minimize air emissions. Nevertheless, the installation or modification of any air emission sources, such as boiler and heaters, emergency generators, fuel storage, etc., may trigger updates to the Synthetic Minor Operating permit issued by VDEQ Title V program.

No additional emissions are anticipated from personnel traveling to the new industrial area, since the personnel working at the new industrial area are already employed at Langley AFB. Relative to overall base emissions, the proposed new industrial area would result in minor,

temporary increases in criteria pollutants, as shown in Table 4-2. These changes would not measurably change base air quality or affect attainment status.

General conformity regulations set forth in 40 CFR 51 Subpart W, and adopted in the Virginia Administrative Code (9 VAC 5 Chapter 160), outline *de minimis* levels of emissions, below which it is presumed that the action conforms to the SIP. General conformity requirements for the new 8-hour O₃ standards are expected to take effect in June 2006. The *de minimis* levels for O₃ precursors in a maintenance area outside of an O₃ transport region (i.e., Hampton Roads AQCR) are 100 tons per year of VOCs emissions and 100 tons per year of NO_x. In addition, the Proposed Action's emissions (both direct and indirect) must be compared to the regional inventory to determine if the emissions are "regionally significant." Emission increases of O₃ precursors (NO_x and VOCs) are well below the threshold thus demonstrating compliance with CAA conformity requirements. In addition, the Proposed Action emissions are well below the regional significance threshold defined by 10 percent of the regional emissions (i.e., 836 tons per year of NO_x and 797 tons per year of VOCs).

4.6.2 Poplar Road Alternative

Construction emissions for this alternative are projected to be slightly larger than those anticipated under the Proposed Action. In comparison to the Proposed Action, the quantity of fill is significantly larger (4,460 versus 3,350 cubic yards) and the trucks would also be required to remove approximately 5 acres of wood products from the site, thus increasing the number of round trips taken by and emissions from the trucks. Emissions from wind erosion are expected to increase slightly due to the extended soil disturbance period prior to construction. The emissions, in tons per construction period, from construction and demolition projects under this alternative are presented in Table 4-2.

Table 4-2. Project Emissions –Poplar Road Alternative

<i>Criteria Pollutants</i>	<i>Langley AFB Baseline Emissions (tons per year)</i>	<i>Hampton Roads AQCR (tons per year)</i>	<i>Temporary Construction Emissions (tons)</i>	<i>Percent of Regional Contribution</i>
CO	68.3	257,325	9.4	<0.01
VOCs	48.33	79,750	2.4	<0.01
NO _x	46.47	83,560	25.1	<0.01
SO ₂	6.47	110,220	0.5	<0.01
PM ₁₀	10.9	49,860	2.0	<0.01

Total construction emissions generated on base and within the Hampton Roads AQCR are less than 1 percent when compared to regional emissions and are below the 100 tons per year *de minimis* federal conformity thresholds for NO_x and VOCs. Emissions generated by construction

projects are temporary in nature and would end when construction is complete. The emissions from fugitive dust (PM₁₀) would be significantly less due to the implementation of control measures in accordance with standard construction practices. For instance, frequent spraying of water on exposed soil during construction, proper soil stockpiling methods, and prompt replacement of ground cover or pavement are standard landscaping procedures that could be used to minimize the amount of dust generated during construction.

Air emissions after the Poplar Road alternative is completed are expected to be virtually identical to or less than current operations, as sources that are removed due to the shutdown of current facilities would be replaced by similar air emission sources at the new facilities. New heating equipment would be more efficient and have lower air pollutant emissions than the boilers and heaters that would be removed. Similarly, new fuel storage, deicing, and aircraft maintenance facilities would be constructed with modern equipment designed to minimize air emissions. Nevertheless, the installation or modification of any air emission sources, such as boiler and heaters, emergency generators, fuel storage, etc., may trigger updates to the Synthetic Minor Operating permit issued by VDEQ Title V program.

No additional emissions are anticipated from personnel traveling to the new industrial area, since the personnel working at the new industrial area are already employed at Langley AFB. Relative to overall base emissions, the proposed new industrial area would result in minor, temporary increases in criteria pollutants, as shown in Table 4-2. These changes would not measurably change base air quality or affect attainment status.

4.6.3 No-Action Alternative

Under the No-Action alternative, a new industrial area would not be constructed. There would be no environmental consequences to this resource.

4.7 HAZARDOUS MATERIALS AND WASTE MANAGEMENT

4.7.1 Proposed Action

HAZARDOUS MATERIALS

Construction of the new North Base Industrial Area facilities may require the use of hazardous materials by contractor personnel. In accordance with the base's HAZMART procedure, copies of material safety data sheets must be provided to the base and maintained on the construction site. Project contractors would comply with federal, state, and local environmental laws and would employ affirmative procurement practices when economically and technically feasible.

All hazardous materials and construction debris generated by the proposed project would be handled, stored, and disposed of in accordance with federal state and local regulations and laws. Permits for handling and disposal of hazardous material would be coordinated by the contractor with the base hazardous waste program manager. Hazardous materials shall not be

stored on base. All hazardous materials used at the construction site including, but not limited to, paint, paint thinners, gasoline, diesel, oil and lubricants shall be removed daily. Only quantities of hazardous materials required to carry out the work for the day would be permitted on site.

Prior to any demolition activities associated with the Proposed Action, the affected facilities would be inspected to identify all asbestos, including Category I and Category II non-friable ACM and lead-containing materials. If ACM or lead-based paint are found in or near the demolition areas, then the following Federal and State regulations must be followed. Due to the age of the buildings, lead-based paint removal may be a factor in demolition of the facilities in the Proposed Action (Durand Loop) sites.

- *Asbestos Removal and Disposal.* Upon classification as friable or non-friable, all waste ACM should be disposed of in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-80-640), and transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9 VAC 20-110-10 *et seq.*).
- *Lead-Based Paint Removal and Disposal.* The proposed project should comply with the U.S. Department of Labor, OSHA regulations, and with the Virginia Lead-Based Paint Activities Rules and Regulations (18 VAC 15-30-510 and 520).

Lead-containing materials would also be disposed of in accordance with applicable regulations (9 VAC 20-60-261).

HAZARDOUS WASTE

Contractor personnel may generate hazardous waste, such as paints, adhesives, and batteries, during the construction of the new industrial area. Storage and disposal of these wastes would be the responsibility of the site contractor and would be managed by Langley AFB hazardous waste managers in accordance with the most recent Langley AFB Hazardous Waste Management Plan. Hazardous wastes generated from activities of the proposed facilities, in particular the Auto/Skills Development center and the Vehicle Maintenance and Repair Complex, would be taken to the new hazardous waste storage facility and be handled in accordance with the most recent Langley AFB Hazardous Waste Management Plan.

In the event of fuel spillage during demolition or construction, the contractor would be responsible for its containment, clean up, and related disposal costs. The contractor would have sufficient spill supplies readily available on the pumping vehicle and/or at the site to contain any spillage. In the event of a contractor related release, the contractor would immediately notify the 1 FW Civil Engineering/Environmental Management Office and take appropriate actions to correct its cause and prevent future occurrences.

ENVIRONMENTAL RESTORATION PROGRAM

ACC policy requires that any proposed project on or near a Langley AFB ERP site be coordinated through the Langley ERP Manager. Three ERP sites, OT-38a, SS-19 and OT-64 are within the area considered for redevelopment. The 1st Civil Engineering Squadron, Environmental Restoration Branch, would request an ACC waiver for construction near this ERP site and provide notification to VDEQ and USEPA Region III. Any soil suspected of contamination, discovered during the construction or demolition processes, would be tested and disposed of in accordance with VDEQ regulations. Disposal of contaminated soil would be funded by these construction and demolition projects.

SOLID WASTE MANAGEMENT

Demolition of buildings 1329, 1330, 1331, and 1332 would generate solid wastes consisting of concrete, brick, wood, structural steel, glass, and miscellaneous metal building components. The total amount of demolition waste generated by the Proposed Action is estimated to be approximately 5,133 cubic yards as identified in Table 4-3. Demolition contractors would be directed to recycle materials to the maximum extent possible, thereby reducing the amount of demolition debris disposed in landfills. Materials not suitable for recycling would be taken to a landfill permitted to handle construction debris wastes, such as the Bethel Landfill in Hampton. That landfill has the capacity to operate for 49 years (VDEQ 2005). Even if all 5,133 cubic yards of construction and demolition wastes were sent to Big Bethel Landfill, implementation of the Proposed Action would contribute less than 1.0 percent of the solid waste disposed of annually in that landfill. No significant environmental consequences on landfill capacity would be expected due to implementation of the Proposed Action.

Table 4-3. Cubic Yards of Solid Waste Expected from Demolition

<i>Building Number</i>	<i>Cubic Yards of Solid Waste</i>
1329	1666
1330	1400
1331	666
1332	1400
TOTAL	5133

Prior to demolition of buildings 1329, 1330, 1331 and 1332, the contractor would establish and coordinate with 1st Civil Engineering Squadron a haul route for the removal of materials from the site. The proposed demolition would involve complete dismantling and removal of all facility structures and equipment. To ensure proper handling and disposition of the waste, all actions would be completed in accordance with applicable regulatory requirements. All utilities would be capped or disconnected. To the greatest extent practicable, demolition materials would be recycled. The demolition contractor would dispose of the remaining materials in an approved landfill in accordance with commonwealth and local regulations.

Operation of the new industrial area would generate minimal amounts of solid waste. No adverse environmental consequences associated with solid waste management would be expected with the implementation of the Proposed Action.

4.7.2 Poplar Road Alternative

HAZARDOUS WASTE/HAZARDOUS MATERIALS

Hazardous material/hazardous waste use or generation associated with the construction at this alternative site would be similar to the Proposed Action site. Construction at the alternative location would not require the demolition or disturbance of any structures and the generation of any wastes containing asbestos or lead. Minimal adverse environmental consequences would be expected.

ENVIRONMENTAL RESTORATION PROGRAM

Development of the North Base Industrial Area at the Poplar Road location would occur near the ERP Range Site ED 147/AOC 147, a former bombing range. The 1st Civil Engineering Squadron, Environmental Restoration Branch, would request an ACC waiver for construction near this ERP site and provide notification to VDEQ and USEPA Region III. Any soil suspected of contamination, as discovered during the demolition and construction process, would be tested and disposed of in accordance with appropriate VDEQ regulations. Any unexploded ordnance discovered would be addressed by the Langley AFB EOD technicians. The environmental consequences for this resource are not anticipated to be significant.

SOLID WASTE MANAGEMENT

Preparation of this alternative site for construction of a new industrial area would also require clearing the woods from the site. Operation of the industrial area would generate minimal amounts of solid waste. No adverse environmental consequences would be expected with the implementation of this alternative.

4.7.3 No-Action Alternative

Under the No-Action alternative, a new industrial area would not be constructed. There would be no environmental consequences to this resource.

4.8 SAFETY

4.8.1 Proposed Action

GROUND SAFETY

Implementation of this action would result in a short-term increase in the risks associated with construction and demolition; however, no significant environmental consequences are

anticipated. Standard demolition and construction practices guided by OSHA and National Fire Protection Association (NFPA) regulations would be followed. With the construction of new facilities, substandard structures would be removed from use, improving working conditions and safety for personnel.

EXPLOSIVE SAFETY

The siting of the North Base Industrial Area on Durand Loop would not interfere with any existing QD explosive safety arcs on Langley AFB. Coordination with the 1 FW Safety Office would take place prior to finalizing the exact location of the structure and supporting facilities. No significant adverse environmental consequences are anticipated.

4.8.2 Poplar Road Alternative

GROUND SAFETY

Implementation of this action would result in a short-term increase in the risks associated with demolition and construction; however, no significant environmental consequences are anticipated. Standard demolition and construction practices guided by OSHA and NFPA regulations would be followed. With the construction of new facilities, substandard structures would be removed from use, improving working conditions and safety for personnel.

EXPLOSIVE SAFETY

Implementation of this action would not interfere with any existing QD explosive safety arcs on Langley AFB. No significant adverse environmental consequences are anticipated.

4.8.3 No Action Alternative

Under the No-Action alternative, demolition and construction of the North Base Industrial Area facilities would not take place. The use of these 40- to 60-year-old facilities could increase the potential risk to personnel.

4.9 NOISE

Noise impact analyses typically evaluate potential changes to existing noise environments that would result from implementation of a proposal. Potential changes in the noise environment can be (1) beneficial (i.e., if they reduce the number of sensitive receptors exposed to unacceptable noise levels); (2) negligible (i.e., if the total area exposed to unacceptable noise levels is essentially unchanged); or (3) adverse (i.e., if they result in increased exposure to unacceptable levels).

4.9.1 Proposed Action

Implementation of the Proposed Action would have minor, temporary increases in localized noise levels in the vicinity of the project area during demolition and construction. The base is an active military facility that typically experiences high noise levels from daily flight operations. Use of construction and demolition equipment for site preparation and development (i.e., demolition, grading, fill, and construction) would generate noise. However, noise would be similar to typical construction and demolition noise, last only the duration of the specific construction and demolition activities, and could be reduced by the use of equipment sound mufflers and restricting construction and demolition activity to normal working hours (i.e., between 7:00 a.m. and 5:00 p.m.). Table 4-4 shows sound levels associated with typical heavy construction equipment under varying modes of operation.

Table 4-4. Typical Equipment Sound Levels

<i>Equipment</i>	SOUND LEVEL (IN A-WEIGHTED DECIBELS) UNDER INDICATED OPERATIONAL MODE ¹		
	<i>Idle Power</i>	<i>Full Power</i>	<i>Moving Under Load</i>
Forklift	63	69	91
Backhoe	62	71	77
Dozer	63	74	81
Front-end loader	60	62	68
Dump truck	70	71	74

Note: 1. Measured at 125 feet.

Source: Air Force 1999.

Compared with aircraft noise, noise produced by construction and demolition would be relatively lower in magnitude and spread out during the business day. Noise from truck traffic hauling construction materials to construction location and demolition materials away from the demolition location and the staging area would not affect base residents because the West Gate would provide demolition and construction access. The noise disruptions would be temporary and would be limited to daytime hours; therefore, impacts are considered insignificant.

Aircraft noise from on-going airfield operations would continue to generate average noise levels of 75 decibels (dB) to 85 dB and should not adversely affect proposed industrial activities. The recreational vehicle storage and hazardous waste storage areas would be located in the higher noise area. The new industrial office facilities would include features to attenuate the aircraft noise and ensure a safe working environment for base personnel.

4.9.2 Poplar Road Alternative

Under this alternative, noise would be generated from construction and building activities. However, noise would be short-term and intermittent, resulting in no measurable effect to the adjacent civil engineering and aircraft operation and maintenance facilities. Aircraft would

continue to generate average noise levels of 75 dB to 85 dB from flyovers, generally overshadowing noise from construction activities. The new industrial office facilities would include features to attenuate the aircraft noise and ensure a safe working environment for base personnel.

4.9.3 No-Action Alternative

Under the No-Action alternative, demolition and construction would not occur. Noise levels would remain the same as they are currently.

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5.0 CUMULATIVE EFFECTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

5.1 CUMULATIVE EFFECTS

This section provides (1) a definition of cumulative effects, (2) a description of past, present, and reasonably foreseeable actions relevant to cumulative effects, and (3) an evaluation of cumulative effects potentially resulting from these interactions.

5.1.1 Definition of 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). Recent CEQ guidance in *Considering Cumulative Effects* affirms this requirement, stating that the first steps in assessing cumulative effects involve defining the scope of the other actions and their interrelationship with the proposed action. The scope must consider geographic and temporal overlaps among the proposed action and other actions. It must also evaluate the nature of interactions among these actions.

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

To identify cumulative effects, this EA addresses three questions.

1. Does a relationship exist such that elements of the proposed action might interact with elements of past, present, or reasonably foreseeable actions?
2. If one or more of the elements of the proposed action and another action could be expected to interact, would the proposed action affect or be affected by impacts of the other action?
3. If such a relationship exists, does an assessment reveal any potentially significant impacts not identified when the proposed action are considered alone?

In this EA, an effort has been made to identify all actions that are being considered and that are in the planning phase at this time. To the extent that details regarding such actions exist and

the actions have a potential to interact with the proposed action in this EA, these actions are included in this cumulative analysis. This approach enables decision makers to have the most current information available so that they can evaluate the environmental consequences of the proposed action.

5.1.2 Past, Present, and Reasonably Foreseeable Actions

This EA applies a stepped approach to provide decision makers with not only the cumulative effects of the Proposed Action and the Poplar Road alternative, but also the incremental contribution of past, present, and reasonably foreseeable actions.

PAST AND PRESENT ACTIONS

Langley AFB is an active military installation that undergoes continuous change in mission and in training requirements. This process of change is consistent with the U.S. defense policy that the Air Force must be ready to respond to threats to American interests throughout the world. In 1998, the Air Force implemented a force structure change that added 12 F-15C aircraft and 134 personnel to Langley AFB, increasing the total number of F-15C aircraft to 66. In 2001, Langley AFB was chosen as the beddown location of the Initial Operational Wing for 72 of the new F/A-22 aircraft. To support this beddown, various projects, including demolition and construction of three hangers, a new simulator building and other support buildings, have been constructed or are under construction. Approximately 16 acres of the base along the flightline are under development to support the beddown.

The base, like any other major installation, also requires occasional new construction, facility improvements, and infrastructure upgrades. These improvements include demolition of the Steam Plant (Building 80) in 2004. The base has been in operation since 1917, and many facilities have outlived their useful life and require extensive renovation or demolition. Demolition within the historic district in 2004 included the water tower (facility 616) and Seaplane Hanger (Building 633). Construction is now complete on the new housing management office, dormitory complex, and reconstruction of the King Street Gate. Langley AFB is currently upgrading portions of its water, storm water drainage system, and electrical system and expanding the West Gate and portions of Sweeney Boulevard. Also recently completed are a new operations support center and a new youth center.

REASONABLY FORESEEABLE FUTURE ACTIONS

During the FY 2006 to FY 2008 timeframe, Langley AFB has proposed a number of actions that are independent of the proposed action and would be implemented irrespective of a decision on the proposed construction of the North Base Industrial Area. In order to redevelop portions of the base and to eliminate facilities that are obsolete, the base has planned demolition of the following buildings: Dock (610) and industrial buildings 615, 731, 732, 735, and 1033. The base is also planning to construct a new building to consolidate the Air Force Command and Control, Intelligence, Surveillance, Reconnaissance Center, a new building for the Distributed

Common Ground System and to construct force protection and access improvements to the LaSalle Gate. There are also numerous hurricane repair projects underway to repair damage to facilities resulting from Hurricane Isabel which struck the Hampton Roads Area in 2004.

Planned community support construction includes new visitors' quarters, expansion of the hospital, and construction of a new AAFES mini-mall and service station, and redevelopment of the marina. The base is also planning a series of infrastructure improvements that include an expansion to the alert area, new combat arms maintenance training range, replacement of the existing 2-MGD potable water storage tank, and relocation of the government gas station.

5.1.3 Analysis of Cumulative Impacts

The following analysis examines how the impacts of these other actions might be affected by those resulting from the Proposed Action at Langley AFB and whether such a relationship would result in potentially significant impacts not identified when the Proposed Action is considered alone.

None of the future infrastructure actions (analyzed in previous environmental documents) would be expected to result in more than negligible impacts either individually or cumulatively. Redevelopment of the North Base Industrial Area would consume approximately 0.5 percent of undeveloped land on the 2,883-acre Langley AFB. This construction along with other development proposals considered for the next 5 years (identified in Section 5.1.2) is not anticipated to disturb more 4 percent of the base. All actions affect very specific, circumscribed areas, and the magnitude of the actions is minimal. Given that the Proposed Action would likewise have a minimal effect within the base, the combined impacts of these actions would remain well below the threshold of significance for any resource category.

5.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

NEPA requires that environmental analysis include identification of "... any irreversible and irretrievable commitments of resources which would be involved in the proposed action and Alternatives should it be implemented." Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the uses of these resources have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable timeframe. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., extinction of a threatened or endangered species or the demolition of a historic building).

For the proposed actions, most resource commitments are neither irreversible nor irretrievable. Most environmental consequences are short-term and temporary (such as air emissions from construction) or longer lasting but negligible (e.g., utility increases). North Base Industrial Area

construction would require consumption of limited amounts of materials typically associated with interior and exterior construction (e.g., concrete, wiring, insulation, and windows) and the irretrievable commitment of fossil fuels through the use of vehicles necessary to remove demolition debris and construct the proposed facilities. The amount of these materials used is not expected to significantly decrease the availability of the resources.

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Persons and Agencies Contacted

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Wilcox, T. 2001. Environmental Services Biologist, Virginia Department of Game and Inland Fisheries.

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7.0 LIST OF PREPARERS

David M. Dischner, Project Manager

B.A., Urban Affairs, Virginia Polytechnic Institute and State University, Blacksburg, 1974

Hazardous Materials Management Certificate, University of California, Riverside, 1988

Years of Experience: 26

Kimberly Wilson, Production Manager

Years of Experience: 16

Claudia Laughlin, Graphics

Years of Experience: 6

David Lingner, Air Quality

B.S., Chemistry & Mathematics, Bates College 1978

Ph.D., Chemistry, Purdue University 1985

Years of Experience: 20

Howard B. Rock, Senior Analyst

B.A., Virginia Wesleyan College, Norfolk ,VA 1974

Cultural Resources Management Certificate, University of Nevada, Reno 1990

Years of Experience: 31

Robert E. Van Tassel, Program Manager

B.A., Economics, University of California, Santa Barbara, 1970

M.A., Economics, University of California, Santa Barbara, 1972

Years of Experience: 25

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APPENDIX A

CONSULTATION LETTERS



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAY 16 2005

Ms. Ethel Eaton
Virginia Department of Historic Resources
2801 Kensington Avenue
Richmond VA 23221

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9648

Dear Ms. Eaton

Langley AFB is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to develop the 1300 Area at Langley AFB.

The EA will analyze potential environmental impacts associated with the proposed development of an existing industrial area at Langley AFB. New facility construction would include an auto skills center, explosive ordinance disposal administrative office, a vehicle repair and maintenance facility, recreational vehicle storage area and a central accumulation point site (<90 day facility). Additional parking areas will be provided for the new facilities. Four existing buildings will be demolished as part of the development proposal. The entrance into Durand Loop will be modified to allow expansion into the area between Durand Loop and Lee Road.

In addition to the proposed action, one alternative and a no-action alternative will be analyzed in the EA. Attachment 1 is a map of the proposed action area.

Please provide your comments or any requests for additional information to Mr. Matt Goss of the Environmental Flight. Mr. Goss can be reached at the above address, or at (757) 764-1095. Your response before 3 June 2005 will allow us to ensure your contribution is included in the draft EA.

Sincerely

ROBERT A. LANGHILL, Major, USAF
Deputy Chief, Environmental Flight

Attachment:
Map of Proposed Action Area

Global Power For America



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAY 16 2005

Mr. Tony Watkinson
Virginia Marine Resources Commission
2600 Washington Avenue, 3rd Floor
Newport News VA 23607

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9631

Dear Mr. Watkinson

Langley AFB is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to develop the 1300 Area at Langley AFB.

The EA will analyze potential environmental impacts associated with the proposed development of an existing industrial area at Langley AFB. New facility construction would include an auto skills center, explosive ordinance disposal administrative office, a vehicle repair and maintenance facility, recreational vehicle storage area and a central accumulation point site (<90 day facility). Additional parking areas will be provided for the new facilities. Four existing buildings will be demolished as part of the development proposal. The entrance into Durand Loop will be modified to allow expansion into the area between Durand Loop and Lee Road.

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ROBERT A. LANGHILL, Major, USAF
Deputy Chief, Environmental Flight

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Global Power For America



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAY 16 2005

Mr. Thomas A. Barnard, Jr.
Virginia Marine Resources Commission
P.O. Box 1346
Gloucester Point VA 23062

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9624

Dear Mr. Barnard

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Sincerely

ROBERT A. LANGHILL, Major, USAF
Deputy Chief, Environmental Flight

Attachment:
Map of Proposed Action Area

Global Power For America



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAY 16 2005

Mr. Gerald P. Wilkes
Virginia Department of Mines, Minerals and Energy
Division of Mineral Resources
P.O. Box 3667
Charlottesville VA 22903

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9617

Dear Mr. Wilkes

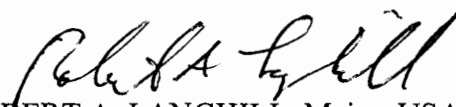
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Sincerely


ROBERT A. LANGHILL, Major, USAF
Deputy Chief, Environmental Flight

Attachment:
Map of Proposed Action Area

Global Power For America



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAY 16 2005

Mr. Alan Weber
Virginia Department of Health
109 Governor Street, 6th Floor
Division of Drinking Water
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9600

Dear Mr. Weber

Langley AFB is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to develop the 1300 Area at Langley AFB.

The EA will analyze potential environmental impacts associated with the proposed development of an existing industrial area at Langley AFB. New facility construction would include an auto skills center, explosive ordinance disposal administrative office, a vehicle repair and maintenance facility, recreational vehicle storage area and a central accumulation point site (<90 day facility). Additional parking areas will be provided for the new facilities. Four existing buildings will be demolished as part of the development proposal. The entrance into Durand Loop will be modified to allow expansion into the area between Durand Loop and Lee Road.

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Please provide your comments or any requests for additional information to Mr. Matt Goss of the Environmental Flight. Mr. Goss can be reached at the above address, or at (757) 764-1095. Your response before 3 June 2005 will allow us to ensure your contribution is included in the draft EA.

Sincerely

ROBERT A. LANGHILL, Major, USAF
Deputy Chief, Environmental Flight

Attachment:
Map of Proposed Action Area

Global Power For America



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAY 16 2005

Mr. Ray Fernald
Virginia Department of Game and Inland Fisheries
4010 West Broad Street
Richmond VA 23230

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9594

Dear Mr. Fernald

Langley AFB is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to develop the 1300 Area at Langley AFB.

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Deputy Chief, Environmental Flight

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LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAY 16 2005

Mr. Michael Foreman
Virginia Department of Forestry
900 Natural Resources Drive, Suite 800
Charlottesville VA 22903

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9587

Dear Mr. Foreman

Langley AFB is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to develop the 1300 Area at Langley AFB.

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Deputy Chief, Environmental Flight

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DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAY 16 2005

Mr. John Davy
Virginia Department of Conservation & Recreation
203 Governor Street
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9570

Dear Mr. Davy

Langley AFB is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to develop the 1300 Area at Langley AFB.

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Sincerely

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Deputy Chief, Environmental Flight

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DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAY 16 2005

Ms. Catherine Harold
Chesapeake Bay Local Assistance Department
101 N. 14th Street, 17th Floor
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9563

Dear Ms. Harold

Langley AFB is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to develop the 1300 Area at Langley AFB.

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Sincerely

ROBERT A. LANGHILL, Major, USAF
Deputy Chief, Environmental Flight

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Global Power For America



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAY 16 2005

Mr. Keith Tignor
Virginia Department of Environmental Quality
Office of Plant & Pest Services
1100 Bank Street
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9556

Dear Mr. Tignor

Langley AFB is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to develop the 1300 Area at Langley AFB.

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Sincerely

ROBERT A. LANGHILL, Major, USAF
Deputy Chief, Environmental Flight

Attachment:
Map of Proposed Action Area

Global Power For America



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAY 16 2005

Ms. Ellen Gilinsky
Virginia Department of Environmental Quality
Virginia Water Protection Program
629 East Main Street, 9th Floor
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9549

Dear Ms. Gilinsky

Langley AFB is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to develop the 1300 Area at Langley AFB.

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Sincerely

ROBERT A. LANGHILL, Major, USAF
Deputy Chief, Environmental Flight

Attachment:
Map of Proposed Action Area

Global Power For America



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAY 16 2005

Mr. Tom Modena
Virginia Department of Environmental Quality
Waste Division
629 East Main Street, 4th Floor
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9532

Dear Mr. Modena

Langley AFB is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to develop the 1300 Area at Langley AFB.

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Sincerely

ROBERT A. LANGHILL, Major, USAF
Deputy Chief, Environmental Flight

Attachment:
Map of Proposed Action Area

Global Power For America



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAY 16 2005

Mr. Kotus S. Narasimhan
Virginia Department of Environmental Quality
Air Data Analysis Program
629 East Main Street, 8th Floor
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9525

Dear Mr. Narasimhan

Langley AFB is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to develop the 1300 Area at Langley AFB.

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Sincerely

ROBERT A. LANGHILL, Major, USAF
Deputy Chief, Environmental Flight

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Global Power For America



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAY 16 2005

Mr. David Grimes
Virginia Department of Transportation
Environmental Division
1401 East Broad Street
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9518

Dear Mr. Grimes

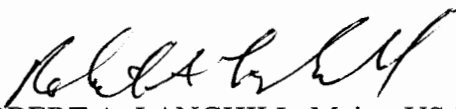
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Sincerely



ROBERT A. LANGHILL, Major, USAF
Deputy Chief, Environmental Flight

Attachment:
Map of Proposed Action Area

Global Power For America



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAY 16 2005

Mr. Harold Winer
Virginia Department of Environmental Quality
Tidewater Regional Office
5636 Southern Boulevard
Virginia Beach VA 23462

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9501

Dear Mr. Winer

Langley AFB is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to develop the 1300 at Langley AFB.

The EA will analyze potential environmental impacts associated with the proposed development of an existing industrial area at Langley AFB. New facility construction would include an auto skills center, explosive ordinance disposal administrative office, a vehicle repair and maintenance facility, recreational vehicle storage area and a central accumulation point site (<90 day facility). Additional parking areas will be provided for the new facilities. Four existing buildings will be demolished as part of the development proposal. The entrance into Durand Loop will be modified to allow expansion into the area between Durand Loop and Lee Road.

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Sincerely

ROBERT A. LANGHILL, Major, USAF
Deputy Chief, Environmental Flight

Attachment:
Map of Proposed Action Area

Global Power For America



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAY 16 2005

Ms. Ellie Irons
Virginia Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, 6th Floor
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9495

Dear Ms. Irons

Langley AFB is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to develop the 1300 Area at Langley AFB.

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Deputy Chief, Environmental Flight

Attachment:
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Global Power For America



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAY 16 2005

Ms. Karen L. Mayne
U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
P.O. Box 99
Gloucester VA 23061

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9488

Dear Ms. Mayne

Langley AFB is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to develop the 1300 Area at Langley AFB.

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Pursuant to analysis of the proposed action, as well as compliance with the Endangered Species Act, we request information regarding listed threatened, endangered, and candidate species that occur or may occur in the potentially affected area. Please identify a point of contact for any follow-up questions we may have concerning the data you provide and we look forward to receiving your comments as part of this process.

Global Power For America

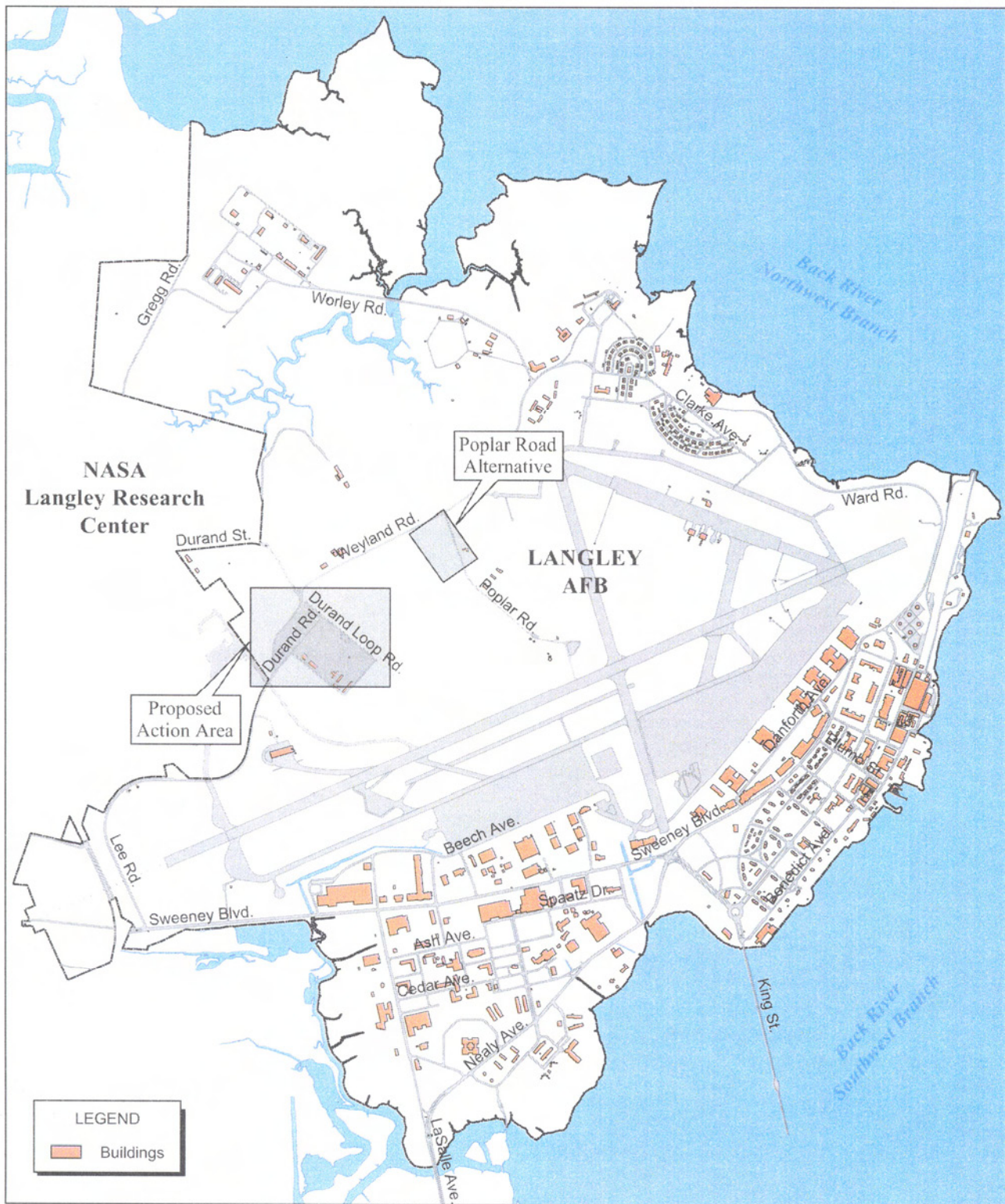
Please provide your comments or any requests for additional information to Mr. Matt Goss of the Environmental Flight. Mr. Goss can be reached at the above address, or at (757) 764-1095. Your response before 3 June 2005 will allow us to ensure your contribution is included in the draft EA.

Sincerely

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

ROBERT A. LANGHILL, Major, USAF
Deputy Chief, Environmental Flight

Attachment:
Map of Proposed Action Area



1300 Project Area Location
Langley AFB, Virginia





COMMONWEALTH of VIRGINIA

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P. O. Box 10009, Richmond, Virginia 23240
Fax (804) 698-4500 TDD (804) 698-4021
www.deq.virginia.gov

Robert G. Burnley
Director

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

May 23, 2005

Mr. Matthew Goss
Environmental Management Flight
Department of the Air Force
Headquarters, 1st Fighter Wing
1 CES/CEV
37 Sweeney Boulevard
Langley Air Force Base, Virginia 23665

RE: Development of 1300 Area at Langley AFB (Certified Mail Return Receipt
#7004-0750-0001-7466-9495)

Dear Mr. Goss:

This is in response to the May 16, 2005 letter from Major Robert A. Langhill announcing the preparation of an Environmental Assessment for the proposed development of the 1300 Area at Langley Air Force Base, and soliciting comments on the scope of the document.

According to the letter, the project consists of demolition of four buildings and development of several new facilities at an existing industrial area at the Base. In addition to providing additional parking areas and modifying the entrance into Durand Loop to allow expansion into the area between the latter and Lee Road, the Air Force would construct an auto skills center, an administrative office for explosive ordnance disposal, a vehicle repair facility, recreational vehicle storage area, and a central accumulation point site.

The roles of the Virginia Department of Environmental Quality (DEQ) in relation to the project under consideration are as follows. First, DEQ's Office of Environmental Impact Review (this Office) will coordinate Virginia's review of any environmental documents prepared pursuant to the National Environmental Policy Act (NEPA) and comment to the Air Force on behalf of the Commonwealth. A similar review process will pertain to the federal consistency determination that must be provided pursuant to the Coastal Zone Management Act (CZMA). If the federal consistency determination is included as part of the EA or EIS, there can be a single review taking 60 days as allowed

Mr. Matthew Goss
Page 2

by the Federal Consistency Regulations (15 CFR Part 930, section 930.41(a)). We recommend this approach to save time and extra effort for the Air Force as well as for the Commonwealth.

Environmental Review and Scoping

We are sharing Major Langhill's letter with selected state and local Virginia agencies, which are likely to include the following (note: starred (*) agencies administer one or more of the Enforceable Policies of the Virginia Coastal Resources Management Program; see "Federal Consistency....," below):

- Department of Environmental Quality:
 - Office of Environmental Impact Review
 - Tidewater Regional Office*
 - Air Division*
 - Waste Division
- Department of Game and Inland Fisheries*
- Department of Conservation and Recreation:
 - Division of Chesapeake Bay Local Assistance*
 - Division of Soil and Water Conservation*
 - Division of Planning and Recreation Resources
- Department of Health*
- Marine Resources Commission*
- Department of Historic Resources
- Virginia Institute of Marine Science
- Hampton Roads Planning District Commission
- City of Hampton.

In order to ensure an effective coordinated review of the Environmental Impact Statement or Environmental Assessment and the consistency determination, we will require 18 copies of the document when it is published. The document should include a U.S. Geological Survey topographic map as part of its information. We recommend, as well, that project details be adequately described. While this Office does not participate in scoping efforts beyond the advice given herein, other agencies are free to provide scoping comments to you concerning the preparation of the NEPA documents for the proposed project.

Federal Consistency under the Coastal Zone Management Act

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 the Virginia Coastal Resources Management Program (VCP) (see section 307(c)(1) of the Act and the

Federal Consistency Regulations, 15 CFR Part 930, sub-part C, sections 930.30 through 930.46). The Air Force must provide a consistency determination which involves an analysis of the activities in light of the Enforceable Policies of the VCP (first enclosure), and a commitment to comply with the Enforceable Policies. In addition, we invite your attention to the Advisory Policies of the VCP (second enclosure). The federal consistency determination may be provided as part of the NEPA documentation; as indicated above, we recommend this approach. Section 930.39 of the Federal Consistency Regulations and Virginia's Federal Consistency Information Package (see below) give content requirements for the consistency determination.

The Federal Consistency Information Package is available on DEQ's web site, <http://www.deq.state.va.us>. Select "Programs" on the left, then scroll to "Environmental Impact Review/Federal consistency" and select this heading. Select "federal consistency reviews" on the left. This gives you access to the document.

Recommendations on Project Planning and Content of Documents

It is apparent to us, from recent experience, that the Air Force is planning a number of projects at Langley Air Force Base, each of which requires environmental review and consistency review. It would be helpful to reviewers, and perhaps also to the Air Force, if the individual Environmental Assessments could make reference to a master plan document, or a Programmatic Environmental Impact Statement (EIS) and Plan, that shows, with effective topographic and other mapping and diagrams, the relationships of many of these projects to one another on the ground (and perhaps also in time). Our review of a Programmatic EIS and a master plan document, prior to individual project reviews, might enable us to respond somewhat faster to individual project documents. It would also diminish the workload of the Air Force in producing the individual documents, because in these the Air Force could make reference to the larger document as a means of disposing of certain issues that have been effectively addressed previously. Of course, the idea presupposes that the Programmatic EIS would be prepared and reviewed in the first place; and we assume that the EIS, and accompanying plans for development, would cover a defined time frame (for example: 2005 through 2008, or 2005 through 2015). It would also be necessary to allow modification of individual projects and the Plan itself as circumstances, including fiscal and environmental constraints, make necessary.

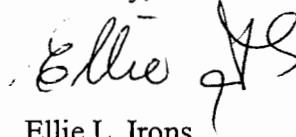
A planning effort of this nature could include such things as stormwater master plans, which might be easier to develop and follow than individual stormwater plans for each project. Providing for the effective management of stormwater in a developing area could prevent later conflicts over individual projects for which stormwater management can no longer be effectively provided.

Mr. Matthew Goss
Page 4

We would be interested in your reaction to this idea. If you have questions about a master plan approach, the environmental review process, or the federal consistency review process, please feel free to call me (telephone (804) 698-4325) or Charles Ellis of this Office (telephone (804) 698-4488).

I hope this information is helpful to you.

Sincerely,



Ellie L. Irons
Program Manager
Office of Environmental Impact Review

cc: Harold J. Winer, DEQ-TRO
Kotur S. Narasimhan, DEQ-Air
Allen Brockman, DEQ-Waste
Catherine M. Harold, DEQ-DWQ
Andrew K. Zadnik, DGIF
C. Scott Crafton, DCR
C. Lee Hill, DCR-DSWC
Alice R. T. Baird, DCR-DCBLA
Alan D. Weber, VDH
Tony Watkinson, MRC
Ethel R. Eaton, DHR
Arthur L. Collins, Hampton Roads PDC
James Freas, City of Hampton
Charles W. Burgess, Jr., City of Poquoson



JEANNE ZEIDLER, CHAIR • PAUL D. FRAIM, VICE CHAIRMAN • JAMES O. MCREYNOLDS, TREASURER

ARTHUR L. COLLINS, EXECUTIVE DIRECTOR/SECRETARY

CHESAPEAKE

Clarence V. Cuffee, *City Manager*
Dalton S. Edge, *Mayor*
Debbie Ritter, *Council Member*

FRANKLIN

Mark S. Fetherolf, *Council Member*
Rowland L. Taylor, *City Manager*

GLOUCESTER COUNTY

John J. Adams, Sr., *Board Member*
William H. Whitley, *County Administrator*

HAMPTON

Randall A. Gilliland, *Council Member*
Ross A. Kearney, II, *Mayor*
Vacancy

ISLE OF WIGHT COUNTY

W. Douglas Caskey, *County Administrator*
Stan D. Clark, *Chairman*

JAMES CITY COUNTY

Michael J. Brown, *Chairman*
Sanford B. Wanner, *County Administrator*

NEWPORT NEWS

Charles C. Allen, *Vice Mayor*
Joe S. Frank, *Mayor*
Edgar E. Maroney, *City Manager*

NORFOLK

Paul D. Fraim, *Mayor*
Donald L. Williams, *Council Member*
Regina V.K. Williams, *City Manager*
Barclay C. Winn, *Council Member*
W. Randy Wright, *Council Member*

POQUOSON

Charles W. Burgess, Jr., *City Manager*
Gordon C. Helsel, Jr., *Mayor*

PORTSMOUTH

Stephen E. Heretick, *Council Member*
James B. Oliver, Jr., *Interim City Manager*
Charles B. Whitehurst, Sr., *Council Member*

SOUTHAMPTON COUNTY

Anita T. Felts, *Board Member*
Michael W. Johnson, *County Administrator*

SUFFOLK

R. Steven Herbert, *City Manager*
Bobby L. Ralph, *Mayor*

SURRY COUNTY

Terry D. Lewis, *County Administrator*
Judy S. Lytle, *Board Member*

VIRGINIA BEACH

Harry E. Diezel, *Council Member*
Robert M. Dyer, *Council Member*
Louis R. Jones, *Vice Mayor*
Meyera E. Oberndorf, *Mayor*
Peter W. Schmidt, *Council Member*
James K. Spore, *City Manager*
James L. Wood, *Council Member*

WILLIAMSBURG

Jackson C. Tuttle, II, *City Manager*
Jeanne Zeidler, *Mayor*

YORK COUNTY

James O. McReynolds, *County Administrator*
Thomas G. Shepperd, Jr., *Chairman*

May 27, 2005

Mr. Matt Goss
Environmental Management Flight
Department of the Air Force
Headquarters, 1st Fighter Wing
1 CES/CEV
37 Sweeney Boulevard
Langley Air Force Base, Virginia 23665

Re: Development of 1300 Area at
Langley AFB
(ENV:GEN)

Dear Mr. Goss:

This is in response to the May 16, 2005 letter from Major Robert A. Langhill announcing the intent to prepare an Environmental Assessment for development of the 1300 Area at Langley Air Force Base in Hampton, Virginia. The staff of the Hampton Roads Planning District Commission has reviewed your request for comments on the scope of the document as well as the recommendations of the Virginia Department of Environmental Quality. We concur with DEQ's recommendation that the Air Force prepare a Programmatic Environmental Impact Statement and Plan for Langley Air Force Base. This will help to facilitate more rapid review of individual projects by the HRPDC, and will allow for a more thorough assessment of the cumulative impacts of multiple projects being planned on the base.

We appreciate the opportunity to comment on this proposed project at Langley AFB. We look forward to reviewing the completed Environmental Assessment document.

Sincerely,


Arthur L. Collins
Executive Director/Secretary

MLJ:fh

Copy: Ms. Ellie Irons

O. GENE DISHNER
DIRECTOR



DIVISIONS
ENERGY
GAS AND OIL
MINED LAND RECLAMATION
MINERAL MINING
MINERAL RESOURCES
MINES
ADMINISTRATION

COMMONWEALTH of VIRGINIA

Department of Mines, Minerals and Energy

Division of Mineral Resources

P.O. Box 3667

Charlottesville, Virginia 22903-0667

(434) 951-6340

27 May 2005

Major Robert Langhill
1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

Re: EA of proposed development the 1300 Area

Dear Major Landhill:

The Department of Mines, Minerals and Energy finds the proposed project would have no anticipated impact to the geology or mineral resources of the site.

Please contact me if further information is required.

Sincerely,

A handwritten signature in dark ink, appearing to read "Gerald Wilkes".

Gerald Wilkes
Geologist



COMMONWEALTH of VIRGINIA

Department of Historic Resources

2801 Kensington Avenue, Richmond, Virginia 23221

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

Kathleen S. Kilpatrick
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.state.va.us

April 8, 2005

Major Robert A. Langhill
1 CES/CEV
37 Sweeney Boulevard, Langley Air Force Base
Hampton, Virginia 23665-2107

Re: Proposed Development of 1300 Area
Langley Air Force Base
Hampton, Virginia
DHR File No. 2005-0700

Dear Major Langhill:

We have received your notification of the Air Force's intent to develop an Environmental Assessment (EA) for the above referenced project. It is our understanding that the Air Force proposes to develop 1300 Area at Langley Air Force Base located in the City of Hampton.

The undertaking has the potential to effect historic properties. We request that in order to carry out its responsibilities pursuant to Section 106 of the National Historic Preservation Act, as amended, and its implementing regulation 36 CFR 800, to identify historic properties listed in or eligible for the National Register of Historic Places that the Air Force consult the Department of Historic Resources (DHR) Archive. Once it has identified all historic properties within the project Area of Potential Effect (APE), the Air Force, in consultation with DHR, must evaluate the effect of its undertaking on such resources. We look forward to continued coordination between our agencies on this project.

If you have any questions about the Section 106 review process or our comments, please call me at (804) 367-2323, Ext. 114.

Sincerely,

Marc Holma, Architectural Historian
Office of Review and Compliance

Administrative Services
10 Courthouse Avenue
Petersburg, VA 23803
Tel: (804) 863-1824
Fax: (804) 862-6196

Capital Region Office
2801 Kensington Ave.
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Portsmouth Region Office
612 Court Street, 3rd Floor
Portsmouth, VA 23704
Tel: (757) 398-6707
Fax: (757) 398-6712

Roanoke Region Office
1030 Penmar Ave., SE
Roanoke, VA 24013
Tel: (540) 857-7585
Fax: (540) 857-7588

Winchester Region Office
107 N. Kent Street, Suite 203
Winchester, VA 22601
Tel: (540) 722-3427
Fax: (540) 722-7535



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

Office of Drinking Water

MAY 19 2005

MAY 16 2005 **RECEIVED**

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

Mr. Alan Weber
Virginia Department of Health
109 Governor Street, 6th Floor
Division of Drinking Water
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9600

Dear Mr. Weber

Langley AFB is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to develop the 1300 Area at Langley AFB.

The EA will analyze potential environmental impacts associated with the proposed development of an existing industrial area at Langley AFB. New facility construction would include an auto skills center, explosive ordinance disposal administrative office, a vehicle repair and maintenance facility, recreational vehicle storage area and a central accumulation point site (<90 day facility). Additional parking areas will be provided for the new facilities. Four existing buildings will be demolished as part of the development proposal. The entrance into Durand Loop will be modified to allow expansion into the area between Durand Loop and Lee Road.

In addition to the proposed action, one alternative and a no-action alternative will be analyzed in the EA. Attachment 1 is a map of the proposed action area.

Please provide your comments or any requests for additional information to Mr. Matt Goss of the Environmental Flight. Mr. Goss can be reached at the above address, or at (757) 764-1095. Your response before 3 June 2005 will allow us to ensure your contribution is included in the draft EA.

Sincerely

No comments

Alan D. Weber
UDH

Attachment: 5-19-05
Map of Proposed Action Area


ROBERT A. LANGHILL, Major, USAF
Deputy Chief, Environmental Flight

Global Power For America

=====

MEMORANDUM FOR RECORD

FROM: 1 CES/CEVQA

SUBJECT: USFWS coordination on 1300 ADP EA

1. At 1015 hrs, 20 May 2005, 1 CES/CEVQA received a call from the USFWS (Mr. Eric Davis) in reply to the IICEP letter Langley AFB had sent out on 16 May 2005. The main point of the call was to allow USFWS to re-iterate its position that due to staff and budgets cuts, they no assist respondents in requests for species information unless an Threatened and Endangered (T&E) species is known to be present. Mr. Davis also mentioned that his office no longer reviews Environmental Assessment but requested we continue to send them to his office nonetheless.
2. During the call, Mr. Davis mentioned that since no T&E species are currently known to occur on Langley AFB, and that the 1300 is an already developed area with some grassy areas, the action agency (Langley AFB) can make its own determination of "No effect" to T&E species (as opposed to may-effect - which would require formal USFWS coordination under the Endangered Species Act) and that USFWS would not challenge that determination.
3. The phone call ended at 1023 hrs, 20 May 2005.

//mg -- 20 May 05//

MATTHEW GOSS, GS-11

Environmental Analysis Program Manager

=====



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

1401 EAST BROAD STREET
RICHMOND, VIRGINIA 23219-2000

PHILIP A. SHUCET
COMMISSIONER

June 13, 2005

MEMORANDUM

To: Robert A. Langhill, Major, USAF
Deputy Chief, Environmental Flight
Department Of The Air Force
Headquarters 1ST Fighter Wing
Langley Air Force Base 23665-2107

From: Harold Paxton, Transportation Planning, Hampton Roads District

Subject: Environmental Assessment Review
Proposal to develop 1300 area at Langley AFB

The Hampton Roads District Planning Section has reviewed the above referenced Environmental Assessment Review for impacts to the existing and future transportation system. Our preliminary review does not indicate any negative impacts to the transportation system, as there are no transportation improvement projects in the direct area that are in the six year plan or in the 2026 Long Range Plan.

We can only conclude any additional traffic or traffic disruptions regarding this project are negligible.

If further assistance is needed, please advise. I can be reached at 804-371-8866

A handwritten signature in cursive script that reads "Harold Paxton".

Harold Paxton, Transportation Planning Engineer, Sr.

Cc: Gary German
Eric Stringfield

**The Department of the Air Force Invites Public
Comments On the Draft Environmental
Assessment for the Redevelopment of the
North Base Industrial Area
at Langley Air Force Base (AFB)**

Langley AFB has prepared a Draft Environmental Assessment (EA) to analyze the potential impacts of the redevelopment of the North Base Industrial Area at Langley AFB. The Draft EA assesses the potential environmental consequences resulting from the demolition of four existing buildings and approximately 90,000 square feet of new construction including: Auto/Skills Center, Explosive Ordnance Disposal (EOD) Operations Center, a Vehicle Maintenance Complex, a new Hazardous Waste Storage Facility, and an Outdoor Recreational Center with recreational vehicle storage area. The analysis also assesses the environmental consequences of the construction on the west side of nearby Poplar Road and the no action alternative.

The Draft EA and a Draft Finding of No Significant Impact/Finding of No Practicable Alternative will be available for review beginning November 27, 2005 at the locations below. Comments should be submitted by December 27 2005.

Poquoson Public Library	500 City Hall Avenue
Hampton Public Library	4207 Victoria Blvd
York County Public Library	100 Long Green Blvd
Bateman Library	42 Ash Avenue Langley AFB

To acquire more information, please contact Mr. Matt Goss.
Written comments should be mailed to:

1 CES/CEVQA
37 Sweeney Boulevard
Langley AFB, VA 23665-2107
ATTN: Matt Goss



COMMONWEALTH of VIRGINIA

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P. O. Box 10009, Richmond, Virginia 23240
Fax (804) 698-4500 TDD (804) 698-4021
www.deq.virginia.gov

Robert G. Burnley
Director
(804) 698-4000
1-800-592-5482

December 15, 2005

Ms. Brenda W. Cook
Langley AFB Environmental Flight
1 CES/CEV
37 Sweeney Boulevard
Langley AFB, Virginia 23665-2107

RE: Draft Environmental Assessment and Consistency Determination for the North Base Industrial Area Development Plan, Langley Air Force Base, City of Hampton, Virginia (DEQ 05-280F).

Dear Ms. Cook:

The Commonwealth of Virginia has completed its review of the Draft Environmental Assessment (EA) and Consistency Determination for the above referenced project. The Department of Environmental Quality is responsible for coordinating Virginia's review of federal environmental documents and responding to appropriate federal officials on behalf of the Commonwealth. Also, as you are aware, pursuant to the Coastal Zone Management Act of 1972, as amended, federal actions that can have foreseeable effects on Virginia's coastal uses or resources must be conducted in a manner which is consistent, to the maximum extent practicable, with the Virginia Coastal Resources Management Program (VCP). The DEQ, as the lead agency for the VCP, is responsible for coordinating Virginia's review of federal consistency determinations. The following agencies, planning district commission, and locality took part in the review of the EA:

Department of Environmental Quality
Department of Game and Inland Fisheries
Department of Conservation and Recreation
Department of Historic Resources
City of Hampton
Hampton Roads Planning District Commission

In addition, the Virginia Marine Resources Commission, Department of Agriculture and Consumer Services and Department of Forestry were invited to comment.

Project Description

The U.S. Air Force intends to redevelop the North Base Industrial Area (NBIA) at Langley Air Force Base in the City of Hampton. Redevelopment activities include the construction of:

- Auto/Skills Center;
- Explosive Ordinance Disposal Operations Center;
- Vehicle Maintenance Complex;
- Hazardous Waste Storage Facility; and
- Outdoor Recreational Center with a recreational vehicle storage area.

Four existing buildings (1329, 1330, 1331 and 1332) would be demolished. The entrance into Durand Loop will be modified to allow expansion into the area between Durand Loop and Lee Road. Additional recreational vehicle parking would be constructed in the undeveloped area at the south corner outside Durand Loop.

The EA submitted for the project concludes that based on the findings of the EA, no significant impact is anticipated from implementation of the proposed action. Therefore, issuance of a Finding of No Significant Impact (FONSI) is warranted, and an environmental impact statement (EIS) is not required. Furthermore, the Air Force found the proposed action consistent with the enforceable policies of the Virginia Coastal Resources Management Program (VCP).

Environmental Impacts and Mitigation

1. Water Quality & Wetlands. According to the EA (page 4-7) construction of the North Base Industrial Area (NBIA) would be within the 100-year floodplain. Filtration would control stormwater runoff and soil erosion from the site. The Air Force anticipates that there would be no impacts to water resources from point source or non-point sources with the implementation of the proposed action. The EA (page 3-12) states that a wetland delineation of the entire base was conducted in late 2000 and verified by the US Army Corps of Engineers (Corps)-Norfolk District on January 22, 2004. Based on the 2000 delineation, the Air Force asserts that there are no wetlands in the area of the proposed action.

DEQ notes that the draft Finding of No Significant Impact (FONSI) contained in the EA asserts that no wetlands impacts will occur under the proposed action. However, the federal consistency analysis contained in Appendix B of the document states, "There would be no significant impacts to wetlands from the implementation of the proposed action since **the majority of development would be in areas not delineated as wetlands** (emphasis added)." This statement indicates that some development would be in areas that **are** delineated as wetlands. This discrepancy requires correction. The

EA should also present an additional wetland map figure which depicts delineated wetland and surface water areas on and adjacent to the proposed action relative to the proposed construction and/or demolition activities at the same scale as Figure 2-1, Proposed Action (EA, page 2-2).

Additionally, Table 2-2, Environmental Related Permitting, and the second paragraph of Section 3.4.2 (EA, page 3-12) provides erroneous State regulatory and statutory citations for tidal and nontidal wetlands and should be corrected. These corrections should properly distinguish between the authority of the Virginia Marine Resources Commission (VMRC) to administer the Tidal Wetlands Act under State law and the authority of DEQ to administer the Virginia Water Protection Permit (VWPP) program as authorized by the State Water Control Law and related regulations. These corrections should also be explicitly clear that the requirement to obtain a State permit for impacts to wetlands is not limited to activities impacting waters of the U.S. but rather, all wetlands and surface waters, regardless of federal jurisdiction.

Please note that the Commonwealth does not support the filling of wetlands, particularly when alternative sites have been identified. It is the policy of the Commonwealth of Virginia to first avoid impacts to wetlands before considering other mitigation measures such as compensation. The Virginia Water Protection permit regulations state that "mitigation means sequentially avoiding and minimizing impacts to the extent practicable, and then compensating for remaining unavoidable impacts of a proposed action" (9 VAC 25-210-10). According to State Water Control Law § 62.1-44.15:5D, "...except in compliance with an individual or general Virginia Water Protection Permit issued in accordance with this subsection, it shall also be unlawful to conduct the following activities in a wetland: (i) new activities to cause draining that significantly alters or degrades existing wetland acreage or functions, (ii) filling or dumping, (iii) permanent flooding or impounding, or (iv) new activities that cause significant alteration or degradation of existing wetland acreage or functions. Permits shall address avoidance and minimization of wetland impacts to the maximum extent practicable. A permit shall be issued only if the Board finds that the effect of the impact, together with other existing or proposed impacts to wetlands, will not cause or contribute to a significant impairment of state waters or fish and wildlife resources."

Federal wetlands mitigation policy is guided by a Memorandum of Agreement between the U.S. Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency that clarify a three-step approach to avoiding, minimizing, and compensating for unavoidable impacts (see Clean Water Act Section 404 (b)(1) *Guidelines Mitigation Memorandum of Agreement*, February 1990). The Corps first makes a determination that potential impacts have been avoided to the maximum extent practicable; remaining unavoidable impacts will then be mitigated to the extent appropriate and practicable by requiring steps to minimize impacts and, finally, compensate for aquatic resource values. This sequence is considered satisfied where the proposed mitigation is in accordance with specific provisions of a Corps and EPA approved comprehensive plan

that ensures compliance with the compensation requirements of the 404(b)(1) Guidelines (examples of such comprehensive plans may include Special Area Management Plans, Advance Identification areas (Section 230.80), and State Coastal Zone Management Plans).

2. *Erosion and Sediment Control and Stormwater Management.* As described in the EA (page 4-7), erosion and sediment control measures would be implemented in accordance with the *Virginia Erosion and Sediment Control Handbook*. The Air Force states that since more than 1 acre would be disturbed by development at any of the proposed sites, a Virginia Pollutant Discharge Elimination System (VPDES) Stormwater General Permit would be required.

The Department of Conservation and Recreation (DCR) Division of Soil and Water Conservation (DSWC) did not respond to our request for comments on this proposed action. However, according to available DCR guidance, federal agencies and their authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with the Virginia Erosion and Sediment Control Law and Regulations (VESCL&R), Virginia Stormwater Management Law and Regulations (VSWML&R), 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, or other structures, soil/dredge spoil areas, or related land conversion activities that disturb 10,000 square feet or more (2,500 square feet or more in a Chesapeake Bay Preservation Area) would be regulated by VESCL&R and those that disturb one acre or greater would be covered by VSWML&R. Accordingly, the Air Force should prepare and implement erosion and sediment control (ESC) and stormwater management (SWM) plans to ensure compliance with state law. The federal agency is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliant sites, and/or other mechanisms, consistent with agency policy.

Furthermore, DCR is responsible for the issuance, denial, revocation, termination and enforcement of Virginia Pollutant Discharge Elimination System (VPDES) permits for the control of stormwater discharges from municipal separate storm sewer systems (MS4s) and land disturbing activities under the Virginia Stormwater Management Program. Therefore, for projects involving land disturbing activities of 2,500 square feet or more in Chesapeake Bay Preservation Areas (CPBAs), the Air Force or its authorized agent is required to apply for registration coverage under the General Permit for Discharges of Stormwater from Construction Activities. General information and registration forms for the General Permit are available on DCR's website at:

<http://www.dcr.virginia.gov/sw/vsmp.htm#geninfo>.

3. *Chesapeake Bay Preservation Areas*. The federal consistency determination contained in the EA (Appendix B) states that the proposed action and alternatives, which occurs primarily on federal property, conforms to the maximum extent practicable with the requirements of the Chesapeake Bay Preservation and Management Regulations.

According to DCR's Division of Chesapeake Bay Local Assistance (DCBLA), while Chesapeake Bay Preservation Areas are not locally designated on federal lands, this does not relieve the Air Force of its responsibilities to be consistent with the provisions of the Chesapeake Bay Preservation Area Designation and Management Regulations (Regulations), as one of the enforceable programs of Virginia's Coastal Resources Management Program (VCP). 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 Chesapeake Bay Preservation Areas.

In Hampton, the areas protected by the Chesapeake Bay Act, as locally implemented requiring stringent performance criteria, include:

- tidal wetlands;
- non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or tributary streams;
- tidal shores; and
- a 100-foot vegetated buffer area located adjacent to and landward of the aforementioned features.

Less stringent performance criteria apply to land that is contiguous to the 100-foot buffer for a distance of 100 feet in the landward direction.

The project as proposed does not appear to be within areas analogous to those protected by the Chesapeake Bay Preservation Act and Regulations for either the Proposed Action or the Poplar Road Alternative. Therefore, DCR-DCBLA concurs that the North Base Industrial Area Development Plan is consistent with the *Chesapeake Bay Preservation Act & Regulations*. For additional information, contact Alice Baird, DCR-DCBLA, at (804) 225-2307.

4. *Air Pollution Control*. According to the EA (page 4-8) emissions from the proposed actions are either "presumed to conform" (based on emissions levels that are considered insignificant in the context of overall regional emissions) or they must demonstrate conformity with approved State Implementation Plan (SIP) provisions. The EA (page 4-9) determined that air emissions are expected to be virtually identical to or less than current operations, as sources that are removed due to the shutdown of current facilities would be replaced by similar air emission sources at the new facilities. The EA (page 4-10) concludes that emission increases of O₃ precursors (NO_x and VOCs) are well below the threshold thus demonstrating compliance with the Clean Air Act (CAA) conformity requirements.

DEQ reviewers determined that the statements in the EA (page 3-18, Sec 3.6.1) concerning the attainment status of the Hampton Roads Air Quality Control Region (AQCR) are generally incorrect and need to be updated to reflect the current attainment status with respect to each criteria pollutant. However, DEQ concurs with the General Conformity conclusions and statements that current air quality and attainment status would not be measurably affected.

The project site is in an ozone (O₃) non-attainment area and an emission control area for the contributors to ozone pollution, which are volatile organic compounds (VOCs) and oxides of nitrogen (NO_x). This has two practical consequences for project development. One is that 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. A second precaution, stemming from 9 VAC 5-40-5490 in the Regulations for the Control and Abatement of Air Pollution, is that there are some limitations on the use of "cut-back" (liquefied asphalt cement, blended with petroleum solvents) that may apply in the construction of roads and parking areas associated with the project. The asphalt must be "emulsified" (predominantly cement and water with a small amount of emulsifying agent) except when specified circumstances apply. Moreover, there are time-of-year restrictions on its use during the months of April through October in VOC emission control areas.

DEQ's Division of Air Program Coordination states that during construction, 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.

If project activities include the burning of construction or demolition material, this activity must meet the requirements under 9 VAC 5-40-5600 et seq. of the Regulations for open burning, and it may require a permit. The Regulations provide for, but do not require, the local adoption of a model ordinance concerning open burning. The Air Force should contact the City of Hampton officials to determine what local requirements, if any, exist.

DEQ provides the following regulatory guidance with regard to permitting requirements related to fuel burning equipment proposed for the new buildings:

1. Article 6, 9 VAC 5-80-1320 B.1. lists exempt sizes for external fuel burning equipment.
2. Article 6, 9 VAC 5-80-1320 B.2. lists exempt sizes for internal fuel burning equipment.
3. 9 VAC 5-80-1320 B.2.b. exempts internal fuel burning equipment using only diesel fuel with an aggregate rated brake (output) horsepower of less than 1,675 hp and diesel engines powering electrical generators having an aggregate rated electrical power output of less than 1125 kilowatts.

The EA (page 2-1) lists several potential air emission units such as a paint prep booth, paint booths, and a wood shop, among others. These all may require an air permit and therefore the submittal of a Form 7 (application for air permit) to DEQ's Tidewater Regional Office (TRO) and receipt of a valid construction permit before construction on the site begins.

5. Solid and Hazardous Wastes and Hazardous Materials. The EA (page 4-11) states that all hazardous materials and construction and demolition debris generated by the proposed action would be handled, stored and disposed of in accordance with federal, state and local regulations and laws. Prior to any demolition activities, the Air Force would ensure that affected facilities would be inspected to identify all asbestos, including Category I and Category II non-friable asbestos containing material (ACM) and lead-containing materials.

DEQ found that both solid and hazardous waste issues were addressed adequately in the report. However, the report did not include a search of waste-related data bases. The Waste Division staff performed a cursory review of its data files and determined that the facility is under DEQ's Federal Facilities Installation Restoration Program (VA2800005033), a Formerly Used Defense Site (VA9799F1590), and a Resource Conservation and Recovery Act (RCRA) small quantity generator of hazardous waste (VAD988222527). The following websites may prove helpful in locating additional information for these identification numbers:

- http://www.epa.gov/echo/search_by_permit.html
- http://www.epa.gov/enviro/html/rcris/rcris_query_java.html.

As noted in the EA (page 2-3), the site will include a less-than 90 day hazardous waste storage facility. In addition, the EA (page 3-20) notes the possibility of contamination at a waste oil and trash burn site in the project area. DEQ notes that the alternative to the proposed action discussed in the EA (page 3-21) is a former bombing range.

DEQ reviewers found that the EA contains contradictory information and discussion regarding the generation of hazardous waste. The Air Force should be aware that the demolition of the existing structures and the construction and operation of the new facility will generate hazardous waste. The generation of waste should not impact the

facility and natural resources as long as the Air Force complies with applicable regulations and laws. The construction of the proposed facility may produce a slight increase in hazardous waste generation, but DEQ anticipates that it will be temporary. As the functions are moved from the existing sites to the proposed North Base Industrial Area, DEQ believes that there should be no significant net increase in post-construction waste generation.

The former areas being closed must comply with applicable RCRA closure standards as referenced at 262.34(a)/265.111 and 114. DEQ recommends that the EA address the review of all functions being moved and any applicable RCRA regulations that must be implemented from the moving of the functions. The Air Force must also notify DEQ of the new hazardous waste storage facility prior to use (9 VAC 20-60-262.B.4).

The EA (page 4-11, Section 4.7.1.) states that contractors are responsible for the handling and disposal of hazardous materials. Later, the EA (page 4-12) states that contractor hazardous waste must be managed through the base hazardous waste program. Please be aware that the Air Force is considered the generator of the solid and hazardous waste at these demolition and construction sites. The liability and responsibility to ensure that all waste generated on the base is properly characterized and managed cannot be delegated to a contractor.

Overall, from an impact to humans and environment with respect to RCRA, DEQ does not anticipate any significant new impacts from existing conditions or errors in assessing regulatory impacts to the actions themselves, except some clarifications as noted above with respect to moving hazardous waste accumulation functions.

Any soil that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-80); 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.

Also, all structures being demolished/renovated/ removed should be checked for asbestos-containing materials (ACM) and lead-based paint prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9VAC 20-80-640 for ACM and 9VAC 20-60-261 for LBP must be followed.

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. For more information contact Harold Winer, DEQ-Tidewater Regional Office, (757) 518-2153.

6. Petroleum Storage Tanks.

Compliance and Inspection

DEQ determined that Langley Air Force Base (CEDs # 5-001910) currently operates 13 Underground Storage Tanks (USTs) and 70 Aboveground Storage Tanks (ASTs) and has a current Oil Discharge Contingency Plan (ODCP). The base is also listed as a >1,000,000 gallon (petroleum storage capacity) facility under 9 VAC 25-91-10 et seq. DEQ found no active USTs or ASTs within the proposed construction area. However, the DEQ database list three "currently in use" 1,000 gallon ASTs (#1329, #1331 and #1332). These numbers correspond to buildings slated for demolition in the proposed plan. Please note that it cannot be determined from a DEQ database review alone that these ASTs are located in the North Base Industrial Area. However, if these tanks are located in the proposed demolition area, they must be closed in accordance with 9 VAC 25-91-120 "Notification and Closure Requirements for ASTs."

If the construction of this project will include the use of portable ASTs (>660 gallons) for equipment fuel, the tanks must be registered with DEQ using AST Registration form 7540-AST. This form is available at the DEQ web site at www.deq.virginia.gov, under *Programs<Petroleum Programs<Download Library<UST & AST Registration Forms*. The completed registration form should be mailed to the DEQ address listed, along with the appropriate registration fee. Any questions concerning tank registration should be directed to Tom Madigan, DEQ Tidewater Regional Office, at (757) 518-2115.

Remediation

DEQ records indicate that there have been no reported petroleum releases at or adjacent to the proposed construction area. There have been 149 reported petroleum releases at Langley Air Force Base. The two closest petroleum releases to the construction site are PC#s 1993-0147 and 1998-2340. These two cases have been closed and are located over 500 feet from the proposed construction area. If evidence of a petroleum release is discovered during construction of this project, it must be reported to DEQ. Contact Karen Doran, DEQ-TRO, at (757) 518-2157. Petroleum-contaminated soils generated during construction of this project must be characterized and disposed of properly.

7. Pesticides and Herbicides. The use of herbicides or pesticides for 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. Also, we recommend that the use of pesticides or herbicides containing volatile organic compounds as their active ingredient be avoided to the maximum extent practicable in order to protect air quality. Otherwise, the use of these pesticides or herbicides should be applied outside of the ozone season. Please contact the Department of Agriculture and Consumer Services at (804) 786-3501 for more information.

8. Natural Heritage Resources. The EA (page 4-5) states that under the proposed actions, demolition and construction would disturb areas that were previously developed, have currently experienced high levels of continual human activity, lack native terrestrial habitat, and exhibit a low level of biodiversity. The Air Force anticipates that the only plant or animal species likely to be displaced are individuals of common and locally abundant species.

The Department of Conservation and Recreation (DCR), Division of Natural Heritage (DNH) searched its Biotics Data System for occurrences of natural heritage resources from the project area. 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.

Biotics documents the presence of natural heritage resources in the project area. However, due to the scope of the activity and the distance to the resources, DCR-DNH does not anticipate that this project will adversely impact these natural heritage resources.

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

In addition, our files do not indicate the presence of any State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

Any absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. New and updated information is continually added to Biotics. DEQ recommends that DCR-DNH be contacted at (804) 786-7951, to secure information on natural heritage resources before the project is implemented.

9. Wildlife Resources. According to the EA (page 3-14), Langley AFB provides habitat for one federally-listed threatened species: the bald eagle. An active bald eagle nest site is three miles east of the base. Virginia threatened and endangered species include eight state-threatened and six endangered species. The Canebrake rattlesnake

has been found along the shore of the southwest branch of the Back River and is not expected to occur within the project area (EA, page 3-14).

The Department of Game and Inland Fisheries (DGIF) does not anticipate a significant adverse impact upon threatened and endangered wildlife resources under its jurisdiction to occur due to this project. To minimize adverse impacts upon general wildlife, DGIF recommends:

- minimizing the amount of forest that must be cleared; and
- stormwater controls designed to replicate and maintain the hydrographic condition of the site prior to the change in landscape. Controls may include:
 - utilizing bioretention areas, and
 - minimizing the use of curb and gutter in favor of grassed swales.

These components 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.

Minimizing the use of curbs also will facilitate wildlife movement across roads and provide some connectivity between any remaining natural areas.

Furthermore, DGIF believes this project is consistent with the fisheries management enforceable policy of the Virginia Coastal Resources Management Program.

10. Forestry Resources. According to the EA (4-1), the proposed action would require the removal of approximately 7 acres of undeveloped forested lands.

DEQ recommends that, to protect trees in the project vicinity that are not targeted for removal, the Air Force should mark and fence them at least to the dripline or the end of the root system, whichever extends farther from the tree stem. Marking should be done with highly visible ribbon so that equipment operators see the protected areas easily.

Parking and stacking of heavy equipment and construction materials near trees can damage root systems by compacting the soil. Soil compaction, from weight or vibration, affects root growth, water and nutrient uptake, and gas exchange. The protection measures suggested above should be used for parking and stacking as well as for moving of equipment and materials. If parking and stacking are unavoidable, the Air Force should use temporary crossing bridges or mats to minimize soil compaction and mechanical injury to plants.

Any stockpiling of soil should take place away from trees. Piling soil at a tree stem can kill the root system of the tree. Soil stockpiles should be covered, as well, to prevent soil erosion and fugitive dust. Questions on tree protection may be directed to the Department of Forestry, Mike Foreman, at (434) 977-6555.

11. Historic Structures and Archaeological Resources. The EA (page 4-4) states that impacts to cultural resources are not expected under the proposed action. A 1991 archaeological inventory of the site did not locate cultural deposits in the area. In the event that archaeological resources are encountered during construction, the Air Force will cease all activity until the find is evaluated under the *Langley Cultural Resources Management Plan* (Air Force 2004d) and federal regulations. The EA (page 4-5) states that none of the building identified for demolition are considered eligible for nomination to the National Register of Historic Places (NHRP). The Air Force plans to consult with the State Historic Preservation Office (SHPO) once project design and funding is available.

The Air Force must ensure that the proposed activity complies with §106 of the *National Historic and Preservation Act of 1966*, as amended, and its implementing regulation 36 CFR 800. *Section 106* requires that federal agencies must consider effects to properties that are listed or eligible for listing on the National Register of Historic Places. The Department of Historic Resources (DHR) conducts reviews of projects to determine their effect on historic structures or cultural resources. The Air Force should consult directly with DHR to ensure compliance with *Section 106*. For coordination, contact Ms. Ethel Eaton, DHR, at (804) 367-2323.

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

- Consider environmental attributes when purchasing materials. For example, the extent of recycled material content, toxicity level, and amount of packaging should be considered and can be specified in purchasing contracts.
- Consider contractors' commitment to the environment when choosing contractors. Specifications regarding raw materials and construction practices can be included in contract documents and requests for proposals.
- Choose sustainable materials and practices for infrastructure and building construction and design. These could include asphalt and concrete containing recycled materials, and integrated pest management in landscaping, among other things.

DEQ's Office of Pollution Prevention provides free information and technical assistance relating to pollution prevention techniques. For more information, contact DEQ's Office of Pollution Prevention, Mr. Tom Griffin at (804) 698-4545.

13. Energy Conservation. DEQ recommends that new building be designed to comply with state and federal guidelines and industry standards for energy conservation and efficiency. For example, energy efficiency of the terminal can be enhanced by maximizing the use of the following:

- Thermally efficient building shell components (roof, wall, floor, and insulation);
- High efficiency heating, ventilation, air conditioning systems;
- High efficiency lighting systems; and
- energy-efficient office and data processing equipment.

The Department of Mines, Minerals and Energy should be contacted, Gerald Wilkes (434) 951-6364.

14. Local Comments. The City of Hampton reviewed the proposal and found that it does not appear to impact the site significantly with respect to any land use resources, water resources, air quality, noise, or hazardous materials. In addition, the project does not appear to conflict with the City's current plans or policies. The City supports the commitment by the Air Force to utilize architectural design standards in accordance with the Leadership in Energy and Environmental Design (LEED) Green Building Rating System. For any additional information, contact James Freas, City of Hampton, at (757) 728-5233.

15. Regional Comments. The Hampton Roads Planning District Commission (HRPDC) reviewed the EA and contacted the City of Hampton regarding the project. Based on its review, the HRPDC finds the proposed action generally consistent with local and regional plans and policies. Questions or comments may be directed to Arthur Collins, HRPDC, at (757) 420-8300.

Federal Consistency under the Coastal Zone Management Act

Pursuant to the Coastal Zone Management Act of 1972, as amended, federal activities located inside or outside of Virginia's designated coastal management area that can have reasonably foreseeable effects on coastal resources or coastal uses must, to the maximum extent practicable, be implemented in a manner consistent with the Virginia Coastal Resources Management Program (VCP). The VCP consists of a network of programs administered by several agencies. The DEQ coordinates the review of federal consistency determinations with agencies administering the Enforceable and Advisory Policies of the VCP.

The EA (Appendix B) includes a consistency determination and accompanying analysis of the enforceable policies of the VCP. Based on the information provided in the EA and federal consistency determination, and the comments of reviewing agencies, we concur that the proposed activity is consistent with the Virginia Coastal Resources

Management Program, provided that the Air Force complies with all requirements of applicable permits and other authorizations that may be required.

Regulatory and Coordination Needs

1. Erosion and Sediment Control and Stormwater Management. The Air Force must ensure that it is in compliance with Virginia's Erosion and Sediment Control Law (Virginia Code 10.1-567) and regulations (4 VAC 50-30-30 et seq.) and Stormwater Management Law (Virginia Code 10.1-603.5) and regulations (4 VAC 3-20-210 et seq.). Activities that disturb 10,000 square feet or more of land (2,500 square feet in a Chesapeake Bay Preservation Area) would be regulated by VESCL&R and those that disturb one acre or greater would be covered by VSWML&R. The Air Force is encouraged to contact DCR's Chowan, Albermarle and Coastal Watersheds Office, (757) 925-2468, for assistance with developing or implementing E&S and/or Stormwater Management Plans to ensure project conformance during and after active demolition.

For land disturbing activities equal to one acre or more, the Air Force is required to apply to DCR for registration coverage under the VPDES General Permit for Discharges of Stormwater from Construction Activities. Specific questions regarding the Stormwater Management Program requirements should be directed to Mr. Eric Capps, DCR, at (804) 786-3957, e-mail eric.capps@dcr.virginia.gov.

2. Air Quality Regulations. This project may be subject to air regulations administered by the Department of Environmental Quality. Regulatory requirements that may apply to project activities relate to the control of fugitive dust emissions and open burning. 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. If project activities include the burning of construction or demolition material, either on or off site, this activity must meet the requirements under 9 VAC 5-40-5600 et seq. Whereas, the regulation provides for, but does not require, the local adoption of a model ordinance concerning open burning, the Air Force should contact City of Hampton officials to determine what local requirements, if any, exist.

Air emission units such as a paint prep booth, paint booths, and wood shop may require an air permit and therefore the submittal of a Form 7 (application for air permit) to DEQ's Tidewater Regional Office (TRO) and receipt of a valid construction permit before construction on the site begins. For more information contact Harold Winer, DEQ-Tidewater Regional Office, (757) 518-2153.

3. Solid and Hazardous Wastes. All solid waste, hazardous waste, and hazardous materials must be managed in accordance with all applicable federal, state, and local environmental regulations. Contact DEQ's Tidewater Regional Office at (757) 518-2000, concerning 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.

- *Asbestos Materials.* It is the responsibility of the owner or operator of a demolition activity, prior to the commencement of the demolition, to thoroughly inspect the affected part of the facility where the demolition or renovation operation will occur for the presence of asbestos, including Category I and Category II nonfriable asbestos containing material (ACM). Upon classification as friable or non-friable, all waste ACM shall be disposed of in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-80-640), and transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9 VAC 20-110-10 et seq.). Contact the DEQ Waste Management Program for additional information, (804) 698-4021, and the Department of Labor and Industry, Ronald L. Graham at (804) 371-0444.
- *Lead-Based Paint.* If applicable, the proposed project must comply with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations, and with the Virginia Lead-Based Paint Activities Rules and Regulations. For additional information regarding these requirements contact the Department of Professional and Occupational Regulation, Mr. Thomas Perry at (804) 367-8595.

4. *Petroleum Storage Tanks.* The Air Force must register new ASTs and USTs associated with this proposed action with DEQ. The removal of USTs must be conducted in accordance with Virginia UST Technical Regulation. The Air Force must characterize and dispose of any contaminated soils or groundwater in accordance with state regulations. For additional information and coordination, contact Harold Winer, DEQ Tidewater Regional Office, at (757) 518-2153.

5. *Historic Resources.* To ensure compliance with *Section 106 of the National Historic and Preservation Act of 1966*, the Air Force must coordinate project activities with the Virginia Department of Historic Resources. Please contact Ethel Eaton, DHR, at (804) 367-2323.

Thank you for the opportunity to review the draft Environmental Assessment and consistency determination for this undertaking. Detailed comments of reviewing agencies are attached for your review. Please contact me at (804) 698-4325 or John Fisher at (804) 698-4339 for clarification of these comments.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Ellie Irons', written in dark ink.

Ellie Irons, Program Manager
Office of Environmental Impact Review

Enclosures

cc: Kotur S. Narasimhan, DEQ-ADA
Allen Brockman, DEQ-ORP
Harold Winer, DEQ-TRO
Tony Watkinson, VMRC
Andrew Zadnick, DGIF
Scott Bedwell, DCR
Keith R. Tignor, VDACS
Michael Foreman, DoF
Ethel Eaton, DHR
George Wallace, City of Hampton
Arthur L. Collins, Hampton Roads PDC

Fisher, John

From: Winer, Harold
Sent: Monday, December 12, 2005 9:55 AM
To: Fisher, John
Cc: Parolari, Bert; Borton, David; Johnston, Milton; Cash-Robertson, William; Workman, Jane
Subject: EIR #05-280F, North Base Industrial Area Development Plan

As requested, TRO staff has reviewed the supplied information and has the following comments:

Concerning Air Permitting:

1. Article 6, 9 VAC 5-80-1320 B.1. lists exempt sizes for external fuel burning equipment.
2. Article 6, 9 VAC 5-80-1320 B.2. lists exempt sizes for internal fuel burning equipment. 9 VAC 5-80-1320 B.2.b. exempts internal fuel burning equipment using only diesel fuel with an aggregate rated brake (output) horsepower of less than 1,675 hp and diesel engines powering electrical generators having an aggregate rated electrical power output of less than 1125 kilowatts.
3. The applicant should adhere to 9 VAC 5 Chapter 50 Article 1 Standards of Performance for Visible Emissions and Fugitive Dust/ Emissions of Virginia's air regulations, especially during the construction phase of this project. This will ensure that fugitive emissions are kept to a minimum.
4. The information in 2.1 PROPOSED ACTION page 2-1 lists several **potential** air emission units such as a paint prep booth, paint booths, a wood shop, among others. These all may require an air permit and therefore the submittal of a Form 7 (application for air permit) to the TRO office and receipt of a valid construction permit **before beginning actual construction** on the site.

Air Compliance offers the following:

Sec 3.6.1, page 3-18, first paragraph: The statements concerning the attainment status of the Hampton Roads AQCR are generally incorrect and need to be updated to reflect the current attainment status with respect to each criteria pollutant. Nevertheless, we concur with the General Conformity conclusions and statements that current air quality and attainment status would not be measurably affected.

Regarding WVP issues, we note that the Draft FONSI at the beginning of the report asserts that no wetlands impacts will occur under the proposed action. However, the unlabeled table provided as part of Appendix B states "There would be no significant impacts to wetlands from the implementation of the proposed action since **the majority of development would be in areas not delineated as wetlands** (emphasis added)." This statement indicates that some development would be in areas that **are** delineated as wetlands. This discrepancy should be corrected. In doing so, this document should also present an additional wetland map figure which depicts delineated wetland and surface water areas on and adjacent to the proposed action relative to proposed construction and/or demolition activities at the same scale as figure 2-1. Additionally, Table 2-2 and the second paragraph of Section 3.4.2 provides erroneous State regulatory/statutory citations for tidal and nontidal wetlands and should be corrected. These corrections should properly distinguish between the authority of VMRC to administer the Tidal Wetlands Act under State law and the authority of DEQ to administer the Virginia Water Protection Permit program as authorized by the State Water Control Law and related regulations. These corrections should also be explicitly clear that the requirement to obtain a State permit for impacts to wetlands is not limited to activities impacting waters of the U.S. but rather, all wetlands and surface waters, regardless of federal jurisdiction.

Concerning Remediation programs:

1. Petroleum Storage Tank Compliance/Inspections: The base (CEDS # 5-001910) currently operates 13 Underground Storage Tanks (USTs) and 70 Aboveground Storage Tanks (ASTs) and has a current ODCP. The base is also listed as a > 1,000,000 gallon (petroleum storage capacity) facility under 9 VAC 25-91-10 et seq. My review of the Environmental Assessment turned up no active USTs or ASTs within the proposed construction area, however the DEQ database list three "currently in use" 1,000 gallon ASTs as #s 1329, 1331 and 1332. These numbers coorespond to buildings slated for demolition in the proposed plan. Please note that it cannot be determined from a DEQ databse review alone that these ASTs are located in the North Base Industrial Area. However, if these tanks are located in the proposed demolition area, they must be closed in accordance with 9 VAC 25-91-120 "Notification and Closure Requirements for ASTs".

If the construction of this project will include the use of portable AST storage (>660 gallons) for equipment fuel, the tank or tanks must be registered with DEQ using AST Registration form 7540-AST. This form is available at the DEQ web site

12/12/2005

(www.deq.virginia.gov) under "petroleum programs, download library, AST registration forms". Once the registration form is completed, it should be mailed to the DEQ address on the form along with the appropriate registration fee (also listed on the form). Any questions concerning tank registration should be directed to "Tom Madigan" at the Tidewater Regional Office 5636 Southern Boulevard, Virginia Beach, VA 23462, (757) 518-2115 or by e-mail at temadigan@deq.virginia.gov

2. **Petroleum Storage Tank Remediation:** DEQ records indicate that there have been no reported petroleum releases at or adjacent to the proposed construction area. There have been 149 reported petroleum releases at Langley Air Force Base. The two closest petroleum releases to the construction site are PC#s 1993-0147 and 1998-2340. These two cases at Langley AFB have been closed and are located over 500 feet from the proposed construction area. If evidence of a petroleum release is discovered during construction of this project, it must be reported to DEQ. Contact Ms. Karen Doran at (757) 518-2157. Petroleum-contaminated soils generated during construction of this project must be properly characterized and disposed of properly.

Concerning Solid Wastes, all demolition waste generated must be characterized in accordance with the VHWMR prior to disposal or material recovery/re-use.

Regarding Hazardous Waste issues:

None of the buildings proposed to be demolished in the proposed action area are current hazardous waste management units, to our knowledge. Our concerns with the demolition would be those discussed later in the EA - compliance with any asbestos or lead paint removal and its disposal. (Note: they reference a Virginia Lead Based Paint Program as 9 VAC 20-60-261 – 20-60-261 is the adoption of the federal 40 CFR 261 which is waste determination.)

The Summary section notes that hazardous waste will be generated only in the vehicle maintenance complex. In section 1 they state no hazardous waste generation, and another section discusses possible contractor-related hazardous wastes. The construction itself, as well as all of the proposed functions for the new area, potentially will generate hazardous waste. The generation should not impact the facility/environment as long as they comply with applicable regulations and laws, but the EA is inconsistent and misleading. The construction may produce a slight increase in hazardous waste generation, but it is short-lived. As the functions proposed are moving to the area from elsewhere on Base – there should be no significant net increase in waste generation post-construction.

The proposed action is to move existing functions from other areas of the Base to this industrial area. Of particular note is the moving of the current primary less than 90-day accumulation areas at 1390/1395 to the new building. While that does not impact the new area beyond what was already noted in the EA (i.e., they will comply with all applicable laws and regulations), it does mean that the former areas being closed must comply with applicable RCRA closure standards as referenced at 262.34 (a)/265.111 and 114. It is suggested that the EA address the review of all functions being moved and any applicable RCRA regulations that must be implemented from the moving of the functions. They must also notify DEQ of the new hazardous waste storage facility prior to use, as per 9 VAC 20-60-262.B.4

Section 3.0 has some incorrect information but it does not impact the overall focus so we did not list those items here (contact Lisa Silvia in TRO if you need that information)

Section 4.7.1, page 4-11, second paragraph, states that contractors are responsible for handling and disposal of hazardous materials. Page 4-12 notes that contractor hazardous waste must be managed through the Base hazardous waste program. The statement on 4-11 is contrary to Base policy and discouraged by DEQ (in fact, hazardous materials being disposed generally ARE hazardous waste.)

Overall, from an impact to humans and environment with respect to RCRA, we saw no significant new impacts from existing conditions or errors in assessing regulatory impacts to the actions themselves, except some clarifications as noted above with respect to moving hazardous waste accumulation functions.

Thanks for the opportunity to comment.

Harold J. Winer
Deputy Regional Director
Virginia DEQ, Tidewater Regional Office
Phone: 757-518-2153/Fax: 757-518-2003
Email: hjwiner@deq.virginia.gov

**DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR PROGRAM COORDINATION**

ENVIRONMENTAL REVIEW COMMENTS APPLICABLE TO AIR QUALITY

TO: John E. Fisher

DEQ - OEIA PROJECT NUMBER: 05 - 280F

PROJECT TYPE: ☐ STATE EA / EIR / FONSI ☒ FEDERAL EA / EIS ☐ SCC

☒ X CONSISTENCY DETERMINATION/CERTIFICATION

PROJECT TITLE: NORTH BASE INDUSTRIAL AREA DEVELOPMENT PLAN

PROJECT SPONSOR: DEPARTMENT OF DEFENSE / U. S. AIR FORCE

PROJECT LOCATION: ☒ X OZONE NON ATTAINMENT AREA

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DEQ-Office of Environmental
Impact Review

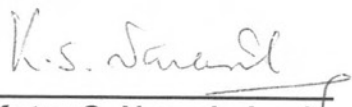
REGULATORY REQUIREMENTS MAY BE APPLICABLE TO: ☒ X CONSTRUCTION
☐ OPERATION

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 5-40-5200 C & 9 VAC 5-40-5220 F – STAGE II Vapor Recovery
3. ☐ 9 VAC 5-40-5490 et seq. – Asphalt Paving operations
4. ☒ X 9 VAC 5-40-5600 et seq. – Open Burning
5. ☒ X 9 VAC 5-50-60 et seq. Fugitive Dust Emissions
6. ☐ 9 VAC 5-50-130 et seq. - Odorous Emissions; Applicable to _____
7. ☐ 9 VAC 5-50-160 et seq. – Standards of Performance for Toxic Pollutants
8. ☐ 9 VAC 5-50-400 Subpart _____, Standards of Performance for New Stationary Sources, designates standards of performance for the _____
9. ☐ 9 VAC 5-80-10 et seq. of the regulations – Permits for Stationary Sources
10. ☐ 9 VAC 5-80-1700 et seq. Of the regulations – Major or Modified Sources located in PSD areas. This rule may be applicable to the _____
11. ☐ 9 VAC 5-80-2000 et seq. of the regulations – New and modified sources located in non-attainment areas
12. ☐ 9 VAC 5-80-800 et seq. Of the regulations – Operating Permits and exemptions. This rule may be applicable to _____

COMMENTS SPECIFIC TO THE PROJECT:

Being in an area of ozone non-attainment, all precautions are necessary to restrict the emissions of volatile organic compounds (VOC) and oxides of nitrogen (NOx) during construction.


(Kotur S. Narasimhan)
Office of Air Data Analysis

DATE: November 17, 2005



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DEC 08 2005

DEQ-Office of Environmental
Impact Review

COMMONWEALTH of VIRGINIA

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P. O. Box 10009, Richmond, Virginia 23240
Fax (804) 698-4500 TDD (804) 698-4021
www.deq.virginia.gov

Robert G. Burnley
Director

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

MEMORANDUM

TO: John E. Fisher, Environmental Program Planner

FROM: *ARB* Allen Brockman, Waste Division Environmental Review Coordinator

DATE: December 7, 2005

COPIES: Sanjay Thirunagari, Waste Division Environmental Review Manager; Durwood Willis, file

SUBJECT: Environmental Assessment and Consistency Determination
DOD/Air Force—Langley Air Force Base, North Base Industrial Area
Development Plan, DEQ Project #05-280F

The Waste Division has completed its review of the Environmental Impact Assessment and Consistency Determination for Langley Air Force Base's North Base Industrial Area Development Plan, Hampton, in Virginia. We have the following comments concerning the waste issues associated with this project:

Both solid and hazardous waste issues were addressed adequately in the report. However, the report did not include a search of waste-related data bases. The Waste Division staff performed a cursory review of its data files and determined that the facility is under DEQ's Federal Facilities Installation Restoration Program (VA2800005033), a Formerly Used Defense Site (VA9799F1590), and a RCRA small quantity generator of hazardous waste (VAD988222527). The following websites may prove helpful in locating additional information for these identification numbers: http://www.epa.gov/echo/search_by_permit.html or http://www.epa.gov/enviro/html/rcris/rcris_query_java.html. Durwood Willis of DEQ's Federal Facilities Program has been contacted for his review of this report and will reply in a separate memo, if he identifies any additional issues.

As noted on p. 2-3 of the plan, the site will include a less-than 90 day hazardous waste storage facility. In addition, p. 3-20 of the plan notes the possibility of contamination at a waste oil and trash burn site in the project area. The alternative to the project area that is proposed is a former bombing range (p. 3-21).

Any soil that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. In addition, the hazardous waste storage facility must be managed 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 20-80); 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.

Also, all structures being demolished/renovated/ removed (e.g. Buildings 1329, 1330, 1331 & 1332) should be checked for asbestos-containing materials (ACM) and lead-based paint prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9VAC 20-80-640 for ACM and 9VAC 20-60-261 for LBP must be followed.

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 Allen Brockman at (804) 698-4468.

W. Tayloe Murphy, Jr.
Secretary of Natural
Resources



Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

217 Governor Street
Richmond, Virginia 23219-2010
Telephone (804) 786-7951 FAX (804) 371-2674 TDD (804) 786-2121

MEMORANDUM

DATE: December 13, 2005

TO: Mr. John E. Fisher
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, Va. 23219
jefisher@deq.virginia.gov
(804) 698-4339

FROM: Robert Munson, Planning Bureau Manager
Virginia Department of Conservation and Recreation

SUBJECT: DEQ-05-280F: DOD/USAF – North Base Industrial Area Development Plan

The Department of Conservation and Recreation (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.

Biotics documents the presence of natural heritage resources in the project area. However, due to the scope of the activity and the distance to the resources, we do not anticipate that this project will adversely impact these natural heritage resources.

Under a Memorandum of Agreement, DCR represents the Virginia Department of Agriculture and Consumer Services (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.

In addition, our files do not indicate the presence of any State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

Any absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. New and updated information is

continually added to Biotics. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

The Virginia Department of Game and Inland Fisheries maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters, which may contain information not documented in this letter. Their database may be accessed from http://www.dgif.virginia.gov/wildlife/info_map/index.html, or contact Shirl Dressler at (804) 367-6913.

DCR's Division of Chesapeake Bay Local Assistance has reviewed the Environmental Assessment and Consistency Determination for the North Base Industrial Area Development Plan at Langley Air Force Base and offers the following comments:

While Chesapeake Bay Preservation Areas are not locally designated on federal lands, this does not relieve the Air Force of its responsibilities to be consistent with the provisions of the Chesapeake Bay Preservation Area Designation and Management Regulations (Regulations), as one of the enforceable programs of Virginia's Coastal Resources Management Program (VCRMP). 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 Chesapeake Bay Preservation Areas.

In Hampton, the areas protected by the Chesapeake Bay Act, as locally implemented requiring stringent performance criteria, include: tidal wetlands, non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or tributary streams, tidal shores and a 100-foot vegetated buffer area located adjacent to and landward of the aforementioned features. Less stringent performance criteria apply to land that is contiguous to the 100-foot buffer for a distance of 100 feet in the landward direction.

The project as proposed does not appear to be within areas analogous to those protected by the Chesapeake Bay Preservation Act and Regulations for either the Proposed Action or the Poplar Road Alternative. We concur that the North Base Industrial Area Development Plan is consistent with the *Chesapeake Bay Preservation Act & Regulations*.

Thank you for the opportunity to comment on this project.

Sincerely,

A handwritten signature in dark ink, appearing to read "Robert S. Munson". The signature is fluid and cursive, with the first name "Robert" and last name "Munson" clearly distinguishable.

Robert S. Munson
Planning Bureau Manager

Fisher, John

From: Andrew Zadnik [Andrew.Zadnik@dgif.virginia.gov]
Sent: Thursday, December 01, 2005 4:48 PM
To: Fisher, John
Cc: ProjectReview.Richmond_PO.DGIF@dgif.virginia.gov
Subject: 05-280F_ESSLOG 21578_DOD_Langley Industrial Area

We do not anticipate a significant adverse impact upon Threatened and Endangered wildlife resources under our jurisdiction to occur due to this project. To minimize adverse impacts upon general wildlife, we recommend minimizing the amount of forest that must be cleared. We also 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 could include, but not be limited to, utilizing bioretention areas, and minimizing the use of curb and gutter in favor of grassed swales. These components 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. Minimizing the use of curbs also will facilitate wildlife movement across roads and provide some connectivity between any remaining natural areas.

We find this project consistent with the Fisheries Section of the VA Coastal Resources Management Program.

Thank you,

Andrew K. Zadnik
Environmental Services Section Biologist
Department of Game and Inland Fisheries
4010 West Broad Street
Richmond, VA 23230

(804) 367-2733
(804) 367-2427 (fax)



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DEQ-Office of Environmental
Impact Review

COMMONWEALTH of VIRGINIA

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

Kathleen S. Kilpatrick
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.virginia.gov

December 5, 2005

Ms Brenda W. Cook
Chief, Environmental Management Flight
1 CES/CEV
37 Sweeney Boulevard
Langley Air Force Base, Virginia 23665-2107

Re: North Base Industrial Area Development Plan
Langley AFB, City of Hampton, Virginia
VDHR File No. 2005-0700

Dear Ms Cook:

Through the Virginia Department of Environmental Quality (DEQ) we were made aware of the above referenced project.

We want to remind you that the Department of the Air Force, as a federal agency, must consider the effects of its actions on historic properties listed in or eligible for the National Register of Historic Places and provide the Advisory Council on Historic Preservation the opportunity to comment in accordance with Sections 106 of the National Historic Preservation Act, as amended, and its implementing regulation 36 CFR 800. The Section 106 review process begins when the federal agency provides a description of the undertaking and its Area of Potential Effect (APE) to the State Historic Preservation Officer (SHPO), which in Virginia is the Department of Historic Resources (DHR). For this reason we request that you consult with us directly on this undertaking. While 36 CFR 800.8 allows federal agencies to coordinate Section 106 compliance with the National Environmental Policy Act (NEPA), the agency must inform the applicable SHPO early in the process that it intends to do so. The agency must also take care that the environmental documentation prepared under NEPA does present information about historic properties and potential effects to such resources at a level of detail that allows the SHPO and other consulting parties to comment.

We look forward to working with you on this project. If you have any questions concerning our comments, please contact me at (804) 367-2323, ext. 114.

Sincerely,



Marc Holma, Architectural Historian
Office of Review and Compliance

Cc: Mr. John E. Fisher, DEQ

Administrative Services
10 Courthouse Avenue
Petersburg, VA 23803
Tel: (804) 863-1624
Fax: (804) 862-6196

Capital Region Office
2801 Kensington Ave.
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Tidewater Region Office
14415 Old Courthouse Way, 2nd Floor
Newport News, VA 23608
Tel: (757) 886-2807
Fax: (757) 886-2808

Roanoke Region Office
1030 Penmar Ave., SE
Roanoke, VA 24013
Tel: (540) 857-7585
Fax: (540) 857-7588

Winchester Region Office
107 N. Kent Street, Suite 203
Winchester, VA 22601
Tel: (540) 722-3427
Fax: (540) 722-7535



City of Hampton

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DEQ-Office of Environmental
Impact Review

DECEMBER 7, 2005

John E. Fisher
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, VA 23219

**Re: Comment on draft Environmental Assessment -
North Base Industrial Area Development Plan
Langley Air Force Base, Virginia
Project number – 05-280F**

Dear Mr. Fisher:

Planning staff has received and reviewed the draft Environmental Assessment (EA) for the North Base Industrial Area Development Plan at Langley Air Force Base (LAFB), Virginia. The project entails redeveloping an area on the north side of the runway to establish a light industrial district.

The project scope does not appear to impact the site significantly with respect to land use resources, water resources, air quality, noise, or hazardous materials. In addition, the project does not appear to be in conflict with the City's Comprehensive Plan.

The City supports the commitment by LAFB to use Leadership in Energy and Environmental Design (LEED) guidelines in the construction of new buildings (p. 2-3). NASA Langley is currently preparing plans to construct a research and office campus using LEED guidelines and may be able to provide guidance to Langley on using these guidelines for this, and other projects.

Please let me know if I can be of further assistance regarding this project (728.5233 or jfreas@hampton.gov).

Sincerely,

James Freas
City Planner
City of Hampton



JEANNE ZEIDLER, CHAIR • PAUL D. FRAIM, VICE CHAIRMAN • JAMES O. McREYNOLDS, TREASURER

ARTHUR L. COLLINS, EXECUTIVE DIRECTOR/SECRETARY

RECEIVED

DEC 14 2005

DEQ-Office of Environmental
Impact Review

December 13, 2005

Mr. John E. Fisher
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, Virginia 23219

Re: North Base Industrial Area Development Plan, LAFB
DEQ 05-280F (ENV:GEN)

Dear Mr. Fisher:

Pursuant to your request of November 15, 2005, the staff of the Hampton Roads Planning District Commission has reviewed the Environmental Assessment and Consistency Determination for the proposed North Base Industrial Area Development Plan for Langley Air Force Base. We have contacted the City of Hampton regarding the project.

Based on this review, the project is generally consistent with local and regional plans and policies. The City of Hampton has submitted additional comments to you in a separate letter (copy attached). We concur with their comments.

We appreciate the opportunity to review this project. If you have any questions, please do not hesitate to call.

Sincerely,

Arthur L. Collins
Executive Director/Secretary

MLJ:fh

Attachment

Copies: Mr. James Freas, HA

CHESAPEAKE

Clarence V. Cuffee, *City Manager*
Amar Dwarkanath, *Deputy City Manager*
Dalton S. Edge, *Mayor*
W. Joe Newman, *Council Member*
Debbie Ritter, *Council Member*

FRANKLIN

Mark S. Fetheroll, *Council Member*
Rowland L. Taylor, *City Manager*

GLOUCESTER COUNTY

John J. Adams, Sr., *Chairman*
William H. Whitley, *County Administrator*

HAMPTON

Randall A. Gilliland, *Council Member*
Ross A. Kearney, II, *Mayor*
Jesse T. Wallace, Jr., *City Manager*

ISLE OF WIGHT COUNTY

W. Douglas Caskey, *County Administrator*
Stan D. Clark, *Board Member*

JAMES CITY COUNTY

Michael J. Brown, *Chairman*
Sanford B. Wanner, *County Administrator*

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Joe S. Frank, *Mayor*
Edgar E. Maroney, *City Manager*

NORFOLK

Paul D. Fraim, *Mayor*
Donald L. Williams, *Council Member*
Regina V.K. Williams, *City Manager*
Barclay C. Winn, *Council Member*
W. Randy Wright, *Council Member*

POQUOSON

Charles W. Burgess, Jr., *City Manager*
Gordon C. Helsel, Jr., *Mayor*

PORTSMOUTH

James B. Oliver, Jr., *City Manager*
Charles B. Whitehurst, Sr., *Council Member*

SOUTHAMPTON COUNTY

Anita T. Felts, *Board Member*
Michael W. Johnson, *County Administrator*

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R. Steven Herbert, *City Manager*
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Meyera E. Oberndorf, *Mayor*
Jim Reeve, *Council Member*
Peter W. Schmidt, *Council Member*
James K. Spore, *City Manager*

WILLIAMSBURG

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Jeanne Zeidler, *Mayor*

YORK COUNTY

James O. McReynolds, *County Administrator*
Thomas G. Shepperd, Jr., *Board Member*

APPENDIX B
FEDERAL AGENCY COASTAL ZONE MANAGEMENT
ACT (CZMA) CONSISTENCY DETERMINATION

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

INTRODUCTION

This document provides the Commonwealth of Virginia with the United States Air Force's (Air Force's) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307 and 15 Code of Federal Regulations (CFR) Part 930 sub-part C. The information in this Consistency Determination is provided pursuant to 15 CFR Section 930.39.

Pursuant to Section 307 of the Coastal Zone Management Act, 16 United States Code (USC) § 1456, as amended, its implementing regulations at 15 C.F.R. Part 930, this is a Federal Consistency Determination for activities described within the Langley Air Force Base (AFB) North Base Industrial Area Development Plan Environmental Assessment (Chapter 2.0 of the document).

Proposed Federal Agency Action

The Proposed Action consists of the redevelopment of the North Base Industrial Area. The redevelopment encompasses the 1300 Area and includes the demolition and construction of new facilities. Four existing buildings (1329, 1330, 1331, and 1332) totaling 11, 550 square feet would be demolished as part of the development proposal. New construction totaling 90,089 square feet would include: Auto/Skills Center, Explosive Ordnance Disposal (EOD) Operations Center, a Vehicle Maintenance Complex, a new Hazardous Waste Storage Facility, and an Outdoor Recreational Center with recreational vehicle storage area.

The Air Force has evaluated the proposed action and alternatives for potential effects to the land or water uses or natural resources of the Commonwealth's coastal zone within the context of the statutes listed in the Virginia Coastal Resources Management Program (below).

Federal Consistency Review

Statutes addressed as part of the Virginia Coastal Resources Management Program consistency review and considered in the analysis of the proposed actions are discussed in the following table.

<i>Statute</i>	<i>Scope</i>	<i>Consistency</i>
Fisheries Management Virginia Administrative Code 28.2-200 to 28.2-713 (Virginia Marine Resources Commission) and 29.1-100 to 29.1-570 (Department of Game and Inland Fisheries) State Tributyltin (TBT) Program. VAC 3.1-249.59 to 3.1-249.62	Stresses the conservation and enhancement of finfish and shellfish resources and the promotion of commercial and recreational fisheries to maximize food production and recreational opportunities.	Fisheries would not be affected by the proposed action or alternatives
Subaqueous Lands Management Virginia Administrative Code Section 28.2-1200 to 28.2-1213	Establishes the conditions for granting or denying permits to use state-owned bottomlands based on considerations of potential effects on marine and fisheries resources, wetlands, adjacent or nearby properties, anticipated public and private benefits and water quality standards established by the Virginia Department of Environmental Quality.	No aspects of the proposed action or alternatives occur in state waters. There will be no dredge and fill operations. The proposed action or alternatives would not involve the use of state submerged lands

<i>Statute</i>	<i>Scope</i>	<i>Consistency</i>
Wetlands Management The tidal wetlands program is administered by the Virginia Marine Resources Commission; Virginia Administrative Code 28.2-1301 to 28.2-1320. The Virginia Water Protection Permit program administered by VDEQ includes protection of wetlands – both tidal and non-tidal; Virginia Administrative Code 62.1-44.15.5 and Water Quality Certification pursuant to Section 401 of the Clean Water Act.	Preserves tidal wetlands, prevent their Destruction, and accommodate economic development in a manner consistent with wetlands preservation. Also, establishes a Water Quality Certification program consistent with Section 401 of the Clean Water Act.	The proposed action would not conflict with the wetlands management program associated with the Virginia Coastal Zone Management Program. There would be no significant impacts to wetlands from the implementation of the proposed action since development would be in areas not delineated as wetlands. If the Poplar Road alternative location were chosen approximately 0.26 acres of palustrine emergent wetlands would be filled. A permit from the USACE would be applied for and wetlands impacted would likely require mitigation to prevent net loss of existing wetland acreage and function. Standard construction and demolition practices would be applied to control sedimentation and erosion during construction, renovation, and demolition, thereby avoiding secondary effects to any nearby wetlands or freshwater aquatic communities.
Dunes Management Virginia Administrative Code 28.2-1400 through 28.2-1420 (Marine Resources Commission)	Provides for protection of primary dunes as contained in the Coastal Primary Sand Dune Protection Act	The proposed action and alternatives will not adversely affect beach and shore management, nor impact any primary dunes as defined by the Coastal Primary Sand Dune Act. There are no sand-covered beaches or sand dunes in the vicinity of this project.

<i>Statute</i>	<i>Scope</i>	<i>Consistency</i>
Non-point Source Pollution Control Virginia Administrative Code Sections 10.1-560 et seq (Department of Conservation and Recreation)	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 the Department of Conservation and Recreation (Virginia Administrative Code Section 10.1-560 et seq).	The proposed action and alternatives would result in minor soil erosion and increases in turbidity from soil erosion. Best management practices for preventing and controlling erosion would be necessary and are described in Chapter 2.1 of the document.
Point Source Pollution Control Virginia Administrative Code 62.1-44.15 (State Water Control Board)	The point source program is administered by the State Water Control Board pursuant to Virginia Administrative Code Section 62.1-44.15. Point source pollution control is accomplished through the implementation of the National Pollutant Discharge Elimination System (NPDES) permit program established pursuant to Section 402 of the federal Clean Water Act and administered in Virginia as the VPDES permit program.	No point source discharges into surface water or effects to public drinking water supplies would occur from the proposed action and the alternatives.
Shoreline Sanitation Virginia Administrative Code Sections 32.1-164 through 32.1-165 (Virginia Department of Health)	Regulates the installation of septic tanks, sets standards concerning soil types suitable for septic tanks, and specifies minimum distances for placement from streams, rivers and other State Waters	Installation of septic tank systems are not contained in this proposal. All sanitary sewage will be routed to an on-base central sewage collection system and treated at the Hampton Roads Sanitation District's regional wastewater treatment facility.

<i>Statute</i>	<i>Scope</i>	<i>Consistency</i>
Air Pollution Control Virginia Administrative Code Section 10-1.1300 to 10-1.1320 (State Air Pollution Control Board)	Implements the Federal Clean Air Act to provide the legally enforceable State Implementation Plan for the attainment of the National Ambient Air Quality Standards.	The proposed action and the alternatives would not result in significant air emissions.
Coastal Lands Management Virginia Administrative Code Sections 10.1-2100 to 10.1-2114 and Virginia Administrative Code 10-20-10 et seq. (Chesapeake Bay Local Assistance Department and 84 localities in Tidewater Virginia)	A state-local cooperative program pursuant to the Chesapeake Bay Preservation Act and Chesapeake Bay Preservation and Management Regulations to regulate activities in the Chesapeake Bay Resource Management Areas The main goal of this program is protect and restore coastal resources, habitats, and species of the Commonwealth. These include, but are not limited to, wetlands, subaqueous lands and vegetation, sand dune systems, barrier islands, underwater or maritime cultural resources, riparian forested buffers, and endangered or threatened species	The proposed action and alternatives, which occurs primarily on federal property, conforms to the maximum extent practicable with the requirements of the Chesapeake Bay Preservation and Management Regulations.