
Consolidation of 726th Air Control Squadron and 74th Air Control Squadron

Draft Environmental Assessment

United States Air Force
Air Combat Command

March 2002



ACRONYMS AND ABBREVIATIONS

AADT	Annual Average Daily Traffic	MSL	Mean Sea Level
ACC	Air Combat Command	MTMC	Military Transportation Management Command
ACS	Air Control Squadron	MTW	Major Theater War
ADA	American with Disabilities Act	NAAQS	National Ambient Air Quality Standards
ADT	Average Daily Traffic	NCO	Non-Commissioned Officer
AFB	Air Force Base	NEPA	National Environmental Policy Act
AFI	Air Force Instruction	NFRAP	No Further Remedial Action Planned
AGE	Air Ground Equipment	NHPA	National Historic Preservation Act
AQCR	Air Quality Control Region	NIPRNET	Non-Classified Internet Protocol Router Network
BS	Bomb Squadron	NO ₂	Nitrogen Dioxide
CAA	Federal Clean Air Act	NO _x	Nitrogen Oxides
CATM	Combat Arms Training	NPDES	National Pollution Discharge Elimination System
CCF	Central Collection Facility	NRHP	National Register of Historic Places
CEQ	Council on Environmental Quality	O&M	Operation and Maintenance
CEQA	California Environmental Quality Act	O ₃	Ozone
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	OSHA	Occupational Safety and Health Act
CFR	Code of Federal Regulations	Pb	Lead
CINC	Commanders-in-Chief	PM ₁₀	Particulate Matter equal to or less than 10 microns
CO	Carbon Monoxide	POV	Privately-Owned Vehicle
CONOPS	Concept of Operations	PTE	Potential to Emit
CRC	Control and Reporting Center	RCRA	Resource Conservation and Recovery Act
CRE	Control and Reporting Element	ROI	Region of Influence
CSAF	Chief of Staff Air Force	SATCOM	Satellite Communications
CZMA	Coastal Zone Management Act	SFS	Security Forces Squadron
dB	Decibel	SH	State Highway
DD	Decision Document	SHPO	State Historic Preservation Office
DNL	Day-Night Average Sound Level	SIP	State Implementation Plan
DoD	Department of Defense	SIPRNET	Secret Internet Protocol Router Network
EA	Environmental Assessment	SO ₂	Sulfur Dioxide
EAF	Expeditionary Aerospace Force	SCAQMD	Southern California Air Quality Management District
EIAP	Environmental Impact Analysis Process	SWPPP	Storm Water Pollution Prevention Plan
EPCRA	Emergency Planning and Community Right-to-Know Act	TADIL	Tactical Data Information Link
ERP	Environmental Restoration Program	TDS	Total Dissolved Solids
ESA	Endangered Species Act	TSDF	Treatment, Storage and Disposal Facility
FY	Fiscal Year	USACE	United States Army Corps of Engineers
GOV	Government-Owned Vehicle	USDCESA	United States Dept. of Commerce, Economics and Statistics Administration
GSE	Ground Support Equipment	USEPA	United States Environmental Protection Agency
HAZMAT	Hazardous Materials	USFWS	United States Fish and Wildlife Service
HMMP	Hazardous Materials Management Process	UTC	Unit Type Code
I	Interstate Highway	VDEQ	Virginia Department of Environmental Quality
IDEQ	Idaho Department of Environmental Quality	VOC	Volatile Organic Compound
JFACC	Joint Forces Air Component Commander	VPDES	Virginia Pollutant Discharge Elimination System
LOS	Level of Service	WG	Wing
LTA	Lighter-Than-Air		
MAP	Management Action Plan		
MFH	Military Family Housing		
MILCON	Military Construction		

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Assessment



United States Air Force
Air Combat Command
Langley AFB, Virginia

March 2002

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1 **EXECUTIVE SUMMARY**

2 This Environmental Assessment (EA) describes the potential environmental consequences
3 resulting from a proposal to consolidate the 726th Air Control Squadron (ACS) currently located
4 at Mountain Home Air Force Base (AFB) in Idaho and the 74th ACS currently located at Langley
5 AFB, Virginia.

6 **ENVIRONMENTAL IMPACT ANALYSIS PROCESS**

7 This EA has been prepared by the United States Air Force (Air Force) in accordance with the
8 requirements of the National Environmental Policy Act (NEPA) of 1969, the Council on
9 Environmental Quality (CEQ) regulations implementing NEPA, and Air Force Instruction (AFI)
10 32-7061 (*The Environmental Impact Analysis Process*, 32 Code of Federal Regulations [CFR] 989).

11 **PURPOSE AND NEED FOR ACTION**

12 To better meet Expeditionary Aerospace Force (EAF) requirements, Commander Air Combat
13 Command (ACC) has given approval to upgrade the 726th ACS mission from a Control and
14 Reporting Element (CRE) to a Control and Reporting Center (CRC). The EAF provides a more
15 capable, tailored, and trained aerospace force to meet theater Commanders-in-Chief (CINCs)
16 requirements across the full spectrum of operations while offering greater integration of
17 Reserve Component forces. The EAF efforts provide for a more structured and predictable
18 approach to scheduling of personnel assignments and improve the ability of the Air Force to
19 support National Security.

20 The purpose of this action is to undertake a new ACS mission to train, organize, and equip a
21 single, consolidated Control and Reporting Center (CRC) with three combat mission-ready
22 crews, two mission planning cells, two deployable radar cells, and supporting communications
23 and maintenance personnel. To accomplish this goal, the number of Air Control Squadrons in
24 ACC would be reduced from four to three through the consolidation of the 726th ACS at
25 Mountain Home AFB, Idaho and the 74th ACS at Langley AFB, Virginia. The merger of the
26 726th ACS and the 74th ACS would consolidate limited equipment and manpower and would
27 provide modular, smaller, and lighter unit type codes (UTCs) in support of Defense Planning
28 Guidance/Annual Planning and Program Guidance, major theater war (MTW), and EAF
29 deployment scenarios.

30 **PROPOSED ACTION AND ALTERNATIVES**

31 The proposed action would combine the authorizations from the 74th ACS at Langley AFB,
32 Virginia, and those of the 726th ACS at Mountain Home AFB. This would result in an increase
33 of 245 authorizations at Mountain Home AFB by increasing the 726th ACS authorizations from
34 125 to 370. The 245 new authorizations would be comprised of 125 relocated from Langley AFB
35 (the 74th ACS) and 120 new positions.

1 The existing 726th ACS facilities (Buildings 1788 and 1790) are sized for the current 125
2 authorizations. The existing ACS facilities comprise 30,500 square feet in three facilities.
3 Building 1788 contains 22,100 square feet used for operations, maintenance and training
4 functions and Building 1790 contains 8,100 square feet used for aircraft ground equipment
5 (AGE) maintenance, vehicle maintenance and supply functions. HAZMAT storage comprises
6 an additional 300 square feet.

7 Under the Proposed Action, accommodating an additional 245 authorizations would require
8 new construction and reorganizing into shift work. The supply function would also expand
9 resulting in increased storage and maintenance requirements and associated equipment.
10 Computer, communications, radio, and radar maintenance functions would almost double in
11 size. Mountain Home AFB does not have the facilities available to support the proposed
12 expansion of the 726th ACS, thus, the construction of new facilities would be required.

13 An alternative (Langley AFB Alternative) that calls for the relocation of the 125 authorizations
14 of the 726th ACS located at Mountain Home AFB with 120 new authorizations to the 74th ACS at
15 Langley AFB was also examined.

16 The No-Action Alternative would leave existing ACS facilities at current staffing levels with
17 continuing stress on the existing facilities and personnel.

18 **SUMMARY OF ENVIRONMENTAL CONSEQUENCES**

19 It is expected that there would be negligible impacts associated with implementation of the
20 Proposed Action at Mountain Home AFB. Minor beneficial effects to local and regional
21 employment can be expected. Implementation of the Langley AFB Alternative is expected to
22 induce adverse, but not significant, impacts in the areas of cultural resources and floodplains.
23 Small beneficial impacts are also expected for local and regional employment under the Langley
24 AFB Alternative (see Table ES-1).

1 **Table ES-1. Summary of Potential Environmental Consequences of the Proposed Action, Langley AFB Alternative, and No-Action Alternative**

AIR CONTROL SQUADRON (ACS) CONSOLIDATION RESOURCE IMPACT SUMMARY			
<i>Resource</i>	<i>Proposed Action at Mountain Home AFB</i>	<i>Langley AFB Alternative</i>	<i>No-Action Alternative</i>
Socioeconomics	Peak employment increase of 351 jobs: 242 active duty, 67 construction, 42 secondary. Long-term employment increase of 284 jobs. Population increase of 538 persons with demand for 206 housing units.	Peak employment increase of 353 jobs: 242 active duty, 69 construction, 42 secondary. Long-term employment increase of 284 jobs. Population increase of 538 persons with demand for 206 housing units.	No change in employment, population or demand for additional housing.
Transportation	Increase of 351 short-term and 284 long-term vehicle trips during a.m. and p.m. peak periods. Increased traffic at I-84B/SH 67 (Airbase Road) intersection.	Increase of 353 short-term and 284 long-term vehicle trips during a.m. and p.m. peak periods. Light than Air (LTA) bypass road would be built to reduce traffic flow through base housing area.	No change in vehicle trips, traffic flow, or capacity.
Hazardous Materials and Waste Management	Potential use of hazardous materials and hazardous waste generation. No Environmental Restoration Program (ERP) sites at proposed location.	Potential use of hazardous materials and hazardous waste generation. Proposed project site at Langley near but not co-located with 2 ERP sites.	No change in use of hazardous materials or generation of hazardous waste.
Noise	1 to 3 dB increases during construction phase. Noise from operations and maintenance would have negligible impacts. No off-base noise impacts.	1 to 3 dB increases in during construction phase. Noise from operations and maintenance would have negligible impacts. No off-base noise impacts.	No change in current operations and no change in associated noise levels.
Air Quality	Mountain Home AFB is located in an attainment area for criteria pollutants; no formal conformity determination required. Proposed action emissions would contribute less than 0.01% of regional emissions.	Langley AFB located in maintenance area for ozone. However construction and operational emissions would not exceed <i>de minimis</i> levels, would not be regionally significant, and therefore would not require formal conformity determination. Construction emissions greater than the proposed action due to LTA by-pass road construction and fill dirt delivery. Emissions would contribute less than 0.01% of regional emissions.	No change in current operations; no changes in air quality.
Water Resources	Disturbance to less than three acres of developed and undeveloped area. Not within floodplain.	Disturbance of about five acres within the 100-year floodplain. Proposed activities could affect the coastal zone; EA serves as coastal consistency determination.	No change in operations and no change in water resources or to the coastal zone.
Biological Resources	Impacts to wildlife and native habitats would be negligible. No wetlands would be affected. No impacts to federally listed threatened or endangered species or critical habitat.	Impacts to wildlife and native habitats would be negligible. Finding of No Practicable Alternative required due to proposed location in floodplain. No impact to federally listed threatened or endangered species or critical habitat.	No change to biological resources.
Cultural Resources	No impacts to historic architectural resources or archaeological resources; area of proposed development has been previously surveyed. No impacts to traditional resources.	Adverse impacts to historic architectural resources could result from Langley Historic District greenhouse relocation. Construction would be done in consultation with Virginia Department of Historic Resources. No impacts to traditional resources.	No change to historic architectural resources, archaeological resources, or traditional resources.

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1.0 PURPOSE AND NEED

1.1 INTRODUCTION

The United States Air Force (Air Force) proposes to consolidate the 726th Air Control Squadron (ACS) located at Mountain Home Air Force Base (AFB), Idaho and the 74th ACS (currently located at Langley AFB, Virginia) at Mountain Home AFB. An alternative to the proposed action would be consolidation of the two existing squadrons at Langley AFB, Virginia. See Figure 1-1. This Environmental Assessment (EA) has been prepared to analyze the potential environmental consequences associated with the proposed action, the action alternative, and no action alternative in accordance with the requirements of the National Environmental Policy Act (NEPA) (42 United States Code 4321 *et seq.*). The Langley AFB alternative could involve potential impacts to the coastal zone. Thus, this document also provides an evaluation of potential coastal zone impacts pursuant to National Oceanic and Atmospheric Administration Coastal Zone Management regulations (15 Code of Federal Regulations [CFR] 930). Consequently, this EA serves as coastal consistency determination documentation with respect to implementing the action alternative at Langley AFB. In addition, this document was prepared in accordance with the following:

- Regulations established by the Council on Environmental Quality (CEQ) (40 CFR 1500-1508)
- Air Force Instruction (AFI) 32-7061 (The Environmental Impact Analysis Process [EIAP], 32 Code of Federal Regulations [CFR] 989), which implements Section 102 (2) of NEPA

1.2 BACKGROUND

The Air Force currently has four Air Control Squadrons within the Air Combat Command (ACC) located at the following installations: (1) the 726th ACS at Mountain Home AFB, Idaho; (2) the 74th ACS at Langley AFB, Virginia; (3) the 729th ACS at Hill AFB, Utah; and (4) the 728th ACS at Eglin AFB, Florida. The ACS provides the Joint Forces Air Component Commander (JFACC) with a multiple, tactical data information link (TADIL) capability and decentralized air battle execution functions such as airspace management, threat tracking, targeting, and weapons control capability.

The 726th ACS at Mountain Home AFB and the 74th ACS at Langley AFB each utilize an existing ACS complex containing operations, administrative, maintenance and storage facilities, and associated radar, communications, and support infrastructure. Existing aircraft operations and training of non-ACS military units in the airspace and ranges associated with Mountain Home AFB and Langley AFB provide the necessary training environment to meet ACS mission requirements and readiness for deployment.

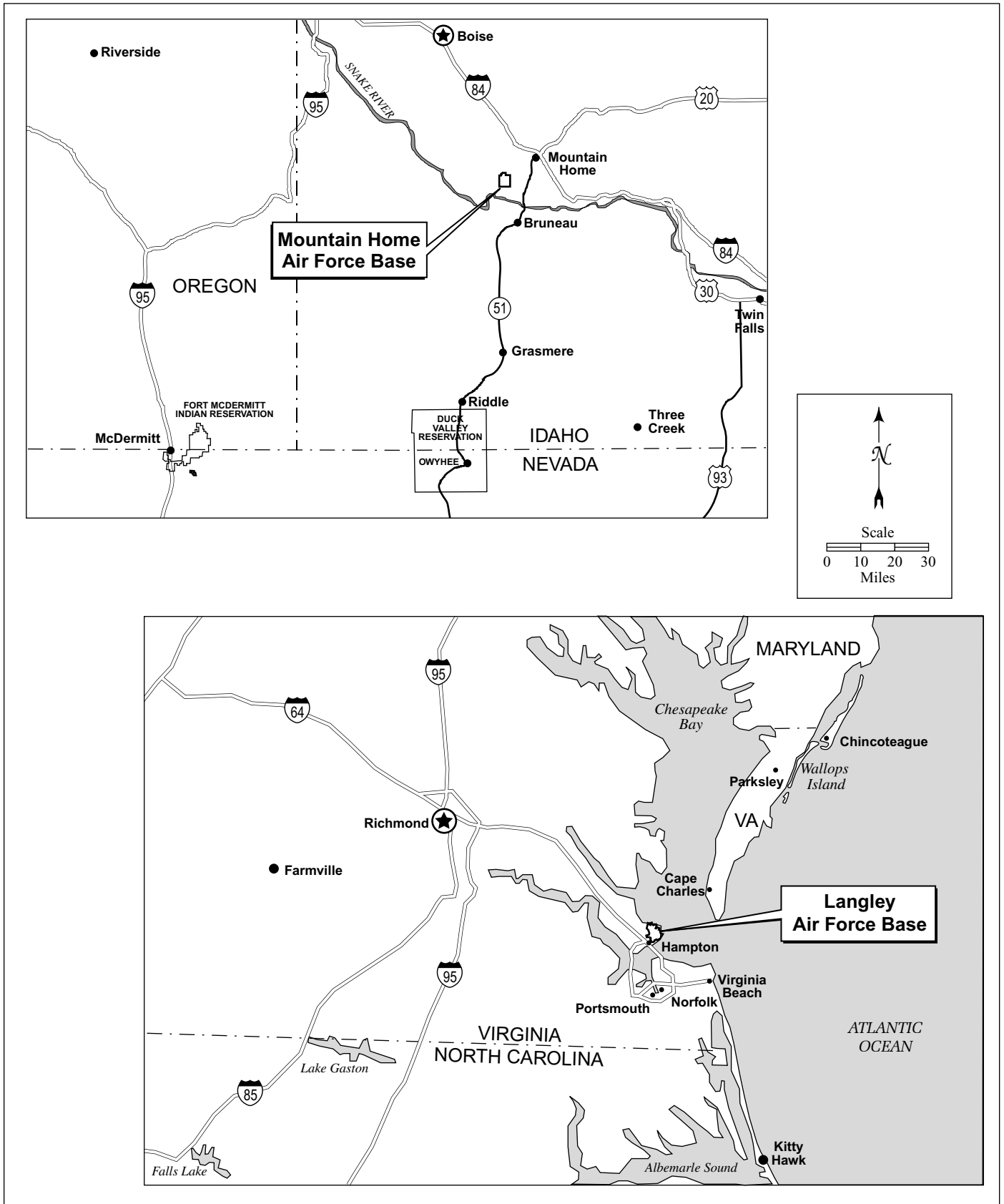


Figure 1-1. Regional Location of Mountain Home AFB, Idaho, and Langley AFB, Virginia

1.3 PURPOSE AND NEED

The purpose of this action is to undertake a new ACS mission to train, organize, and equip a single, consolidated Control and Reporting Center (CRC) with three combat mission-ready crews, two mission planning cells, two deployable radar cells, and supporting communications and maintenance personnel. To accomplish this goal, the number of Air Control Squadrons in ACC would be reduced from four to three through the consolidation of the 726th ACS and the 74th ACS.

The consolidation is needed to provide a more capable, tailored, and trained aerospace force to meet theater Commanders-in-Chief (CINCs) requirements across the full spectrum of operations while offering greater integration of Reserve Component forces. In addition, the consolidation would provide a more structured and predictable approach to scheduling, offering greater stability to military personnel. The merger of the 726th ACS and the 74th ACS would consolidate limited equipment and manpower. Such a merger would also provide modular, smaller, and lighter unit type codes (UTCs) in support of Defense Planning Guidance/Annual Planning and Program Guidance, major theater war (MTW), and Expeditionary Aerospace Force (EAF) deployment scenarios.

The Control and Reporting Center (CRC) consolidation is needed to more efficiently apply personnel and equipment to Expeditionary Aerospace Force deployment scenarios.

After consolidation, the CRC would provide the Joint Forces Air Component Commander (JFACC) with the following capabilities:

- Radars and/or a theater air defense-missile tracker system to transmit information on cruise-type and theater ballistic missile threats via tactical information data link (TADIL) operations.
- Wide-area detection, tracking, combat identification, reporting, and warning of aircraft and missile threats.
- Decentralized air battle execution including airspace management, time critical targeting, army air defense artillery and naval surface vessel interface.
- Weapons control capability including close air support, air launched offensive counter air/defensive counter air, combat search and rescue and airborne reconnaissance.

1.4 PUBLIC AND AGENCY INVOLVEMENT

In early November 2001, the Air Force contacted local, state, tribal, and federal agencies to inform them of the Air Force intent to prepare an Environmental Assessment for the proposed consolidation of the 726th and 74th ACSs. Through this scoping process the Air Force obtained information regarding pertinent environmental issues the agencies felt should be addressed in the environmental impact analysis. Appendix A contains a list of agencies contacted by the Air Force.

1.0 Purpose and Need

1 Agency consultations were undertaken with regard to cultural resources to comply with the
2 National Historic Preservation Act (NHPA) and regarding biological resources, primarily for
3 compliance with the Endangered Species Act (ESA).

4 The preservation of cultural resources falls under the purview of the State Historic Preservation
5 Office (SHPO), as mandated by the NHPA and its implementing regulations (36 CFR 800).
6 Under the law and regulations, federal agencies are generally required to ensure that actions
7 they take do not adversely affect significant cultural resources such as districts, sites, buildings,
8 structures, or objects of national, state, or local
9 significance in American history, architecture,
10 archaeology, or culture. Thus, federal agencies must
11 determine what resources of significance might be
12 affected by proposed actions. The SHPO reviews and
13 comments on findings and identifies the need for any
14 mitigation measures that may be necessary to minimize
15 adverse impacts.

*Consultations for this Environmental
Assessment include agencies
responsible for administering the
National Historic Preservation Act,
the Endangered Species Act, and the
Coastal Zone Management Act.*

16 The Endangered Species Act (ESA) involves consultation with the Department of the Interior
17 (delegated to the United States Fish and Wildlife Service [USFWS]) in cases where a federal
18 action could affect listed threatened or endangered species, species proposed for listing, or
19 species that could be candidates for listing. The primary focus of this consultation is to request
20 a determination of whether any of these species occur in the region of influence of the proposed
21 action. If any of these species are present, a determination of the potentially adverse effects on
22 the species is made. Should no species protected by the ESA be affected by the proposed action,
23 no additional action is required. State agencies are also responsible for those species listed by
24 the appropriate state.

25 The United States Air Force has consulted with the USFWS and SHPO in the State of Idaho and
26 the Commonwealth of Virginia and with the respective state departments having responsibility
27 for environmental quality/compliance and management of fish, wildlife, and state species of
28 concern. In addition, because Langley AFB is located in the Coastal Zone, Commonwealth of
29 Virginia policies related to the federal Coastal Zone Management Act (CZMA) have been
30 addressed. The CZMA was enacted to develop a national coastal management program that
31 comprehensively manages and balances competing uses of and impacts to any coastal use or
32 resource. The CZMA federal consistency requirement (CZMA section 307) mandates that
33 federal agency activities be consistent to the maximum extent practicable with the enforceable
34 policies of a state management program. The federal consistency requirement applies when
35 any federal activity, regardless of location, affects any land or water or natural resource of the
36 coastal zone. The question of whether a specific federal agency activity may affect any natural
37 resources, land use, or water within the coastal zone is determined by the federal agency.

38 The Virginia Department of Environmental Quality (VDEQ) oversees activities in the coastal
39 zone of the commonwealth through a number of enforceable programs. In reviewing proposed

1 actions, VDEQ may require agencies to coordinate with its specific divisions or other agencies
 2 for consultation or to obtain permits; they also may comment on environmental impacts and
 3 mitigation. Enforceable programs and policies of VDEQ pertain to fisheries management, sub-
 4 aqueous lands management, wetlands management, dunes management, non-point source
 5 pollution control, point source pollution control, shoreline sanitation, air pollution control, and
 6 coastal lands management.

7 Table 1-1 indicates the permits and consultations anticipated for implementing the proposed
 8 action or action alternative.

Table 1-1. Required Permits and Consultation

<i>Proposed Action (Mountain Home AFB, Idaho)</i>	<i>Action Alternative (Langley AFB, Virginia)</i>
ESA Consultation	ESA Consultation
SHPO Concurrence with Air Force findings	SHPO Concurrence with Air Force findings
NPDES Permit (Clean Water Act) <i>See Note 1</i>	VPDES Permit (Clean Water Act)
	USACE Section 404 Permit
	Coastal Zone Consistency Determination (VDEQ)
<i>Note 1: Should construction commence after March, 2002, a NPDES permit would be required.</i>	

9 To facilitate public involvement in this project, the Air Force prepared and issued a Notice of
 10 Availability for this draft EA. A list of agencies contacted is contained in Appendix A.
 11 Comments received from the public and agencies will be addressed in the final EA.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

This section describes the following potential project scenarios:

- Proposed Action - consolidation of the 726th ACS (currently at Mountain Home AFB, Idaho) and the 74th ACS (currently stationed at Langley AFB, Virginia) at Mountain Home AFB, Idaho.
- Langley AFB Alternative - consolidation of the 74th ACS and 726th ACS at Langley AFB, Virginia.
- No-Action Alternative - each squadron remains at its current location as currently configured and continues its present mission.

2.1 PROPOSED ACTION

HQ ACC currently has four Air Control Squadrons and the proposed action will consolidate two of them. The two current locations and their respective facilities assessed here are best suited to accomplish training and also provide opportunities for expansion to meet revised manpower authorizations.

The proposed action would combine the 726th ACS (Mountain Home AFB, Idaho) and 74th ACS (Langley AFB, Virginia) at Mountain Home AFB. This would result in an increase of 245 manpower authorizations at Mountain Home AFB by increasing the authorizations of the 726th ACS from 125 to 370. The 245 new authorizations would be comprised of 125 re-located from Langley AFB (the 74th ACS) and 120 new positions (United States Air Force, 2001).

Figure 2-1 illustrates the location of Mountain Home AFB within its regional context and the general location of the proposed project site at the base. Figure 2-2 shows the site proposed for the project including the existing ACS complex (Buildings 1788 and 1790) and locations proposed for new facilities and parking areas.

ACS consolidation at Mountain Home AFB involves an increase of 245 authorizations from 125 to 370 and construction of special operations facility (10,400 square feet), vehicle maintenance facility (22,000 square feet), and supply storage facility (5,000 square feet).

The existing 726th ACS facilities comprise 30,500 square feet and are sized to accommodate the current 125 authorizations. Accommodating an additional 245 authorizations would require new construction and reorganizing into shift work. The supply function would expand resulting in an increase in storage and maintenance requirements and there would be additional associated equipment. Computer, communications, radio and radar maintenance functions would almost double in size. New facilities providing 36,200 square feet of additional space would need to be constructed at Mountain Home AFB to support the proposed expansion. See Table 2-1.

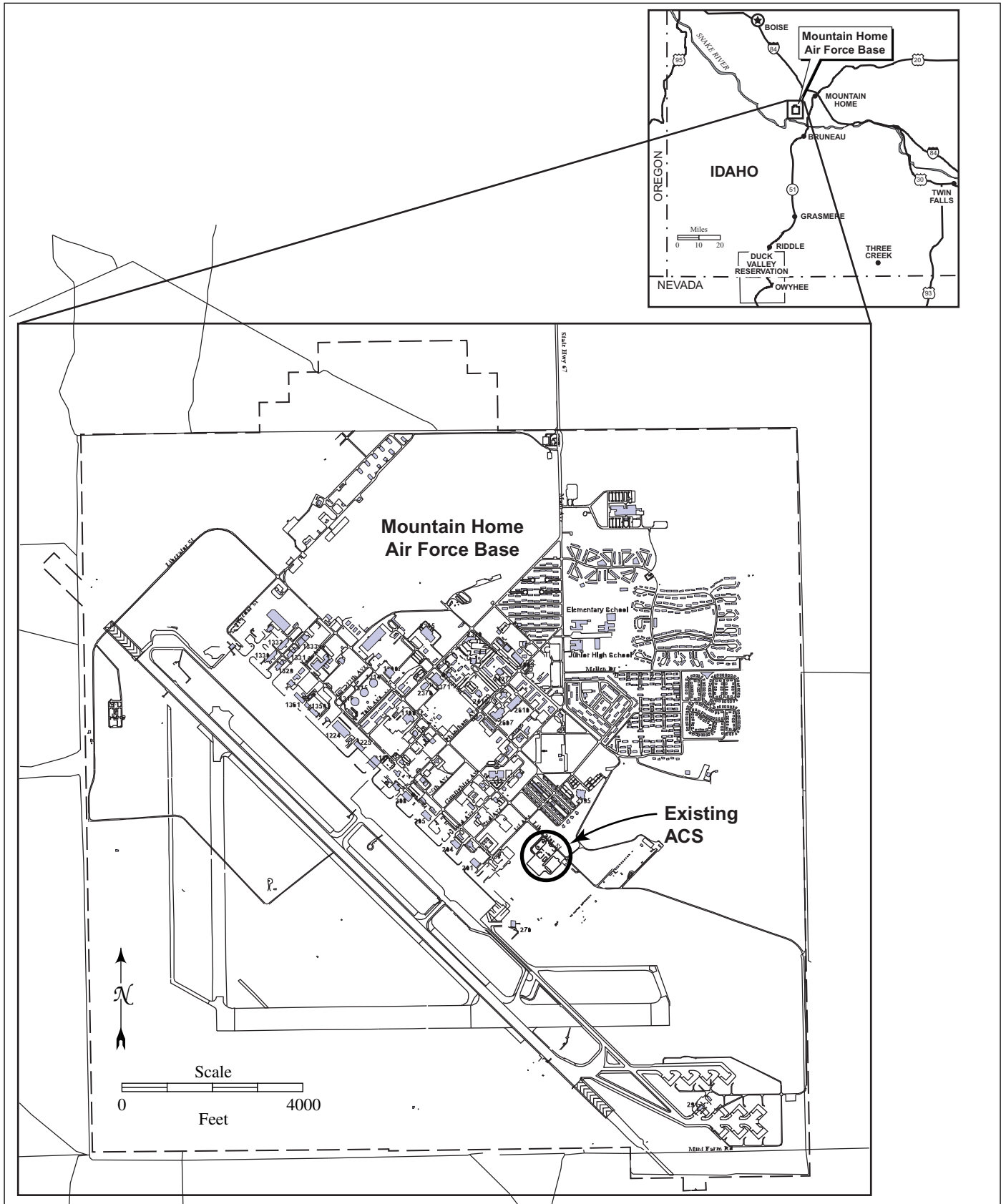


Figure 2-1. Existing ACS Facility at Mountain Home AFB, Idaho

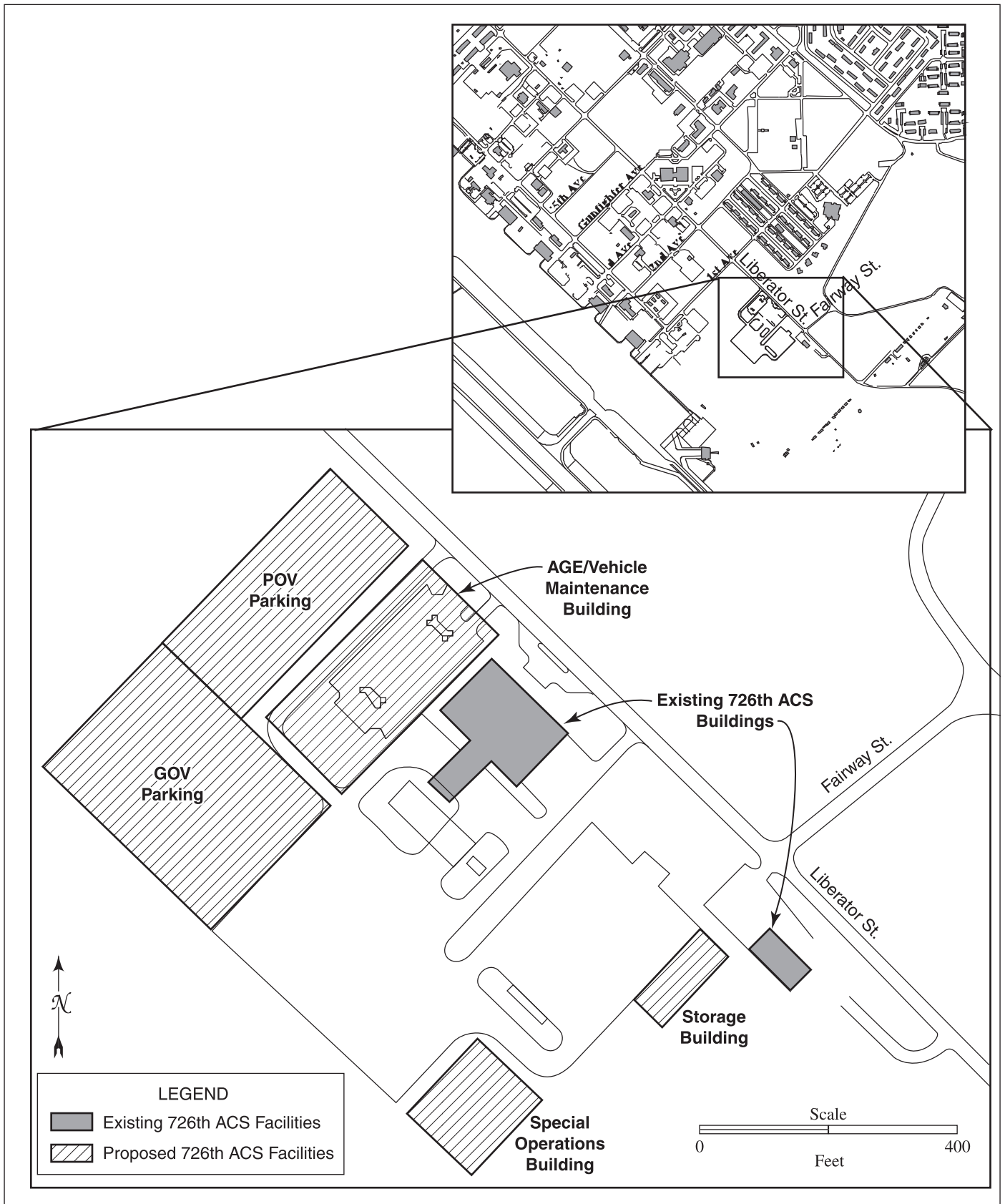


Figure 2-2. Existing and Proposed ACS Facilities at Mountain Home AFB, Idaho

1

Table 2-1. Total Personnel and Space Requirements at Mountain Home AFB, Idaho

<i>Function</i>	<i>Number of Personnel</i>	<i>Space Requirement (square feet)</i>
Operations	137	18,500
Radar Maintenance	20	3,000
Radio Maintenance	26	2,000
SATCOM Maintenance	38	2,000
Communication Operations Maintenance	73	4,000
AGE Maintenance	40	7,200
Vehicle Maintenance	16	14,000
Supply Storage Warehouse	6	10,000
Services Warehouse	14	5,000
HAZMAT Storage	0	1,000
Total	370	66,700
Heavy Vehicle Parking		150 parking spaces

2 The following aspects of the proposed action are described below: (1) the proposed reuse of
3 existing facilities in the 726th ACS complex; and (2) construction of new facilities and support
4 infrastructure, operations and maintenance functions, and projected personnel levels.

5 **2.1.1 Facility Use and Construction**

6 The following functional changes are proposed within the existing ACS complex facilities:

- 7 • Move supply, air ground equipment (AGE), and vehicle maintenance functions from
8 Buildings 1788 and 1790 to proposed new facilities within the ACS complex.
- 9 • Remove existing corrosion control equipment. Future ACS vehicles will be painted at
10 contract facilities located off-base.
- 11 • Utilize vacated space in buildings 1788 and 1790 for expansion of computer,
12 communications, radio and radar maintenance functions.
- 13 • Use the small electronic maintenance bays in building 1788 for mission planning with
14 aircrews, which is required to meet new Concept of Operations (CONOPs) mission
15 planning requirements.
- 16 • Store an additional 200 weapons that would accompany the additional personnel in the
17 vault in Building 1788. This vault is already used for storage of weapons for the 726th
18 ACS and has adequate additional capacity.

- 1 • Make minor alterations to buildings 1788 and 1790, which may be required after further
2 planning.

3 With the continued use of the approximately 30,500 square feet of current facilities in the ACS
4 complex, an additional 36,200 square feet of space would be required. The projected total
5 requirement for all functions, including existing space, is therefore approximately 66,700 square
6 feet.

7 Table 2-2 lists the facilities proposed for the ACS complex expansion. Proposed new facilities
8 include a special operations facility (10,400 square feet); supply storage facility (5,000 square
9 feet); multi-bay AGE/vehicle maintenance facility (22,000 square feet); tech pad improvements
10 to the radio tower; renovation of the radar maintenance facility; and force protection to comply
11 with minimum DoD standards. The existing government-owned vehicle (GOV) parking lot has
12 75 parking spaces. This would be expanded to 150 spaces to accommodate the increase in the
13 vehicle fleet from 101 two-ton trucks to 168 five-ton trucks. The privately owned vehicle (POV)
14 parking lot would also be expanded to accommodate between 200 and 250 vehicles.

15 In addition to the new facilities, the 726th ACS would have an increased requirement for
16 communication and logistics equipment. These additions and improvements would include
17 telephone service, computer equipment, and general equipment such as toolboxes, portable
18 lifts, a tire machine, benches, jacks, and storage racks.

Table 2-2. Required Facilities at Mountain Home AFB, Idaho

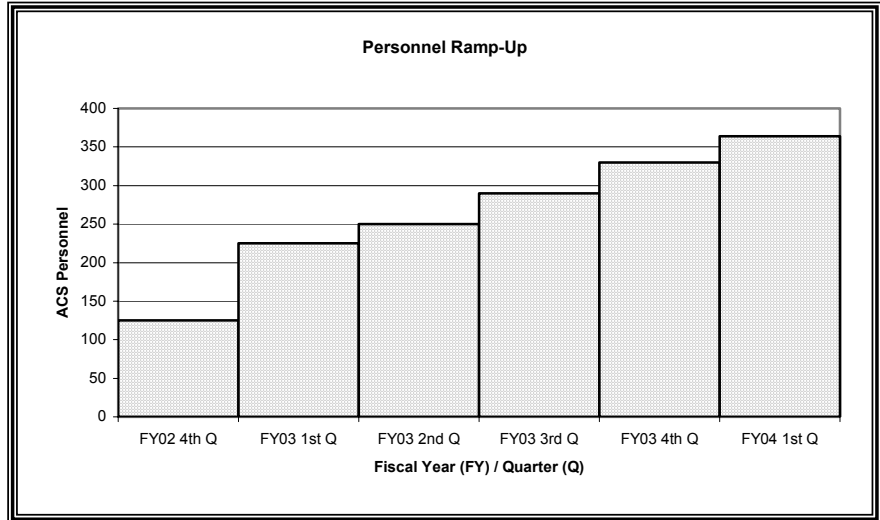
726th ACS Complex <i>Buildings:</i> Special Operations facility, supply storage, and AGE/vehicle maintenance facility <i>Other Facilities:</i> Tech pad improvements/radio tower, and renovate radar maintenance facility
Expansion of GOV and POV parking lots
Support Facilities
Utilities (electrical, water, sewer, communications and fire protection), pavement, and site improvements

19 **2.1.2 Operations, Maintenance and Personnel**

20 No change in aircraft operations would be associated with implementation of the proposed
21 action. Proposed changes in authorizations would begin in the fourth quarter of fiscal year 2002
22 (FY02/4) with the addition of 100 military personnel to the existing 125 at the 726th ACS at
23 Mountain Home AFB. In FY03/01, an additional 25 personnel would be added, and in the
24 remainder of FY03 an additional 40 would be added each quarter, respectively, bringing total
25 authorizations to 370 in FY03/4. This would include 20 officers and 350 enlisted military
26 personnel. This allocation could vary depending upon when facilities are actually completed,

1 since manpower would not
 2 be increased until facilities
 3 can accommodate the
 4 increase in personnel.

5 The units would deploy for
 6 training approximately one
 7 week every quarter. Every
 8 15 months, approximately
 9 half of the unit would
 10 participate in overseas
 11 operations for 120 days total.
 12 This amount may decrease
 13 over time.



14 **2.2 LANGLEY AFB ALTERNATIVE**

15 This alternative would combine the 74th ACS (Langley AFB) and the 726th ACS (Mountain
 16 Home AFB) at Langley AFB. The alternative calls for the relocation of the 125 authorizations of
 18 the 726th ACS located at Mountain Home AFB with 120 new
 20 authorizations to the 74th ACS at Langley AFB. This would
 22 result in an increase of 245 authorizations at Langley AFB.
 24 The Langley AFB Alternative would consolidate limited
 26 equipment and manpower in the 74th ACS. Details
 28 regarding the project are derived from the *Air Control
 30 Squadron Beddown Site Survey at Langley AFB, VA*, published
 32 by the Air Force (United States Air Force, 1998).

ACS consolidation at Langley AFB involves an increase of 245 authorizations from 125 to 370, construction of a new ACS facility, renovation of the existing ACS facility, and construction of a Lighter-than-Air by-pass road.

33 **2.2.1 Facility Use and Construction**

34 The current 74th ACS facilities are sized for 125 authorizations. Accommodating additional
 35 authorizations would be difficult without new construction and reorganizing into shift work.
 36 Maintenance area for satellite communications (SATCOM), ground radio maintenance,
 37 computer maintenance, radar maintenance, and other related functions for the work centers
 38 would be required as well as sufficient covered storage space. No permanent excess facilities
 39 are currently available on base to support long-term requirements. Therefore, a new mission
 40 military construction (MILCON) facility project would be required to provide a permanent
 41 facility. Additionally, it is estimated that the existing ACS facility would require
 42 reconfiguration and a by-pass road (designed to relieve traffic in the Lighter-than-Air [LTA]
 43 area) is also proposed as part of the project. The proposed sites for both the new ACS facilities
 44 and the LTA by-pass road lie within the 100-year floodplain. Construction of the new facilities
 45 would require the introduction of fill material to elevate the building sites above inundation
 46 levels.

1 Notional siting of this new ACS complex would be between the primary facility of the 74th
2 ACS, the Combat Arms Training (CATM)/firing range, Building 1004, and the existing woods.
3 Figure 2-3 illustrates the location of Langley AFB within its regional context and the general
4 location of the proposed project site at the base. Figure 2-4 shows the site proposed for the
5 project including the existing ACS complex and proposed location of new facilities and parking
6 areas.

7 The vehicle fleet would increase from 80 to approximately 147 trucks and vans. The 74th ACS
8 has limited vehicle maintenance space to accommodate an increase in vehicles. The current
9 vehicle maintenance facility must be enlarged to accommodate the increase in vehicles. New
10 facilities are outlined in Table 2-3.

Table 2-3. Required Facilities at Langley AFB, Virginia

74 th ACS Complex
Construct new ACS facility
Renovate existing ACS facility
Support Facilities
By-pass road construction
Miscellaneous Operation & Maintenance (O&M) projects

11 The O&M projects referred to above in Table 2-3 would include the increased requirement for
12 communication and logistics equipment. Fiber and copper cable would need to be run to the
13 new facility to meet the requirements of the non-classified internet protocol router network
14 (NIPRNET), secret internet protocol router network (SIPRNET) and voice and secure voice
15 transmission. There would be additional requirements for computer equipment as well as
16 toolboxes, portable lifts, tire machine, benches, jacks, and storage racks.

17 **2.2.2 Operations, Maintenance, and Personnel**

18 No change in aircraft operations would be associated with implementation of the Langley AFB
19 Alternative. The augmentation of existing personnel of the 74th ACS would occur on a schedule
20 similar to that outlined in section 2.1.2.

21 **2.3 NO-ACTION ALTERNATIVE**

22 The No-Action Alternative would retain the 74th ACS and the 726th ACS at their present
23 manning authorizations as CREs and current locations but would not provide the changes
24 necessary to implement the Chief of Staff Sir Force (CSAF) vision for the EAF. Units would not
25 be able to support the EAF taskings and/or CINC contingencies/MTW requirements. This
26 would defeat the purpose of the proposed action, i.e., redesign and improve CRC and CRE
27 UTCs to better meet the EAF requirements.

28

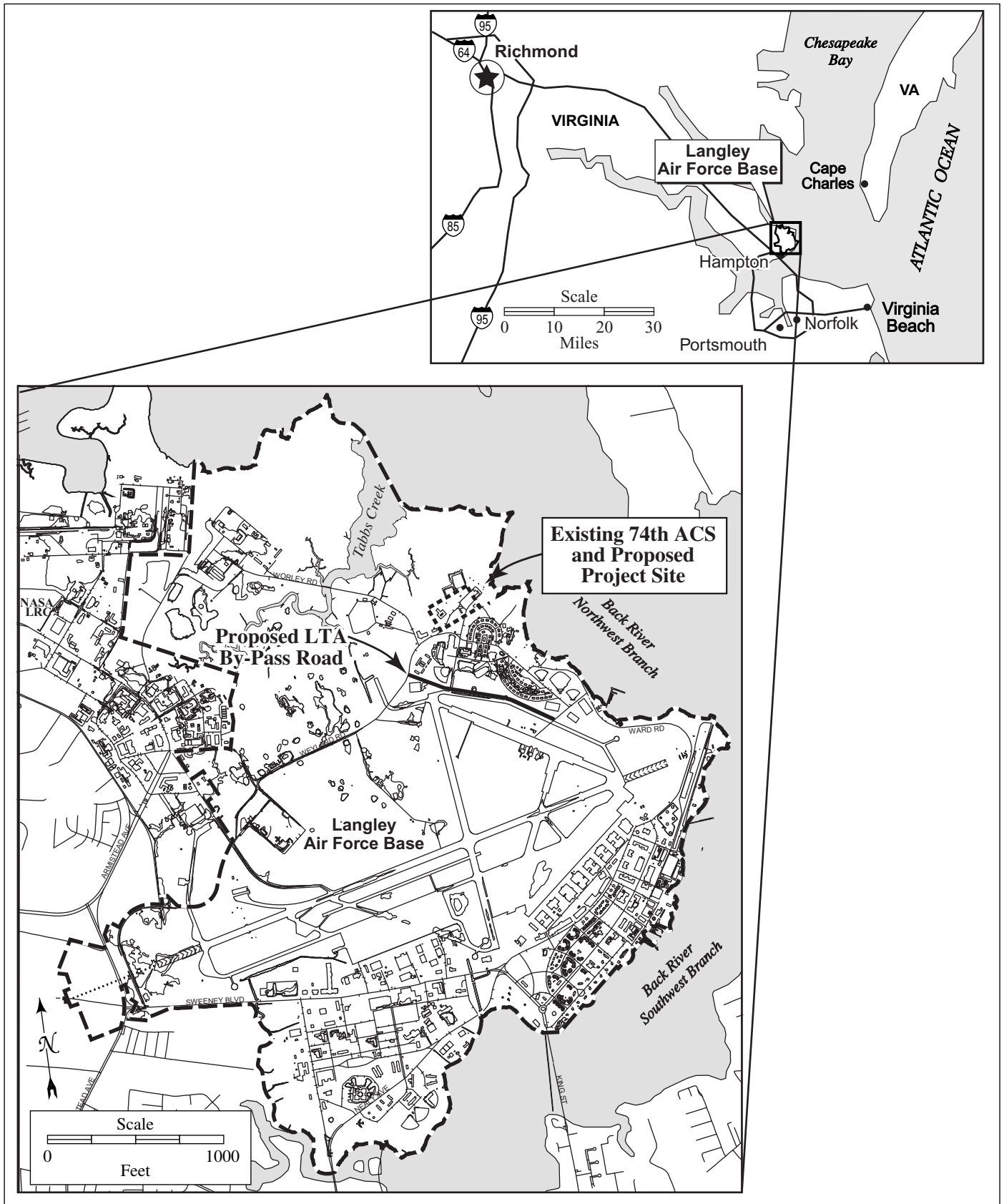


Figure 2-3. Existing ACS Facility at Langley AFB, Virginia

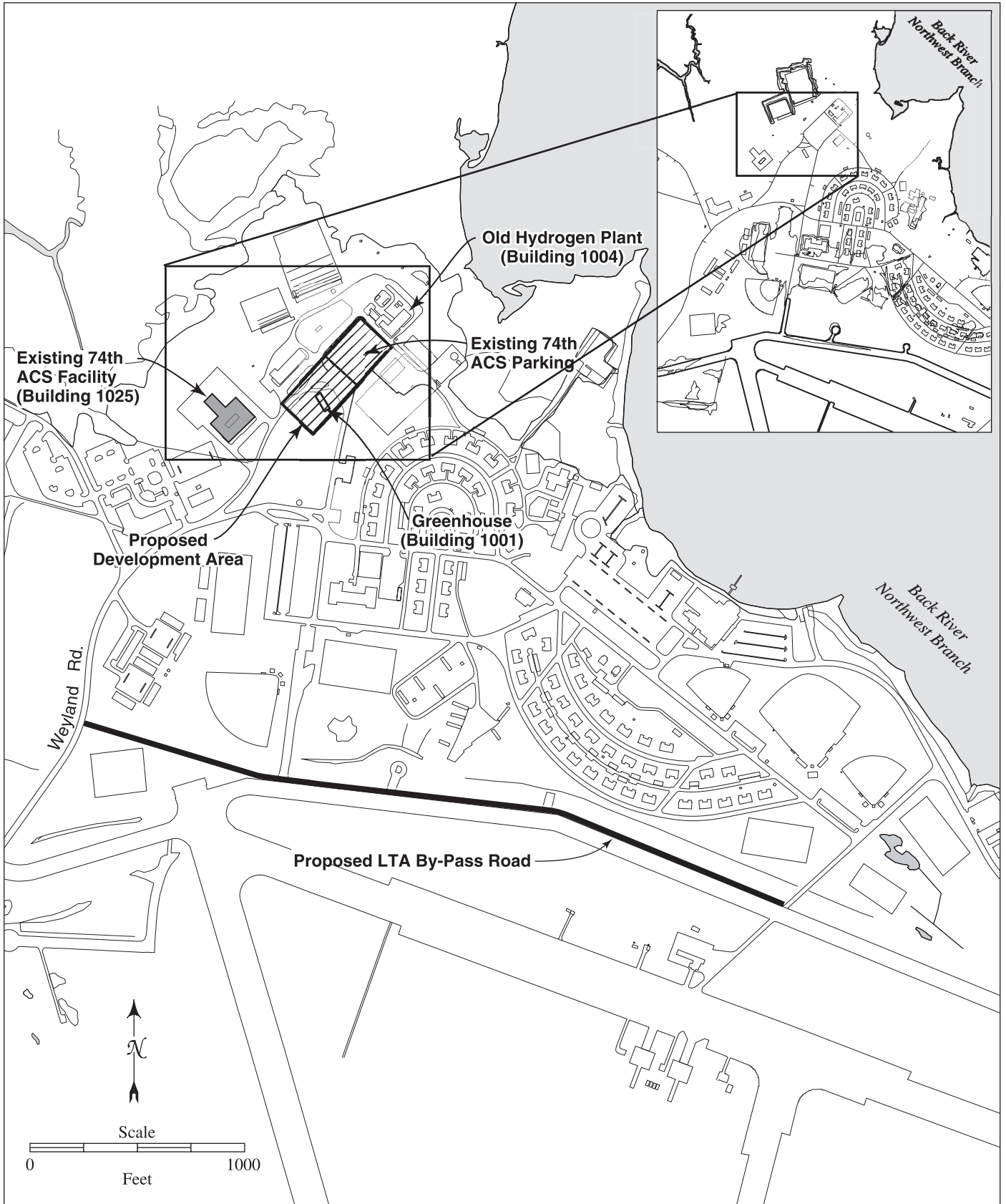


Figure 2-4. Existing and Proposed ACS Facilities at Langley AFB, Virginia

1 **2.4 ENVIRONMENTAL ISSUES IDENTIFIED DURING THE**
2 **SCOPING PROCESS**

3 A number of potential issues have been identified during scoping which are addressed in this
4 EA. They are described below.

5 At Mountain Home AFB, the proposed departure of the B-1B aircraft and associated KC-135
6 refueling tankers, in combination with the addition of F-15E jet fighters and associated
7 organizations, could result in a reduction of 265 active duty personnel assigned to the base.
8 Other potential future activities include the replacement of an average of 100 military family
9 housing units per year from FY03 through FY07, inclusive, replacement of aircraft parking
10 apron areas, addition to and alteration of the base fitness center, construction of a combat
11 supply warehouse, and replacement of airfield pavements. These activities could cumulatively
12 affect environmental resources.

13 At Langley AFB, concerns exist regarding construction in the 100-year flood zone, potentially
14 adverse impacts to the Langley Field Historic District, and the potential effects of surface water
15 run-off to the water quality of the Chesapeake Bay and its tributaries.

16 Langley AFB has been chosen to receive the three-squadron Initial F-22 Operational Wing that
17 will replace three F-15C squadrons. This will involve demolition, renovation, and construction
18 of base facilities. Additionally, during the timeframe fiscal year 2002 (FY 02) to FY 06 Langley
19 AFB has proposed a number of other actions. They include: establishing a Combined Air
20 Operations Center-Experimental and the bed-down of the Aerospace Expeditionary Force
21 Center; construction of a new dormitory; building family housing; privatizing family housing;
22 development of an Operations Support Center, and replacement of water and sanitary mains in
23 a portion of the base. Langley AFB also proposes to develop improved community service
24 facilities that include the following four construction projects: (1) four new American with
25 Disabilities Act (ADA)-compliant housing units, (2) a new Water Tower, (3) a new Youth
26 Center, and (4) a new Community Services Center.

27 The scoping process identified that it was unlikely for impacts to be experienced in the
28 following resource areas: community services; land use; visual resources; environmental
29 justice; and earth resources. Because no potential impacts were identified, these resources were
30 not evaluated in the detailed environmental analysis presented in this document.

31 **2.5 COMPARATIVE SUMMARY OF ENVIRONMENTAL**
32 **CONSEQUENCES**

33 This EA provides a comparative analysis of the potential environmental consequences
34 associated with consolidation of the two existing squadrons at Mountain Home AFB, Idaho, the
35 Langley AFB Alternative, and the No-Action Alternative. Detailed evaluations of potential
36 environmental consequences in 8 resource categories are presented in this EA. As detailed in

2.0 Description of the Proposed Action and Alternatives

1 Chapter 4, implementation of the consolidation at either installation would result in no
 2 significant impacts to any resource. A summary of potential impacts to the environment, by
 3 resource area, is presented in Table 2-4.
 4

Table 2-4. Summary of Potential Environmental Consequences of the Proposed Action, Langley AFB Alternative, and No-Action Alternative

AIR CONTROL SQUADRON (ACS) CONSOLIDATION RESOURCE IMPACT SUMMARY			
Resource	Proposed Action at Mountain Home AFB	Langley AFB Alternative	No-Action Alternative
Socioeconomics	Peak employment increase of 351 jobs: 242 active duty, 67 construction, 42 secondary. Long-term employment increase of 284 jobs. Population increase of 538 persons with demand for 206 housing units.	Peak employment increase of 353 jobs: 242 active duty, 69 construction, 42 secondary. Long-term employment increase of 284 jobs. Population increase of 538 persons with demand for 206 housing units.	No change in employment, population or demand for additional housing.
Transportation	Increase of 351 short-term and 284 long-term vehicle trips during a.m. and p.m. peak periods. Increased traffic at I-84B/SH 67 (Airbase Road) intersection.	Increase of 353 short-term and 284 long-term vehicle trips during a.m. and p.m. peak periods. Lighter than Air (LTA) by-pass road would be built to reduce traffic flow through base housing area.	No change in vehicle trips, traffic flow, or capacity.
Hazardous Materials and Waste Management	Potential use of hazardous materials and hazardous waste generation. No Environmental Restoration Program (ERP) sites at proposed location.	Potential use of hazardous materials and hazardous waste generation. Proposed project site at Langley near but not co-located with 2 ERP sites.	No change in use of hazardous materials or generation of hazardous waste.
Noise	1 to 3 dB increases during construction phase. Noise from operations and maintenance would have negligible impacts. No off-base noise impacts.	1 to 3 dB increases in during construction phase. Noise from operations and maintenance would have negligible impacts. No off-base noise impacts.	No change in current operations and no change in associated noise levels.
Air Quality	Mountain Home AFB is located in an attainment area for criteria pollutants; no formal conformity determination required. Proposed action emissions would contribute less than 0.01% of regional emissions.	Langley AFB located in maintenance area for ozone. However construction and operational emissions would not exceed <i>de minimis</i> levels, would not be regionally significant, and therefore would not require formal conformity determination. Construction emissions greater than the proposed action due to LTA by-pass road construction and fill dirt delivery. Emissions would contribute less than 0.01% of regional emissions.	No change in current operations; no changes in air quality.
Water Resources	Disturbance to less than three acres of developed and undeveloped area. Not within floodplain.	Disturbance of about five acres within the 100-year floodplain. Proposed activities could affect the coastal zone; EA serves as coastal consistency determination.	No change in operations and no change in water resources or to the coastal zone.
Biological Resources	Impacts to wildlife and native habitats would be negligible. No wetlands would be affected. No impacts to federally listed threatened or endangered species or critical habitat.	Impacts to wildlife and native habitats would be negligible. Finding of No Practicable Alternative required due to proposed location in floodplain. No impact to federally listed threatened or endangered species or critical habitat.	No change to biological resources.
Cultural Resources	No impacts to historic architectural resources or archaeological resources; area of proposed development has been previously surveyed. No impacts to traditional resources.	Adverse impacts to historic architectural resources could result from Langley Historic District greenhouse relocation. Construction would be done in consultation with Virginia Department of Historic Resources. No impacts to traditional resources.	No change to historic architectural resources, archaeological resources, or traditional resources.

3.0 **AFFECTED ENVIRONMENT**

This chapter describes existing environmental conditions at both Mountain Home AFB and Langley AFB for resources potentially affected by the Proposed Action and Langley AFB Alternative described in Chapter 2. These existing conditions are also projected to be the future No-Action conditions with the exception of potential cumulative consequences identified in Chapter 5. In compliance with guidelines contained in NEPA and CEQ regulations, and Air Force Instruction (AFI) 32-7061, the description of the existing environment focuses on those environmental resources with the potential to experience impacts. Since there would be no change to aircraft operations or associated safety conditions as a result of implementation of the Proposed Action or Langley AFB Alternative, aircraft operations and safety resource areas were excluded from consideration at the outset.

The environmental impact analysis process (EIAP) analyzes each resource within the expected geographical area where potential impacts might occur. This region of influence (ROI) is defined for each environmental resource.

3.1 **SOCIOECONOMICS**

The specific socioeconomic resource areas addressed include employment and earnings, population, and housing. The ROI is comprised of the counties and communities whose economies are closely related to activities at the respective military installations.

3.1.1 **Mountain Home AFB, Idaho**

Socioeconomic information is presented for an ROI comprised of Ada, Elmore, and Owyhee counties, the economies of which are closely associated with activities at Mountain Home AFB. Where appropriate, comparisons are presented with conditions for the State of Idaho.

EMPLOYMENT AND EARNINGS

In the three-county ROI, total full- and part-time employment increased from 153,039 jobs in 1990 to 234,194 in 1999, at an average rate of 4.8 percent annually. The largest contributions to employment in 1999 were made by services (28.5 percent), retail trade (17.1 percent), and manufacturing (11.3 percent). The sectors of the economy exhibiting the greatest addition of jobs over the period 1990-1999 were also services, retail trade, and manufacturing. For the years 1980, 1990, and 1999, the contribution of the military decreased from 4.8 percent to 3.3 percent and 2.4 percent, respectively (United States Department of Commerce, Economics, and Statistics Administration [USDCESA] 2000).

For the State of Idaho, full- and part-time employment increased at an average rate of 3.5 percent annually between 1990 and 1999. The sectors of the economy exhibiting the greatest addition of jobs in the state over this period were services, retail trade, and construction.

1 Non-farm earnings in the three-county ROI totaled over \$7.7 billion in 1999. Major
2 contributions were made by manufacturing (22.4 percent), services (21.8 percent), state and local
3 government (9.9 percent), and construction (9.4 percent). In Idaho, non-farm earnings totaled
4 over \$19.0 billion in 1999, with the major contributions made by services (23.6 percent),
5 manufacturing (18.2 percent), state and local government (13.7 percent), and retail trade (10.7
6 percent) (USDCEA 2000).

7 In 1999, the number of military personnel stationed at Mountain Home AFB was approximately
8 4,120, with an additional 880 civilian workers. The value of payroll associated with government
9 personnel at Mountain Home AFB reached over \$185 million in 1999 (United States Air Force
10 1999).

11 Mountain Home AFB also purchases significant quantities of goods and services from local and
12 regional firms. In 1999, annual expenditures by the base were over \$49 million. The Air Force
13 estimates that the economic stimulus of Mountain Home AFB created approximately 1,571
14 secondary jobs in the civilian economy (United States Air Force 2000).

15 **POPULATION**

16 The population of the three-county ROI increased by almost 45 percent between 1990 and 2000,
17 reaching 340,678 in 2000. This increase took place at an average annual rate of 3.6 percent. The
18 combined population of the three counties is projected to increase to about 510,932 by the year
19 2025, at an average annual rate of 1.8 percent. By comparison, the population of Idaho
20 increased by 28 percent during the same period, reaching 1,293,953 in 2000 with an average
21 annual growth rate of 2.5 percent between 1990 and 2000 (U.S. Census Bureau 2000a).

23 Approximately 80 percent of the population of the three
25 counties resides in incorporated communities. These
27 cities and towns range in size from Boise (with a 2000
29 population of 185,787) to Grand View (with a
31 population of 470). The largest cities are Boise,
33 Meridian (34,919 persons), and Mountain Home (11,143
35 persons).

The majority of off-base military personnel and their dependents reside in the City of Mountain Home with a population of 11,143 in 2000, 4,337 occupied housing units and 401 vacant units.

36 **HOUSING**

37 There were a total of 133,495 housing units in the ROI in 2000, with a vacancy rate of about 5.5
38 percent. Almost 70 percent of the occupied housing units are owner-occupied (U.S. Census
39 Bureau 2000).

40 Over the period 1990-1999, an average of 3,691 building permits for residential units was issued
41 annually. The number of units permitted on an annual basis varied from a high of 5,372 units in
42 1994 to a low of 2,636 units in 1991. The majority (79 percent) of these units were comprised of
43 single-family homes. The proportion of units contained in structures with five or more units

1 comprised 12 percent of the new units. The number of such multi-family units permitted varied
2 from a high of 1,182 in 1994 to a low of 69 in 1996 (U.S. Census Bureau 2000b).

3 Of the active-duty personnel assigned to Mountain Home AFB in fiscal year (FY) 1999, almost
4 54 percent resided on-base in government family and unaccompanied housing. There are 1,525
5 military family housing units located on the base and 885 bed spaces for unaccompanied
6 personnel in eight dormitories.

7 Of the active duty personnel (and their dependents) who reside off-base, almost 60 percent
8 reside within the City of Mountain Home. According to the Census of 2000, there were 401
9 vacant housing units in the City of Mountain Home and the vacancy rate in the city stood at 8.5
10 percent. Most of the vacant housing units were rental units (12.8 percent vacancy rate) while
11 the vacancy rate for homeowner units was much lower at 2.8 percent. Over the period 1990
12 through 1999, an average of 104 housing unit permits were issued annually in the City of
13 Mountain Home and of these, 71 were for single family homes.

14 **3.1.2 Langley AFB, Virginia**

15 **EMPLOYMENT AND EARNINGS**

16 Employment and earnings information is presented for the following jurisdictions that
17 comprise the ROI and whose economies are closely associated with activities at Langley AFB:
18 York County, Poquoson, James City County, Williamsburg, Newport News, Hampton, and
19 Norfolk. Comparisons are also presented with conditions for the Commonwealth of Virginia.

20 For the ROI, total full- and part-time employment decreased from 506,023 jobs in 1990 to
21 499,348 in 2000, at an average rate of almost -0.2 percent annually. The largest contributions to
22 employment in 1999 were made by services (26.8 percent), military (15.7 percent), and retail
23 trade (14.5 percent). For the years 1980, 1990, and 1999, the contribution of the military
24 decreased from 21.7 percent to 21.0 percent and 15.7 percent, respectively. The sectors of the
25 economy exhibiting the greatest addition of jobs over the period 1990 to 1999 were services and
26 state and local government (USDCEA 2000).

27 In the Commonwealth of Virginia, military employment declined from 6.5 percent of total
28 employment in 1980 to 5.7 percent in 1990 and 3.8 percent in 1999. The sectors of the economy
29 exhibiting the greatest addition of jobs in the state over the period 1990 to 1999 were services
30 and retail trade.

31 Non-farm earnings in the region totaled almost \$17 billion in 1999. The major contributions
32 were made by military (22.7 percent), services (20.7 percent), and manufacturing (12.0 percent).
33 In the Commonwealth of Virginia, non-farm earnings totaled almost \$148 billion in 1999, with
34 the major contributions made by services (30.7 percent), manufacturing (10.9 percent), and state
35 and local government (10.8 percent) (USDCEA 2000).

3.0 Affected Environment

1 In 1999 the number of personnel stationed at Langley AFB stood at about 8,250 active-duty
2 military and 2,440 civilian workers. The value of payroll associated with government personnel
3 at Langley AFB reached over \$475 million in 1999 (United States Air Force 1999).

4 In addition to economic effects associated with payroll expenditures by Langley AFB personnel,
5 the installation also purchases significant quantities of goods and services from local and
6 regional firms. In 1999, annual expenditures by the base totaled over \$266 million. Further, the
7 Air Force estimates that the economic stimulus of Langley AFB created approximately 5,750
8 secondary jobs in the civilian economy (United States Air Force 1999).

9 **POPULATION**

11 The population of the region increased by just over 3.0
13 percent from 1990 to 2000, reaching 688,953 persons in
15 2000. By comparison, the population of the state of
17 Virginia increased by almost 14 percent during the same
19 period, reaching 7,078,515 in 2000, and growing at an
21 average annual rate of 1.3 percent (U.S. Census Bureau
23 2000a).

The majority of off-base military personnel and their dependents reside in the City of Newport News with a population of 180,150 in 2000, 69,686 occupied housing units and 4,431 vacant units.

24 Approximately 88 percent of the 2000 population of the region resides in cities that range in size
25 from Poquoson (with a population of 11,039) to Norfolk (with a population of 261,174). The
26 largest include Norfolk, Newport News (172,302 persons), and Hampton (134,010 persons).

27 The combined regional population is projected to increase from 688,953 in 2000 to 712,013 by the
28 year 2010 at an average annual growth rate of 0.6 percent.

29 **HOUSING**

30 There were a total of 275,497 housing units in the ROI in 2000, with a vacancy rate of about 6.9
31 percent. Just over 55 percent of the occupied housing units are owner-occupied (U.S. Census
32 Bureau 2000b).

33 Over the period 1990 to 1999, an average of 3,136 building permits for residential units was
34 issued annually. The number of units permitted, on an annual basis, varied from a high of 3,729
35 units in 1993 to a low of 2,533 units in 1997. The majority (78 percent) of these units were
36 comprised of single-family homes. The proportion of units contained in structures with five or
37 more units comprised 18 percent of the new units. The number of such multi-family units
38 permitted varied from a high of 766 in 1994 to a low of 325 in 1999 (U.S. Census Bureau 2000b).

39 Of the active-duty personnel assigned to Langley AFB in FY99, just over 18 percent resided on-
40 base in government family and unaccompanied housing. The largest numbers of military
41 personnel reside in Newport News and Hampton.

1 **3.2 TRANSPORTATION**

2 Transportation and circulation refer to the movement of vehicles on roadway networks.
3 Roadway operating conditions, i.e., the adequacy of the existing and future roadway system to
4 accommodate these vehicular movements, are usually described in terms of average daily
5 traffic (ADT) volumes or annual average daily traffic (AADT) and level of service (LOS) ratings.
6 LOS ratings range from LOS A for free-flowing traffic conditions (average vehicle delay of 5
7 seconds or less) to LOS F for congested conditions (average vehicle delay of 60 seconds or
8 more).

9 **3.2.1 Mountain Home AFB, Idaho**

10 **REGIONAL AND LOCAL CIRCULATION**

11 The ROI for transportation resources includes roadway networks on Mountain Home AFB, in
12 the City of Mountain Home, and those likely to be used for base access. The transportation ROI
13 also extends to the Boise area (a 50-mile drive northwest of the base) since a portion of
14 Mountain Home AFB personnel commute from this area, and Saylor Creek Range (15 miles
15 southeast of the base) since use of this range requires occasional transportation of ground crews.

16 The roadway network serving the base and City of Mountain Home includes Interstate 84 (I-84),
17 its associated business loop (I-84B) through the City of Mountain Home, State Highway 51 (SH
18 51), SH 67 (Airbase Road), and collector streets. The overall condition of this network is good,
19 having few problems with LOS or high accident locations.

20 SH 51 is one of the most heavily used roads in the ROI because it provides the shortest route
21 from the center of the city to I-84 and also provides access to many residential areas. The
22 heaviest volume of traffic, however, is found on the section of highway that SH 51 shares with
23 SH 67, which is part of the access route from the City of Mountain Home to the base. SH 67
24 (Airbase Road) begins in Mountain Home at its intersection with I-84B and extends 10 miles to
25 the base. This highway is a four-lane undivided road designed for maximum speed access to
26 the base. ADT for this highway is approximately 6,500 vehicles, which yields an LOS A rating.
27 Despite the relatively heavy use of SH 51, LOS A is characteristic of the entire highway.

28 The most notable circulation conflict occurs in the area where I-84B and SH 67 meet. Virtually
29 all base commuter traffic must travel through this signalized "T" intersection. As a result, this
30 intersection experiences heavy traffic volumes during the afternoon peak hour (4:00-5:00 p.m.),
31 and consequently it becomes congested. This problem is compounded by a Union Pacific
32 railroad underpass located on I-84B several hundred feet north of the intersection. A state
33 project to increase the capacity of the existing two-lane railroad underpass by constructing a
34 four-lane underpass is underway and is scheduled for completion in 2004 (personal
35 communication, Huffaker, 2002).

1 **CIRCULATION AT MOUNTAIN HOME AFB**

2 The roads at Mountain Home AFB essentially form a network completely independent from the
3 City of Mountain Home. In general, traffic volumes on the base network are low and
4 congestion is rare. The heaviest vehicular volumes occur during the morning and afternoon
5 peak periods when personnel are entering and exiting the base. Occasionally, a small queue of
6 cars may occur as drivers attempt to exit on-base residential areas. Due to recent personnel
7 increases and the addition of on-base facilities, a number of intersections provide inadequate
8 capacity to accommodate peak traffic volumes. These problems have not yet warranted any
9 signalization of intersections. The only signalized intersection on base is at the entrance/exit to
10 the base hospital on Main Avenue.

11 **3.2.2 Langley AFB, Virginia**

12 **REGIONAL AND LOCAL CIRCULATION**

13 Access to Langley AFB is provided from Interstate 64 via Armistead Avenue to the west of the
14 base and from Mercury Boulevard (U.S. Route 258/Virginia State Route 32), via LaSalle Avenue
15 (Virginia State Route 167) or King Street (Virginia State Route 278). LaSalle Avenue is a four-
16 lane roadway that provides direct access to the Main Gate with an AADT of 11,370 vehicles.
17 Traffic volumes on King Street between the gate and Little Back River Road were 9,340 vehicles.
18 Armistead Avenue, a four-lane roadway, provides access to the base through the West Gate at
19 the intersection with Sweeney Boulevard. Just north of Sweeney Boulevard, traffic volumes
20 were 17,965 in 1997 (personal communication, Allsbrook, 1998).

21 **CIRCULATION AT LANGLEY AFB**

22 Traffic flow on base generally operates well, with the greatest congestion occurring during the
23 morning rush hour. Parking lot utilization studies and a traffic engineering study for the
24 Community Center and Community South Small Planning Areas were conducted by the
25 Military Transportation Management Command (MTMC 1996) to address areas where
26 congestion was observed. In a recent evaluation of traffic conditions along Sweeney Boulevard,
27 traffic flow at the signalized intersection with Elm Street was observed to be operating at
28 slightly less than optimum condition during peak hours. Traffic entering Sweeney Boulevard at
29 Holly Street during evening peak hours experiences a significant wait time (United States Air
30 Force 2000b). A recently conducted traffic study recommended that a right-turn lane be
31 constructed on eastbound Sweeney Boulevard at Elm Street since 33 to 50 percent of the traffic
32 travels in that direction (United States Air Force 2000b).

33 There is no main thoroughfare north of the main runway that provides circulation access to the
34 ACS area. Construction of the LTA by-pass road is included in the Langley AFB Alternative in
35 order to provide vehicular traffic associated with the enlarged ACS presence (especially truck
36 traffic) with an alternative route to ones currently used that include streets through nearby
37 residential areas.

1 Parking at Langley AFB has been a long-standing concern. Parking lot studies have been
2 conducted to recommend parking alternatives. (MTMC, 1997).

3 Local bus service is available at the West Gate at Armistead Avenue and Sweeney Boulevard.
4 There were no regularly scheduled on-base shuttle services (MTMC, 1997).

5 **3.3 HAZARDOUS MATERIALS AND WASTE MANAGEMENT**

6 Hazardous materials have been defined in AFI 32-7086, *Hazardous Materials Management*, to
7 include any substance with special characteristics that could harm people, plants, or animals.

8 Hazardous waste is defined in the Resource Conservation and Recovery Act (RCRA) as any
9 solid, liquid, contained gaseous or semisolid waste, or any combination of wastes that could or
10 do pose a substantial hazard to human health or the environment. Waste may be classified as
11 hazardous because of its toxicity, reactivity, ignitibility, or corrosivity. In addition, certain types
12 of waste are “listed” or identified as hazardous in 40 CFR 263.

13 The Department of Defense (DoD) developed the Environmental Restoration Program (ERP) to
14 identify, investigate, and remediate potentially hazardous material disposal sites that existed on
15 DoD property prior to 1984.

16 Hazardous materials are identified and regulated under the Comprehensive Environmental
17 Response, Compensation, and Liability Act (CERCLA); the Occupational Safety and Health Act
18 (OSHA); and the Emergency Planning and Community Right-to-Know Act (EPCRA).

19 **3.3.1 Mountain Home AFB, Idaho**

20 The majority of hazardous materials used by Air Force and contractor personnel at Mountain
21 Home AFB are controlled through an Air Force pollution prevention process called the
22 Hazardous Materials Management Process (HMMP). This process provides centralized
23 management of the procurement, handling, storage, and issuing of hazardous materials and
24 turn-in, recovery, reuse, recycling, or disposal of hazardous wastes. The HMMP process
25 includes review and approval by Air Force personnel to ensure users are aware of exposure and
26 safety risks.

27 The Mountain Home AFB Hazardous Material Emergency Planning and Response Plan
28 addresses on-base storage locations and proper handling procedures of all hazardous materials
29 to minimize potential spills and releases. The plan further outlines activities to be undertaken
30 to minimize the adverse effects of a spill, including notification, containment, decontamination,
31 and cleanup of spilled materials. The Spill Prevention Control and Countermeasures Guidance
32 is attached to the Plan.

33 The Asbestos Management Plan provides guidance for the identification of asbestos
34 contaminated materials and the management of asbestos wastes that are disposed of in an on-

1 base permitted landfill. An asbestos facility register is maintained by Base Civil Engineering.
2 Persons inspecting, designing, or conducting asbestos response actions in public or commercial
3 buildings must be properly trained and accredited through an applicable asbestos training
4 program. Design plans for building alteration projects are reviewed to determine if asbestos
5 containing materials are present in the proposed work area and, if so, are disposed of in an off-
6 base permitted landfill.

7 Mountain Home AFB is a large-quantity hazardous waste generator. Hazardous wastes
8 generated during operations and maintenance activities include combustible solvents, fuel
9 filters, metal-contaminated spent acids, painting wastes, battery acid, x-ray fixer, corrosive
10 liquids from boiler operations, washracks sludge, aviation fuel, waste from tank cleanouts and
11 pesticides. Hazardous wastes are managed in accordance with the 366th Wing Plan 3208-96,
12 *Hazardous Waste Management Plan* (United States Air Force, 1997a).

13 Hazardous wastes are initially stored at waste accumulation points near work locations. The
14 maximum volume permitted at each generation point is 55 gallons of hazardous waste or one
15 quart of acutely hazardous waste. When these limits are reached, the wastes are transported to
16 the designated 90-day Hazardous Waste Accumulation Site (Central Collection Facility or CCF)
17 located in Building 1296. The hazardous wastes must be transferred from the CCF to an off-site
18 permitted treatment, storage and disposal facility (TSDF) within 90 days.

19 The location of the site proposed for the new facilities is not on or near an ERP site.

20 **3.3.2 Langley AFB, Virginia**

21 Hazardous materials are controlled at Langley AFB through the Air Force pollution prevention
22 process called HMMP as described in section 3.3.1.

23 Langley AFB has a Spill Prevention and Facility Response Plan (certified in September 2000).
24 The plan meets the Federal Spill Prevention Control and Countermeasures requirements, the
25 Virginia Oil Discharge Contingency Plan requirements, and the Coast Guard requirements.

26 Langley AFB is a large-quantity hazardous waste generator. Hazardous wastes generated
27 during operations and maintenance activities include solvents, metal-contaminated spent acids,
28 and sludge from wash racks. Langley AFB recycles all lubricating fluids, batteries, oil filters,
29 and shop rags. Hazardous wastes are managed in accordance with the *Langley AFB Hazardous*
30 *Waste Management Plan*, (United States Air Force, 1997b).

31 Hazardous wastes are initially stored at approximately 45 waste accumulation points at work
32 locations. A licensed contractor transports the wastes from the accumulation points to the 90-
33 day storage facility where they are stored until disposal is economically practicable or before 90
34 days have expired, whichever comes first. A licensed disposal contractor picks up the wastes
35 and transports it off base for disposal in a licensed disposal facility. In FY 1998, the amount of
36 hazardous waste generated during aircraft maintenance was approximately 52,500 pounds. In

1 1999, it is estimated that about 65,000 pounds were generated during aircraft maintenance
2 activities, including a one-time disposal of approximately 19,500 pounds of absorbent pads that
3 would normally have been disposed of as solid waste but were contaminated as a result of a
4 gasoline spill.

5 The 1st Fighter Wing Asbestos Management Plan 32-10 provides guidance for the identification
6 of asbestos containing materials and the management of asbestos. An asbestos facility register
7 is maintained by Civil Engineering. Persons inspecting, designing, or conducting asbestos
8 response actions must be properly trained and accredited through an applicable asbestos
9 training program. The design of building alteration projects is reviewed to determine if
10 asbestos containing materials are present in the proposed work area and, if so, they are
11 disposed of in an off-base permitted landfill.

12 ACC policy requires that any project on or near a Langley AFB ERP site be coordinated through
13 the Langley ERP Manager. Most of the proposed construction would occur in an area currently
14 containing a parking lot and a greenhouse. Two ERP sites are located nearby: DP-09 and
15 OT-25.

16 The proposed development area is northwest of ERP Site DP-09, an abandoned gas cylinder
17 disposal site covering approximately 1.8 acres. This area was reportedly used to bury gas
18 cylinders used during the LTA dirigible work conducted from the 1920s to 1935. All buried
19 hydrogen/helium cylinders found to date have either been empty or filled with sand. A No
20 Further Remedial Action Planned (NFRAP) Decision Document (DD) was signed for this site in
21 November 1997. This site is considered closed.

22 Directly northeast of the area proposed for development is ERP Site OT-25. This site covers an
23 area of approximately 3.5 acres and previously had an entomology building (demolished in
24 1996) and a storage yard. Entomology operations began at the site in 1971 and ceased in 1983.
25 From 1983 to 1987 a janitorial service contractor used the building for office space and for
26 storage of materials. The site has remained vacant since that time. Pesticide and herbicide
27 management practices in the building and its surroundings have led to contamination of
28 building materials, soil and groundwater and reports indicate that spills, primarily of
29 malathion, had occurred in the yard. A diesel fuel spill of several hundred gallons occurred
30 south of Building 965 in 1989. The site is now heavily overgrown by marsh grass and has been
31 used for equipment storage and disposal of assorted debris. The area falls within the tidally
32 influenced zone adjacent to the Back River and becomes partially flooded at high tide. As of
33 December 2000, a Remedial Investigation was continuing. As of that date there had been
34 various surface and subsurface soil, groundwater, surface water sediment and wetland soil
35 analyses. The Remedial Investigation was finalized in December of 2000, a Feasibility Study
36 completed in September of 2001, and a Proposed Plan was completed in October of 2001.

37 There are no ERP sites near the locations proposed for the by-pass road.

1 **3.4 NOISE**

2 Noise is defined as any sound that is undesirable because it interferes with communication, is
3 intense enough to damage hearing, or is otherwise annoying. Human response to noise varies
4 according to the type and characteristics of the noise source, distance between source and
5 receptor, receptor sensitivity, and time of day. The source of noise associated with existing ACS
6 operations relates to vehicle operations.

7 To date, no exact quantitative dose-response relationship exists for noise-related sleep
8 interference; yet, based on studies conducted to date and the U.S. Environmental Protection
9 Agency (USEPA) guidance of a 45 day-night average sound level (DNL) to protect sleep
10 interference, useful ways to assess sleep interference have emerged. If homes are
11 conservatively estimated to have a 20-dB noise insulation, an average of 65 DNL would produce
12 an indoor level of 45 DNL and would form a reasonable guideline for evaluating sleep
13 interference. This also corresponds well to the general guidelines for assessing speech
14 interference.

15

16 **3.4.1 Mountain Home AFB, Idaho**

17 Noise due to construction and maintenance equipment, as well as light and heavy vehicle
18 traffic, is a common ongoing occurrence in the base environment. Existing and continuing
19 construction projects are currently in progress at Mountain Home AFB. Trucks, as well as
20 heavy equipment, are usually found in the base environment on a daily basis to support these
21 existing facility and infrastructure upgrades. The closest noise-sensitive receptor is the Eagle
22 View military family housing area about 1,000 feet away that is located in the airfield 65 to 70
23 DNL noise zone.

24 **3.4.2 Langley AFB, Virginia**

25 Construction and maintenance equipment noise is a common occurrence on the base
26 environment. The closest noise-sensitive receptors are the on-base residential areas about 300
27 feet away that are located in the airfield 70 to 75 DNL noise zone. No off-base housing or other
28 off-base noise-sensitive receptors are near the proposed site.

29 **3.5 AIR QUALITY**

30 Air quality is described by the atmospheric concentration of six criteria pollutants and two
31 ozone precursor pollutants. Criteria pollutants are those pollutants that are regulated by
32 national ambient air quality standards (NAAQS). The criteria pollutants are ozone (O₃),
33 nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter equal to
34 or less than 10 microns in diameter (PM₁₀), and lead (Pb). The ozone precursor pollutants are
35 volatile organic compounds (VOCs) and nitrogen oxides (NO_x).

1 Clean Air Act (CAA) Section 176(c), General Conformity, established certain statutory
2 requirements with which federal agencies must comply with regard to proposed federal
3 activities. The federal agency must demonstrate conformity of the proposed activities with each
4 state's State Implementation Plan (SIP) for attainment of the NAAQS. In 1993, USEPA issued
5 the final rules for determining air quality conformity. Federal activities must not (1) cause or
6 contribute to any new violation; (2) increase the frequency or severity of any existing violation;
7 or (3) delay timely attainment of any standard, interim emission reductions, or milestones.
8 Thus, federal activities must be in conformity with a SIP's purpose of either (1) eliminating or
9 reducing the severity and number of NAAQS violations or (2) achieving attainment of NAAQS.
10 General conformity applies only to nonattainment and maintenance areas. If the emissions
11 from a federal action proposed in a nonattainment area exceed annual emission thresholds
12 identified in the rule (*de minimis* levels) or are regionally significant (identified as equal to or
13 more than 10 percent of the emissions inventory for the region), a conformity determination is
14 required of that action. The thresholds become more restrictive as the severity of the
15 nonattainment status of the region increases.

16 **3.5.1 Mountain Home AFB, Idaho**

17 Mountain Home AFB is located in Elmore County, Idaho, and with regard to air quality and
18 stationary source emissions, is under the jurisdiction of the Idaho Department of Environmental
19 Quality (IDEQ). Mountain Home AFB is within the Idaho Intrastate Air Quality Control Region
20 (AQCR) #63. AQCR #63, which was developed for planning purposes, consists of 22 counties
21 in central Idaho including Elmore County. The affected environment for base-generated
22 emissions includes Mountain Home AFB, the area surrounding the base, and the airspace
23 surrounding the base. Air quality in the vicinity of Mountain Home AFB, the City of Mountain
24 Home, and Elmore County is generally considered as very good. Due to the large extent of the
25 AQCR, emissions from Mountain Home AFB are compared to those in Elmore County, which
26 encompasses the base, and to the regional three-county area of Elmore, Owyhee, and Ada
27 counties. Air quality within this area is currently either in "attainment" or "unclassifiable/
28 attainment."

29 Table 3-1 summarizes the regional emissions (stationary and mobile) of criteria pollutants and
30 precursor emissions for this affected area. Current emissions of Mountain Home AFB are
31 incorporated into the Elmore County total. Contributions by Mountain Home AFB to county
32 and three-county regional emissions are as follows: for NO_x (16 percent of Elmore County
33 emissions and 1.5 percent of regional emissions), for CO (7 percent of Elmore County emissions
34 and 0.5 percent regionally), for VOCs (6 percent of Elmore County and 1.2 percent regionally),
35 for SO₂ (3 percent of Elmore County and 0.4 percent regionally), and for PM₁₀ (less than one
36 percent of Elmore County and less than 0.1 percent regionally). Fugitive dust contributes the
37 majority of PM₁₀ emissions. Actual emissions of criteria pollutants from stationary sources at
38 the base are less than 100 tons per year, the major stationary source threshold.

Table 3-1. Baseline Emissions for Mountain Home AFB Affected Environment

Regional Emissions ¹	POLLUTANTS (TONS PER YEAR)				
	CO	VOCs	NO _x	SO ₂	PM ₁₀
Elmore County ²	9,662	1,989	1,602	372	11,966
Owyhee County	28,485	2,046	2,070	154	14,083
Ada County	104,318	6,512	13,977	1,930	37,029
Total 3-County Area	142,465	10,547	17,649	2,456	63,078
Mountain Home AFB ³					
– Stationary Sources	35.2	34.1	54.8	2.1	12.9
– Mobile Sources	684.1	89.6	208.2	8.1	18.6
Total Base Emissions	719.3	123.7	263.0	10.2	31.5
Source:					
1. USEPA 2000.					
2. Includes Mountain Home AFB emissions.					
3. United States Air Force 2000a.					

1 **3.5.2 Langley AFB, Virginia**

2 Langley AFB is located within the Hampton Roads Intrastate Air Quality Control Region
3 (AQCR) #223 that includes four counties (York, James City, Isle of Wright, and Southampton),
4 and nine independent cities (Chesapeake, Hampton, Newport News, Norfolk, Poquoson,
5 Portsmouth, Suffolk, Virginia Beach, and Williamsburg). This area includes substantial
6 industry, several military and commercial airfields, and a large population base, all of which
7 generate emissions. Table 3-2 summarizes the baseline emissions (stationary and mobile) of
8 criteria pollutants and ozone precursor emissions for this AQCR.

Table 3-2. Baseline Emissions for Langley AFB Affected Environment

Regional Emissions	Pollutants (tons per year)				
	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					
– Stationary Sources	14.5	33.1	29.8	1.0	4.5
– Mobile Sources	760.9	104.5	241.2	5.6	8.2
Total Base Emissions	775.4	137.6	271.0	6.6	12.7
Source:					
1. Federal Register (629123) June 26, 1997 (includes Langley AFB emissions).					
2. United States Air Force 2000b.					

9 Existing Langley AFB emissions are incorporated into the totals for the Hampton Roads AQCR.
10 For each pollutant, Langley AFB contributes less than 1 percent of regional emissions.

1 Air quality in Hampton Roads AQCR is classified as attainment for all criteria pollutants. For
2 ozone and its pollutant precursors the area is considered in “transitional attainment” or
3 “maintenance.” In addition to its current status as a “maintenance area” for O₃ attainment, the
4 Hampton Roads area is expected to be designated as nonattainment for the new 8-hour O₃
5 standard (pending the outcome of the remand order issued by the Supreme Court in *Whitman v.*
6 *American Trucking*, 531 U.S. 457 2001). While the future implementation of these new standards
7 is still uncertain, the USEPA has proceeded with initial designations based on 3 years of
8 consecutive monitoring data. Designations are either “nonattainment” or “attainment/
9 unclassifiable.” According to USEPA Guidance (March 2000), conformity and other planning
10 requirements would be triggered on the effective date of the final USEPA designations.

11 The Virginia Department of Environmental Quality (VDEQ) has primary jurisdiction over air
12 quality and stationary emission sources at Langley AFB. Stationary sources include jet engine
13 testing, heating and power production, solvents use, storage tanks, and fueling operations. The
14 base operates under a Synthetic Minor Operating permit from the VDEQ. The Synthetic Minor
15 Operating permit, issued under Title V of the Clean Air Act, sets a cap on actual stationary
16 source emissions allowed from a facility whose potential-to-emit (PTE) emissions are greater
17 than allowable thresholds. Mobile sources at Langley AFB include aircraft operations (takeoffs
18 and landings), AGE, ground support equipment (GSE), personal and government vehicles, and
19 aircraft maintenance operations (engine run-ups and trim checks).

20 **3.6 WATER RESOURCES**

21 For the purpose of this analysis, water resources include all surface and groundwater features
22 and 100-year floodplains located within the confines of the installation.

23 **3.6.1 Mountain Home AFB, Idaho**

24 **SURFACE WATER**

25 In general, surface water on base tends to flow from the northeast to the southwest into Canyon
26 Creek, which is off-base and drains southward into the Snake River. Small playas located on
27 and adjacent to the base serve as low-point collection areas for surface water runoff. These
28 playas are small basins that have no outlets and, as a result, any water they collect is lost to
29 evaporation or infiltration (United States Air Force 1996). Wetland and Freshwater Aquatic
30 Communities are addressed in section 3.7.1.

31 **GROUNDWATER**

32 Groundwater is the sole source of potable water for Mountain Home AFB. The on-base water
33 system serves Mountain Home AFB exclusively and no other municipal water systems are
34 located in the immediate vicinity of the base (United States Air Force 1996).

1 The City of Mountain Home draws potable water from 14 active municipal groundwater wells,
2 of which only 8 are reliable as year-round sources. Five wells are deep, of good quality, and are
3 dependable during peak demand periods. Three other wells are used primarily to offset peak
4 demands for golf course irrigation and to serve as emergency standby.

5 Preliminary investigations by the City of Mountain Home have revealed that, in order to meet
6 expected long-term population growth, an additional well should be drilled. However, the
7 water system is considered adequate to serve the existing and near-term city population. Also,
8 storage capacity for fire protection is deemed sufficient for the present population.

9 **FLOODPLAINS**

10 Due to the generally level topography in the vicinity of the base, drainage is not well-defined
11 and surface water runoff from thunderstorms and snowmelt tends to collect in two ephemeral
12 channels and in small depressions. No floodplains, however, have been identified on base and
13 no drainages cross the base (United States Air Force 1996).

14 **3.6.2 Langley AFB, Virginia**

15 **SURFACE WATER**

16 Langley AFB is bounded on the northeast side by the Northwest Branch of the Back River, and
17 on the southeast side by the Southwest Branch of the Back River. Back River is broad and
18 shallow, with a width near the mouth of approximately one mile and a depth averaging 4.5 feet.
19 Flow in the Back River is controlled to a great extent by the tides in Chesapeake Bay. The water
20 quality is primarily saline in nature, representative of the saltwater coves of Chesapeake Bay
21 and the Atlantic Ocean (United States Air Force 1998).

22 A number of creeks, intermittent streams and drainage ditches provide drainage of stormwater
23 and surface runoff. Kiln Creek forms part of the northwestern border of the base and flows into
24 the Northwest Branch of Back River. Tabbs Creek crosses the base just north of the golf course
25 (located in the center of the base) and flows into the Northwest Branch of Back River. Brown's
26 Creek flows through the Flightline Area and empties into the Southwest Branch of the Back
27 River (United States Air Force 1998).

28 The base has implemented a comprehensive Stormwater Pollution Prevention Plan. A total of
29 47 outfalls drain Langley AFB, with 26 outfalls associated with areas that contain industrial
30 activities. All of the outfalls discharge into either the Southwest or Northwest branches of the
31 Back River. A few outfalls discharge into these two branches via two smaller branches of the
32 Back River: Tide Mill Creek to the south and Tabbs Creek to the north. Langley AFB received a
33 Virginia Pollutant Discharge Elimination System (VPDES) permit from VDEQ for 26
34 stormwater outfalls and one treated groundwater outfall (United States Air Force 1998).

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

10 The Virginia Department of Environmental Quality oversees activities in the coastal zone of the
11 commonwealth through a number of enforceable programs. In reviewing proposed actions,
12 VDEQ may require agencies to coordinate with its specific divisions or other agencies for
13 consultation or to obtain permits; they also may comment on environmental impacts and
14 mitigation. VDEQ enforceable programs and policies pertain to fisheries management,
15 subaqueous lands management, wetlands management, dunes management, non-point source
16 pollution control, point source pollution control, shoreline sanitation, air pollution control, and
17 coastal lands management.

18 **GROUNDWATER**

19 In the Langley area, groundwater occurs in three aquifer systems: the shallow water table
20 aquifer, the upper artesian aquifer system, and the principal artesian aquifer system. All three
21 aquifers are suspected to contain water of moderate to poor quality due to high salinity and
22 total dissolved solids (TDS) and have little potential as a conventional water supply (United
23 States Air Force 1998).

24 **FLOODPLAINS**

25 The large majority of Langley AFB is located within the 100-year floodplain. The base was
26 constructed in the early 1900s and most of the area was filled at that time, prior to current laws
27 prohibiting that activity (Executive Order 11988). The low elevation of the base is most
28 apparent when particularly heavy rain events flood base roads and drainage ways. Although
29 adjacent creek corridors move water quickly and safely during most rain events, it is unlikely
30 that any planning will ever totally eliminate the risk of base floods because the seaward
31 boundaries of the base are only seven feet above mean sea level (MSL) at the highest point
32 (United States Air Force 1998). The extent of floodplains at Langley AFB is depicted in Figure
33 3-1.

34 **3.7 BIOLOGICAL RESOURCES**

35 Biological resources are addressed under three categories: (1) vegetation and wildlife; (2)
36 wetland and freshwater aquatic communities; and (3) threatened, endangered, and special
37 status species/communities.

1 **3.7.1 Mountain Home AFB, Idaho**

2 **VEGETATION AND WILDLIFE**

3 In pre-settlement times, land that now encompasses Mountain Home AFB was comprised of
4 relatively continuous expanses of open sagebrush steppe. In the vicinity of Mountain Home
5 AFB, a history of grazing, agriculture conversion, exotic annual plant species invasion, and
6 human-modified fire regimes have greatly altered vegetation communities and wildlife. Most
7 of the area has been converted to an intensely fragmented landscape of invading exotic species,
8 seeded areas, and agricultural fields. Few remnant stands of native pristine habitat persist.

9 The majority of the main base (excluding the Small Arms Range) is developed and consists of
10 landscaped areas, buildings, landfills, rubble piles, and areas paved with asphalt or concrete. In
11 general, open areas are either landscaped or dominated by exotic weed species. Native habitat
12 areas comprise less than 7 percent of the base; and none of these are in a pristine state.
13 Common plant and animal species and habitats characteristic of the base are summarized in
14 Table B-1 of Appendix B.

15 **WETLAND AND FRESHWATER AQUATIC COMMUNITIES**

16 There are no wetlands on Mountain Home AFB. However, there are 9 playas located on-base
17 and two ephemeral streams that cross the base.

18 **THREATENED, ENDANGERED, AND SPECIAL STATUS SPECIES/COMMUNITIES**

19 Thirty-one special status species (one lichen, six plant, three invertebrate, one fish, three
20 amphibian, two reptile, nine bird, and six mammal) occur, or have the potential to occur, within
21 the county where Mountain Home AFB is located. Scientific names and areas of occurrence for
22 each special status species and community are provided in Table B-2 of Appendix B.

23 One federally listed (bald eagle) and one federal candidate species (slickspot peppergrass) have
24 been identified as having the potential to occur at Mountain Home AFB, but that potential is
25 very low. Bald eagles may range onto base from the nearby Snake River Canyon but would
26 find no appropriate habitat. Intact sodic slickspots within quality sagebrush steppe are absent
27 from Mountain Home AFB, thus slickspot peppergrass has no suitable habitat.

28 Eighteen state species of concern (three amphibian, two reptile, nine bird, four mammal) occur
29 or have the potential to occur on Mountain Home AFB as listed in Table B-2 of Appendix B
30 (United States Air Force 1998b). Only the burrowing owl is known to occur on base (United
31 States Air Force 1998b).

32

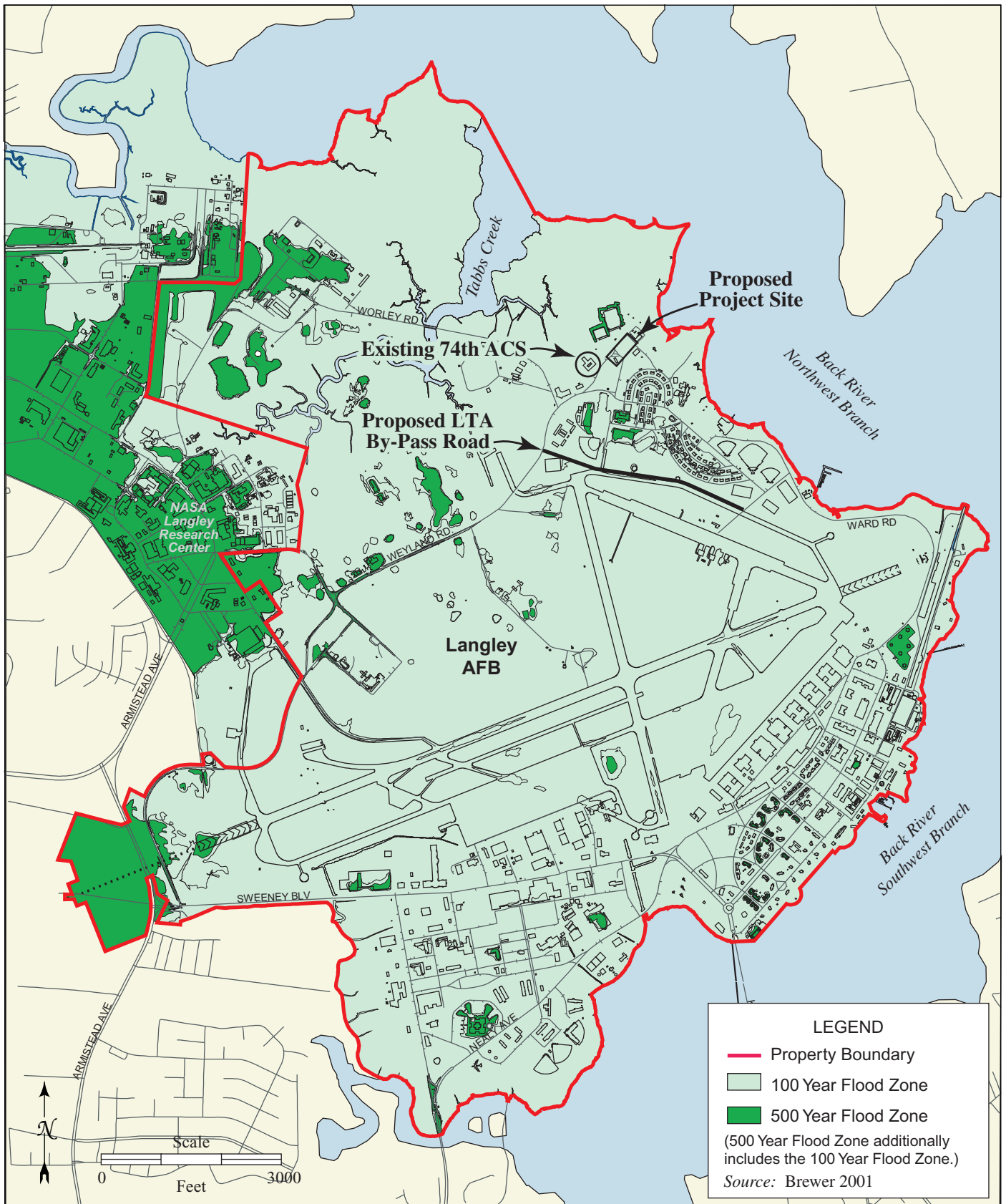


Figure 3-1. Langley AFB Floodplain Map

1 **3.7.2 Langley AFB, Virginia**

2 **VEGETATION AND WILDLIFE**

3 Natural terrestrial communities at Langley AFB were historically characterized by uplands of
4 mixed hardwood and pine and bottomland areas of cypress and gum. Shrubby marsh
5 vegetation would have bordered herbaceous wetland communities. Today, the majority of
6 Langley AFB is landscaped or capped with pavement or concrete. Native terrestrial, upland
7 communities exist as small, remnant patches characteristic of old field succession. Terrestrial
8 vegetation associations found within and around Langley AFB include mixed oak and
9 hardwood forest, pine woodland, and sweetgum and hardwood bottomland (United States Air
10 Force 1998a). A total of 10 percent (288 acres) of the base remains forested (United States Air
11 Force 1998a).

12 Wildlife on the base are wide-spread species that are habitat generalists or tolerant of
13 disturbance and include a wide variety of game and fur-bearing species, small mammals,
14 waterfowl, songbirds, raptors, amphibians, reptiles, and fish. The proximity of the base to
15 estuarine and marine habitats of Chesapeake Bay provides habitat for a variety of neotropical
16 migrants and waterfowl. Common plant and animal species and habitats characteristic of the
17 base are summarized in Table B-3 of Appendix B.

18 **WETLAND AND FRESHWATER AQUATIC COMMUNITIES**

19 Wetlands encompass approximately 652 acres at Langley AFB as shown in Figure 3-2. Of this
20 total, 462 acres are non-freshwater estuarine wetlands. Freshwater wetlands on base include
21 palustrine forested, emergent, and scrub-shrub wetlands. Forest and scrub-shrub wetlands
22 occur in low-lying upland areas with nutrient-poor sandy soils and are dominated by
23 bottomland hardwood trees and shrubs. Emergent wetlands primarily occur as small remnant
24 patches, along drainage ditches, and as tidal marsh (Hobson 1996; United States Air Force
25 1998a).

26 Salt and freshwater marshes of the northwest and southwest branches of the Back River, New
27 Market Creek, Brick Kiln Creek, Tabbs Creek, and Tides Mill Creek surround the base on three
28 sides. Tidal flow from the Chesapeake Bay is substantial along these margins; however, most
29 inland freshwater wetlands have been filled, drained to ditches, or converted into golf course
30 features (United States Air Force 1998a). Currently, Langley AFB is in the process of restoring
31 and stabilizing sections of Chesapeake shoreline through the establishment of smooth and
32 saltmeadow cordgrass fringe marsh.

33 **THREATENED, ENDANGERED, AND SPECIAL STATUS SPECIES/COMMUNITIES**

34 Eleven special status species occur, or have the potential to occur, on Langley AFB. These
35 include Harper's fimbriatilis, Virginia least trillium, Northeastern beach tiger beetle, Tidewater
36 interstitial amphipod, barking tree frog, Mabee's salamander, tiger salamander, canebreak

1 rattlesnake, bald eagle, great egret, and peregrine falcon. Nine have special state status and
2 three have federal status. No critical habitat occurs on base. Special status species or
3 communities are identified in Table B-4 of Appendix B.

4 One of the federally listed threatened species, the bald eagle, occurs at Langley AFB. Surveys
5 conducted in 1993 and 1994 indicated that foraging by bald eagles occurs to a limited extent
6 within creeks and marshes of the base. Habitat suitable for nesting or roosting occurs among
7 the loblolly pines on the northern side of the base, but no nesting or long-term roosting was
8 observed. Uniform age/size structure of loblolly pine stands may limit use of the base as
9 nesting or roosting habitat (Barrera 1995). The bald eagle has nested within 3 miles of the base
10 in recent years, and one of these nest sites is still active (Davis 2001, Wilcox 2001). The second
11 federally listed threatened species, the northeastern beach tiger beetle, has no record of
12 occurrence on base; it typically inhabits broad sandy beaches and has become a species of
13 increasing concern within the Chesapeake Bay ecosystem.

14 **3.8 CULTURAL RESOURCES**

15 Cultural resources are defined as any prehistoric or historic district, site, building, structure, or
16 object considered important to a culture, subculture, or community for scientific, traditional, or
17 religious reasons. Cultural resources are typically divided into three categories: archaeological;
18 architectural; and traditional. Archaeological resources are locations where prehistoric, and
19 historic activity measurably altered the earth or produced deposits of physical remains (e.g.,
20 arrowheads, bottles). Architectural resources include standing buildings, dams, canals, bridges,
21 and other structures of historic significance. Architectural resources generally must be more
22 than 50 years old to be considered for inclusion in the National Register of Historic Places
23 (NRHP). However, more recent structures, such as Cold War era resources, may warrant
24 protection if they manifest “exceptional significance” or the potential to gain significance in the
25 future. Traditional resources are those associated with cultural practices and beliefs of a living
26 community that are rooted in its history and are important in maintaining the continuing
27 cultural identity of the community. The ROI for cultural resources is the area within which the
28 proposed action has the potential to affect existing or potentially occurring archaeological,
29 architectural, or traditional resources.

30 **3.8.1 Mountain Home AFB, Idaho**

31 There are no NRHP-listed cultural resources at Mountain Home AFB. Architectural resources,
32 however, include six World War II structures and five Cold War structures that are eligible for
33 listing on the NRHP. None lie in the area of proposed development. Development would
34 occur within a cluster of buildings constructed in the 1980s and 1990s (Facilities 1788, 1790,
35 1795) that were not identified as significant during a Cold War survey of the base (United States
36 Air Force 1998). No cultural resources were identified during intensive archaeological survey of
37 the project area (SAIC 1991). No traditional resources have been identified at Mountain Home
38 AFB (United States Air Force 1998). The base coordinates Native American issues with the

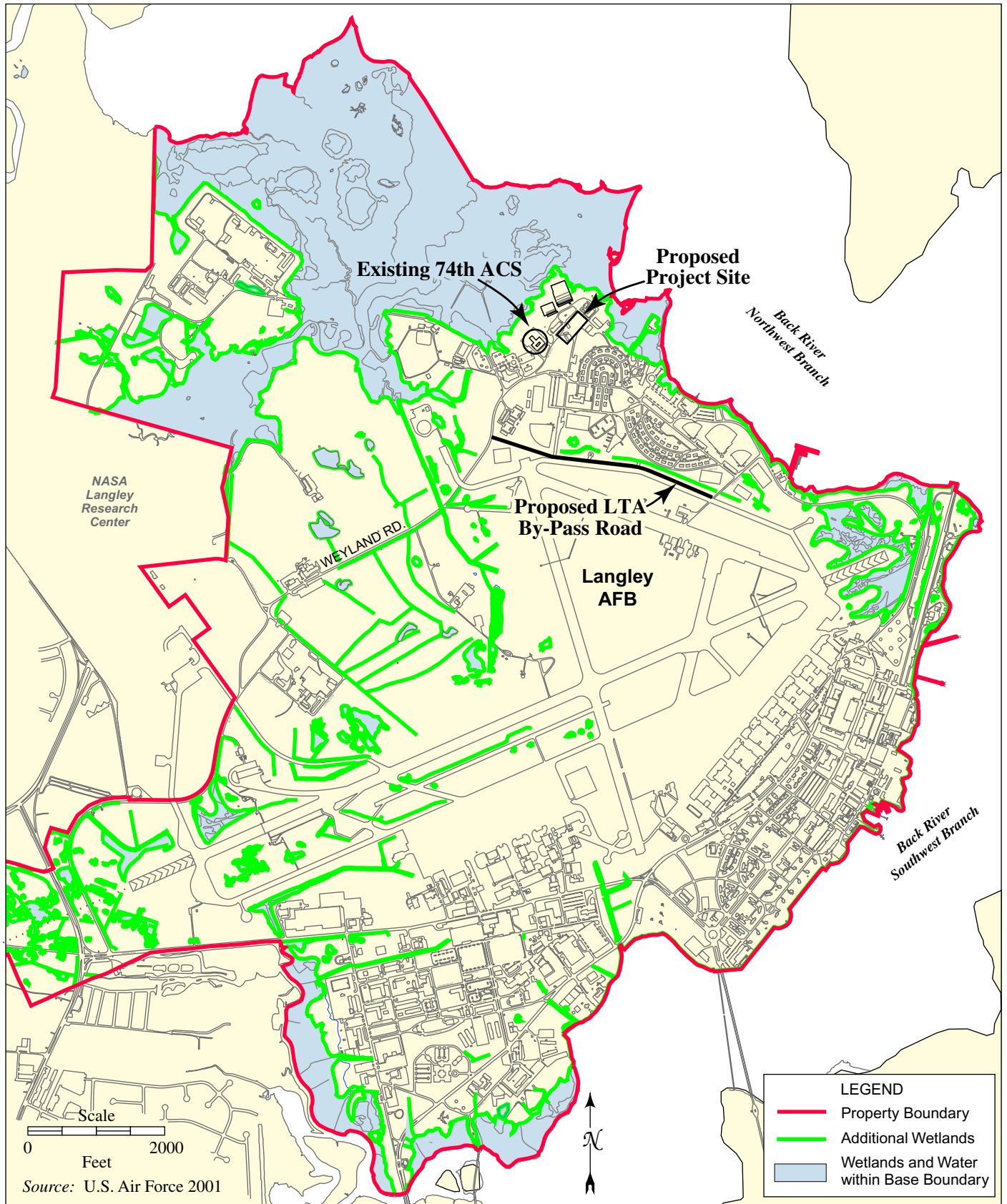


Figure 3-2. Wetlands at Langley AFB

1 Shoshone-Paiute Tribes of the Duck Valley Reservation and Shoshone-Bannock Tribe of the Fort
2 Hall Reservation.

3 **3.8.2 Langley AFB, Virginia**

4 Many historic architectural resources have been identified within Langley AFB or on the base
5 border with NASA's Langley Research Center. A large portion of the base lies within the
6 NRHP-eligible Langley Field Historic District, the boundary of which is shown in Figure 3-3.
7 (U.S. Army Corps of Engineers [USACE] 1998). The proposed development is within the
8 Langley Field Historic District in the North Base (Planning Area 6) LTA area. The old hydrogen
9 plant (Facility 1004), adjacent to the proposed development location, was completed in 1918 in
10 support of the installation's LTA mission. It is a contributing member of the Langley Field
11 Historic District. The greenhouse (Building 1001), located within the proposed development
12 area, was built in 1934 and also is a contributing member of the Langley Field Historic District
13 (USACE 1998). A proposed new LTA by-pass road would pass immediately south of historic
14 non-commissioned officer (NCO) housing along Gray Ave. These houses were constructed in
15 the early 1930s and are contributing members of the Langley Field Historic District.

16 Thirteen archaeological sites have been identified on base or on the base border with NASA's
17 Langley Research Center (USACE 1998). The North Base area has been the focus of extensive
18 archaeological investigations that identified a total of six sites (USACE 1998), none of which are
19 within the area of the proposed development. However, a map dating to 1917 shows a cluster
20 of civilian and military housing structures directly inland from the Back River shoreline in the
21 vicinity of the small arms and skeet ranges (Facilities 1015 and 1019) and the old hydrogen plant
22 (Facility 1004) (USACE 1998) near the proposed development area.

23 No traditional resources or American Indian issues have been identified for Langley AFB
24 (USACE 1998). No federally recognized American Indian tribes or lands are located in Virginia.

25

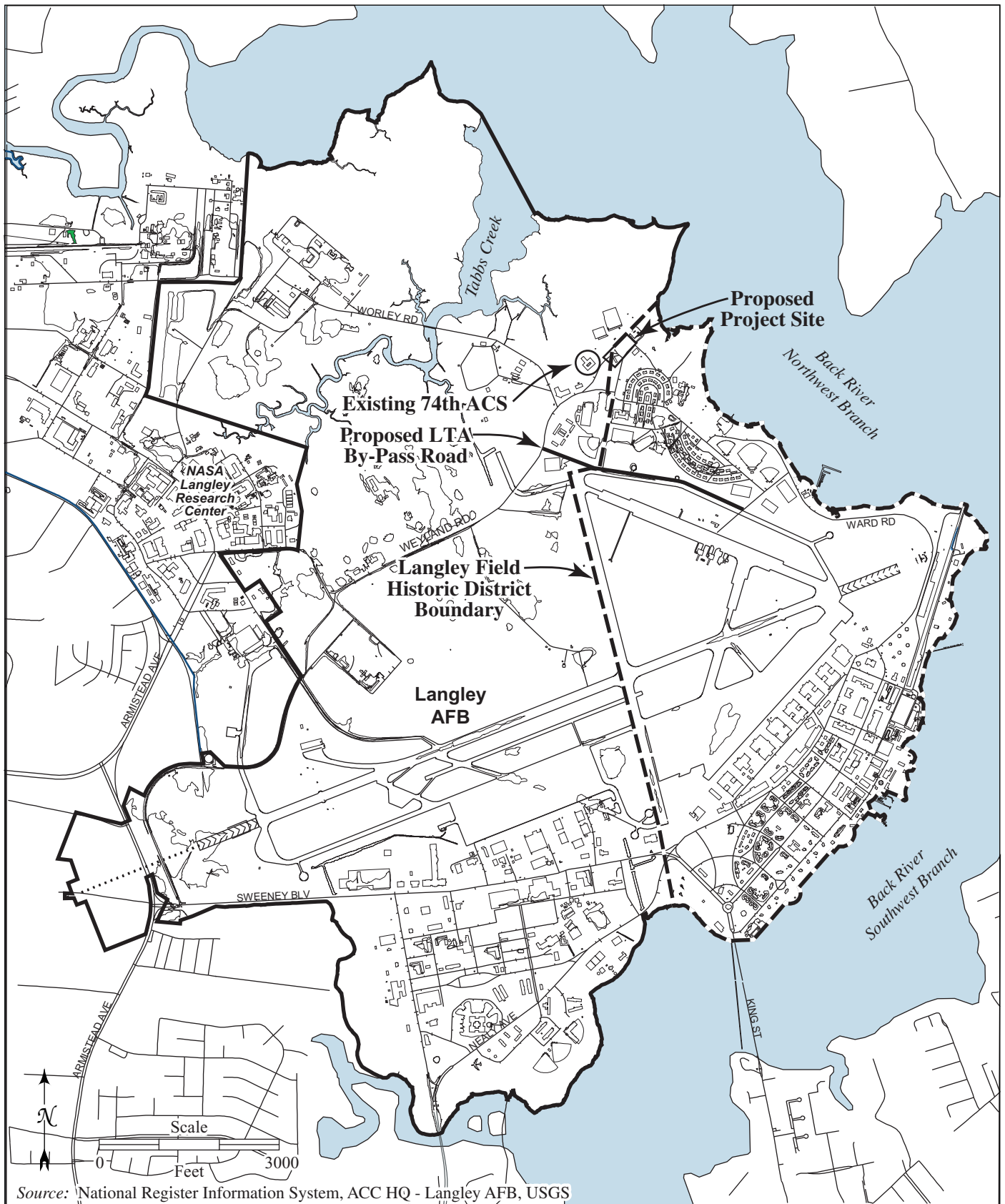


Figure 3-3. Langley Field Historic District

4.0 ENVIRONMENTAL CONSEQUENCES

Chapter 4 presents the environmental consequences of implementing the Proposed Action, Langley AFB Alternative or No-Action Alternative for each of the resource areas discussed in detail in Chapter 3. To identify the consequences, the effects of implementing the project elements (from Chapter 2) are compared against existing conditions (from Chapter 3). Cumulative effects of other foreseeable actions are presented in Chapter 5.

PROPOSED ACTION AT MOUNTAIN HOME AFB

The new facilities and parking for the 726 ACS would be located either within or directly adjacent to the site of the existing ACS complex and would be constructed on existing parking areas and adjacent open areas. Communications cabling and utilities (e.g., water and waste water) would extend off-site to connect with existing infrastructure systems. Military family housing is located northwest of the proposed site, the base golf course is to the northwest, and aircraft hangars are to the west. The number of military personnel assigned to the 726 ACS would triple from 125 to 370. The truck fleet would increase from 101 two-ton trucks to 168 five-ton trucks.

LANGLEY AFB ALTERNATIVE

New facilities and parking for the 74th ACS would be located a short distance to the east of the existing facility. The southern portion of the proposed site is currently occupied by a greenhouse (Building 1001) while the northern portion is used by the 74th ACS for GOV parking. Immediately to the north of the proposed site is an abandoned structure (Building 1004) and military family housing is located about 300 feet to the southwest. The number of military personnel assigned to the 74th ACS would almost triple from 125 to 370 and the vehicle fleet would increase from 80 to approximately 147 trucks and vans.

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, the proposed expansion of existing ACS facilities at either Mountain Home AFB or Langley AFB would not take place. Thus, proposed construction of new ACS facilities, increases in personnel, and associated increases in operations and maintenance activities would not occur. Operation of the existing ACS facilities at current staffing levels would continue.

1 **4.1 SOCIOECONOMICS**

2 **4.1.1 Proposed Action at Mountain Home AFB**

3 **EMPLOYMENT AND EARNINGS**

4 Increased employment is projected to result from three distinct activities: (1) arrival of active
5 duty personnel; (2) construction of facilities; and (3) secondary employment derived from
6 payroll expenditures and regional purchases of goods and services.

8 Without the cumulative projects discussed in Chapter
10 5, the ACS consolidation would increase personnel by
12 5 percent. The peak employment effect will be in FY03
14 with 351 additional jobs: 242 active duty personnel; 67
15 construction jobs; and 42 secondary jobs. With completion of construction activities, the long-
16 term employment increase will stabilize at 284 jobs. These increases in regional employment
17 are small when compared with existing conditions. The peak year impact will comprise less
18 than 0.2 percent of regional employment and long-term impacts will be about 0.1 percent of
19 current employment levels. Long-term earnings of active duty personnel will comprise about
20 0.1 percent of regional non-farm earnings. Although minor in regional magnitude, impacts to
21 employment and earnings are considered beneficial, particularly to the City of Mountain Home,
22 where a substantial portion of the off-base economic activity will occur.

*Short-term peak employment increase
of about 350 jobs. Long-term
employment increase of 284 jobs.*

23 **POPULATION**

24 The effects on regional population are estimated based on two major assumptions: (1) many of
25 the newly arriving active duty personnel will be accompanied by spouses and dependents; and
26 (2) it is unlikely that construction workers or holders of secondary jobs will migrate to the
27 region as a result of the construction jobs associated with the required facilities and other
28 ancillary jobs.

30 By the end of FY03, and following completion of the
32 facilities, it is estimated that a total of 538 additional
34 persons will take up residence in the region. Since it is
36 assumed that the additional jobs generated by the project
38 (both temporary ones associated with construction
39 activities and permanent secondary ones) will be filled by existing residents of the region, the
40 newly arriving persons will be active duty personnel and their accompanying family members.
41 This increase would comprise less than 5 percent of the population of the City of Mountain
42 Home and less than 0.2 percent of the population resident in the region in the year 2000.

*Long-term population increase of
about 540 persons and demand
for just over 200 housing units.*

1 **HOUSING**

2 Assuming no cumulative projects and no additional on-base housing for either accompanied or
3 unaccompanied personnel, all personnel would seek accommodations in surrounding
4 communities and especially in the City of Mountain Home. It is further assumed that all
5 personnel with accompanying family members will require a single dwelling unit while
6 unaccompanied personnel will double-up. Based on these assumptions, it is estimated that
7 there would be a demand for 206 housing units. This number comprises less than 0.2 percent of
8 the existing housing stock of the three-county ROI and less than 6 percent of the average annual
9 number of housing units permitted for construction in the ROI between 1990 and 1999.

10 Large numbers of active duty personnel and their families currently reside in the City of
11 Mountain Home and the community has in the past responded well to increase in demand for
12 housing. According to the Census of 2000, there were 401 vacant housing units in the City of
13 Mountain Home. The housing vacancy rate in the City of Mountain Home stood at 8.5 percent
14 at the time of the 2000 Census (April, 2000). Most of the vacant housing units were rental units
15 (12.8 percent vacancy rate) while the vacancy rate for homeowner units was much lower at 2.8
16 percent. If one assumes a natural (or frictional) vacancy rate of 3 percent, then the pool of
17 potential housing units available for occupancy is about 240, virtually all of which are rental
18 units. Over the period 1990 through 1999, an average of 104 housing unit permits were issued
19 annually in the City of Mountain Home and of these, 71 were for single family homes. It is
20 anticipated that the local housing market would respond adequately to the potential demand
21 for additional housing and experience negligible adverse impacts.

22 **4.1.2 Langley AFB Alternative**

23 **EMPLOYMENT AND EARNINGS**

24 The peak employment effect will be in FY03 by which time 353 additional jobs will be created:
25 242 active duty personnel; 69 construction jobs; and 42 secondary jobs. With completion of
26 construction activities, the long-term employment increase would stabilize at 284 jobs. These
27 increases in regional employment are small when compared with existing conditions. The peak
28 year impact would comprise less than 0.1 percent of regional employment and long-term
29 impacts will be also be less than 0.1 percent of current employment levels. Long-term earnings
30 of active duty personnel will comprise less than 0.1 percent of regional non-farm earnings.
31 Although minor in magnitude, impacts to employment and earnings are considered beneficial.

32 **POPULATION**

33 By the end of FY03, and following completion of the facilities, it is estimated that a total of 538
34 additional persons would take up residence in the region. The newly arriving persons would
35 be active duty personnel and their accompanying family members. This increase comprises
36 about 0.1 percent of the population resident in the region in the year 2000.

1 **HOUSING**

2 The large majority of newcomers to the region are assumed to seek accommodations in
3 surrounding communities and especially in the City of Newport News. It is further assumed
4 that all personnel with accompanying family members would require a single dwelling unit
5 while unaccompanied personnel will double-up. Based on these assumptions, it is estimated
6 that there would be a demand for 206 housing units. This number comprises less than 0.1
7 percent of the existing housing stock of the ROI and less than 7 percent of the average annual
8 number of housing units permitted for construction in the ROI between 1990 and 1999.
9 According to the Census of 2000, there were almost 23,000 vacant housing units in the ROI and
10 4,431 in the City of Newport News. The housing vacancy rate in the City of Newport News
11 stood at 6.0 percent at the time of the 2000 Census (April, 2000). Most of the vacant housing
12 units were rental units (6.2 percent vacancy rate) while the vacancy rate for homeowner units
13 was much lower at 1.9 percent. If one assumes a natural (or frictional) vacancy rate of 3 percent,
14 then the pool of potential housing units available for occupancy is about 1,980, virtually all of
15 which are rental units. With this quantity of housing units available for occupancy in Newport
16 News and additional vacant units in adjacent communities, adequate housing will be available
17 for new residents. Over the period 1990 through 1999, an average of 911 housing unit permits
18 were issued annually in Newport News and of these, 706 were for single family homes. It is
19 anticipated that the local housing market will respond adequately to the potential demand for
20 housing and experience negligible adverse impacts.

21 **4.1.3 No-Action Alternative**

22 Under the No-Action Alternative, the proposed expansion of existing ACS facilities at either
23 Mountain Home AFB or Langley AFB would not take place. There would be no new
24 construction, increase in personnel, or increase in operations and maintenance activities.
25 Operation of the existing ACS facilities at current staffing levels would continue. No impacts to
26 socioeconomics are anticipated.

27 **4.2 TRANSPORTATION**

28 **4.2.1 Proposed Action at Mountain Home AFB**

29 The implicit assumptions in the approach to impact assessment taken here are (1) that one a.m.
30 and one p.m. vehicle trip is generated for each new employee; and (2) that the assignment of
31 new traffic to the road network will be proportional to the existing traffic distribution.

33 The Proposed Action is expected to increase on-base
35 employment by 351 jobs in the short term, and 284 in the
37 long term. This creates the potential to generate up to 351
39 short-term and 284 long-term vehicle trips to and from
41 the installation each work day during the a.m. and p.m.
43 peak travel periods. Current employment on the

*Short-term increase in traffic
congestion at the I-84B/SH 67
(Airbase Road) intersection.
Congestion will be alleviated upon
completion of a new 4-lane railroad
underpass in 2004.*

1 installation is 4,993 jobs with the potential for 4,993 vehicle trips during the peak travel periods.
2 The proposed increase in employment and associated travel demand would increase peak
3 period travel demand by 7 percent during the short term and 6 percent during the long term.
4 The potential increase in off-base traffic attributable to implementation of the Proposed Action
5 could increase the congestion currently experienced at the I-84B/SH 67 (Airbase Road)
6 intersection. Under the cumulative projects scenario outlined in Chapter 5, the anticipated total
7 change in traffic volume is not expected to decrease the level of service for intersections serving
8 the installation. This is also the case even where the base-generated traffic is 100 percent of the
9 current total volume using the intersections during peak travel periods. There would not be a
10 significant impact on traffic flow or capacity.

11 **4.2.2 Langley AFB Alternative**

12 The Langley AFB Alternative is expected to increase on-base employment by 353 jobs in the
13 short term, and 284 in the long term. This creates the potential to generate up to 353 short-term
14 and 284 long-term vehicle trips to and from the installation each work day during the a.m. and
15 p.m. peak travel periods. ACS employment and associated travel demand would increase peak
16 period travel demand by less than 4 percent during the short term and 3 percent during the
17 long term.

18 As stated in section 3.2, construction of the LTA by-pass road is included in the Langley AFB
19 Alternative in order to alleviate potential increases in vehicular traffic associated with the
20 enlarged ACS presence (especially truck traffic) on streets in nearby residential areas. When
21 combined with the by-pass road, the anticipated 4 and 3 percent increases in traffic volumes
22 will not have a significant impact on traffic flow or capacity. For adjacent intersections and
23 access gates, the increase does not have the potential to degrade service levels from LOS D to
24 LOS E.

25 **4.2.3 No-Action Alternative**

26 The No-Action Alternative would have no new activities and no impacts to transportation.

27 **4.3 HAZARDOUS MATERIALS AND WASTE MANAGEMENT**

28 **4.3.1 Proposed Action at Mountain Home AFB**

29 Construction of the new facilities may require the use of hazardous materials by contractor
30 personnel. In accordance with the base's HAZMART procedures, copies of Material Safety Data
31 Sheets must be provided to the base and maintained on the construction site. During operation
32 of the facilities, the base would maintain any hazardous materials used by base personnel
33 according to these procedures and no adverse environmental consequences are anticipated.

34 Hazardous waste, such as paints and adhesives, may be generated by contractor personnel
35 during the construction of the facilities. Storage and disposal of these wastes would be

1 managed in accordance with the base's hazardous waste management plan. Hazardous wastes
2 are anticipated to be generated by base personnel during the operation and maintenance of the
3 facilities. These hazardous wastes would be handled in accordance with established base
4 procedures and therefore no adverse environmental consequences are expected.

5 No ERP site has been designated at the location of the proposed action. According to the
6 Mountain Home AFB Management Action Plan (MAP), dated December 2000, there is an area
7 to the southwest of Liberator Street that is identified as an area that is unevaluated or requires
8 additional evaluation. If, as a result of the implementation of the proposed project, this area is
9 to be disturbed, additional evaluations will be needed in accordance with the base MAP.

10 **4.3.2 Langley AFB Alternative**

11 Hazardous material use associated with the construction of the Langley AFB Alternative would
12 be similar to that under the Proposed Action. No adverse environmental consequences would
13 be expected.

14 Hazardous waste generation associated with the construction under the Langley AFB
15 Alternative would be similar to that under the Proposed Action. No adverse environmental
16 consequences would be expected.

17 As discussed in section 3.3, the proposed project site at Langley is near but not co-located with
18 two ERP sites: DP-09 and OT-25. ERP DP-09, an abandoned hydrogen and/or helium gas
19 cylinder disposal site is considered closed. The Remedial Investigation regarding ERP OT-25
20 was finalized in December of 2000. No adverse environmental consequences would result from
21 the implementation of the Langley AFB alternative.

22 **4.3.3 No-Action Alternative**

23 There would be no change under the No-Action Alternative and no impacts to hazardous
24 materials or waste management would occur.

25 **4.4 NOISE**

26 **4.4.1 Proposed Action at Mountain Home AFB**

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

1 During construction, implementation of the Proposed Action at Mountain Home AFB would
2 result in minor, temporary increases in localized noise levels in the vicinity of the project area.
3 The base is an active military facility that typically experiences high noise levels from daily
4 flight operations. The site of the proposed action is located in the existing 70-75 DNL airfield
5 noise contour zone, while the nearest noise sensitive receptors (on-base residents at the Eagle
6 View Military Family Housing [MFH]) are approximately 1,000 feet to the northeast of the site
7 and are partially in the same noise contour zone. Use of heavy equipment for site preparation
8 and development (i.e., grading, fill, and construction) would generate noise. Noise would be
9 similar to typical construction, last for the duration of the specific construction activities, and
10 could be reduced by the use of equipment sound mufflers and by restricting construction
11 activity to normal working hours (i.e., between 7:00 a.m. and 5:00 p.m.). Compared with
12 aircraft noise, noise produced by construction would generally be more impulsive, relatively
13 lower in magnitude, and spread out during the day. These localized noise increases could at
14 times annoy the residents in the existing Eagle View housing located approximately 1,000 feet
15 northeast of the site. Noise from truck traffic accessing the site is not expected to affect on-base
16 housing units. Noise calculations for various construction phases, assuming varying
17 construction equipment mixes, show that DNL values may increase from 1 to 3 dB above
18 current values at the nearest residences. The noise increases would be temporary and would be
19 limited to daytime hours; therefore, impacts are considered negligible.

20 It is expected that operational noise, associated with activities such as vehicle repair and
21 maintenance, or added traffic on existing roads by increased numbers of personnel or
22 transported equipment would not adversely affect the on-base residences. The personnel traffic
23 is expected to cause only minor noise increases. The bulk of these activities would occur
24 between 7:00 a.m. and 5:00 p.m. during weekdays.

25 Construction and operation noise would be contained within the base. There are no homes,
26 churches, schools or other noise sensitive receptors located immediately outside the base.
27 Therefore, no off-base noise-related environmental consequences are predicted.

28 **4.4.2 Langley AFB Alternative**

29 Implementation of the Langley AFB alternative would have minor, temporary increases in
30 localized noise levels in the vicinity of the project area during construction. The base is an
31 active military facility that typically experiences high noise levels from daily flight operations.
32 The potential development site is located in the 65 to 70 DNL airfield noise zone while nearby
33 residential areas to the east of the site are in the 70 to 75 DNL airfield noise zone. Use of heavy
34 equipment for site preparation and development (i.e., grading, fill, and construction) would
35 generate typical construction noise. It would last for the duration of the specific construction
36 activities during normal working hours (i.e., between 7:00 a.m. and 5:00 p.m.). Noise
37 calculations for various construction phases, assuming varying construction equipment mixes,
38 show that DNL values may increase from 1 to 3 dB above current values at the nearest
39 residences. Compared with aircraft noise, noise produced by construction would generally be

1 more impulsive, relatively lower in magnitude, and spread out during the day. The noise
2 increases would be temporary and would be limited to daytime hours; therefore, impacts are
3 considered negligible.

4 It is not expected that operational noise, associated with activities such as vehicle repair and
5 maintenance, or added traffic on existing roads by personnel or transported equipment would
6 adversely affect on-base residences. Most of these activities would occur during the standard
7 day work schedules although some shift work might occur.

8 Construction and operation noise would be contained within the base. There are no homes,
9 churches, schools or other noise-sensitive receptors located immediately outside the base.
10 Therefore, no off-base noise-related environmental consequences are anticipated.

11 **4.4.3 No-Action Alternative**

12 Under the No-Action Alternative, the proposed expansion of existing ACS facilities at either
13 Mountain Home AFB or Langley AFB would not take place. There would be no new
14 construction, increase in personnel, or increase in operations and maintenance activities and no
15 change to the associated noise environment.

16 **4.5 AIR QUALITY**

17 **4.5.1 Proposed Action at Mountain Home AFB**

18 The air quality analysis quantifies the changes due to: (1) the construction and operation of the
19 proposed vehicle maintenance facility, special operations facility, and supply storage facility;
20 (2) the addition of 245 personnel; and (3) the addition of 67 trucks.

21 Emissions of VOC, NO_x, CO, and PM₁₀ from construction activities are calculated using
22 emission factors from the CEQA (*California Environmental Quality Act*) *Air Quality Handbook*
23 (SCAQMD, 1993) and EPA's AP-42 emission factor document (USEPA 1995). The calculated
24 emissions include contributions from vehicle exhaust (i.e., on-site construction equipment,
26 material handling equipment, and worker trips) and
28 fugitive dust sources (e.g., from grading and site
30 preparation activities). The emissions, in tons per
32 construction period, associated with construction activities
34 under the Proposed Action are presented in Table 4-1.

*Mountain Home AFB is located in
an air quality attainment area for
all criteria pollutants. No CAA
conformity requirements apply.*

35 Total construction emissions generated on base would be less than 0.01 percent of regional
36 emissions in Elmore County. Emissions generated by construction projects are temporary in
37 nature and end when construction is complete. The actual emissions from fugitive dust (PM₁₀)
38 would be significantly less than those projected due to the implementation of control measures
39 in accordance with standard construction practices.

Table 4-1. Proposed Action Project Emissions

<i>Pollutant</i>	<i>Mt. Home AFB Baseline Emissions (tons per year)</i>	<i>Elmore County Emissions (tons per year)</i>	<i>Temporary Construction Emissions (tons)</i>	<i>Percent of Regional Contribution</i>	<i>Operational Emissions (tons per year)</i>	<i>Percent of Current Mt. Home AFB Baseline ¹</i>
CO	719.3	9,662	0.9	<0.01	48.3	6.7
VOCs	123.7	1,989	0.1	<0.01	4.7	3.8
NO _x	263.0	1,602	0.4	<0.01	9.2	3.5
SO ₂	10.2	372	0.03	<0.01	Negligible	Negligible
PM ₁₀	31.5	11,966	0.01	<0.01	0.9	2.9

Note: 1. Baseline includes stationary sources only.

1 Direct operational emissions from the new facilities are included in Table 4-1. Operational
2 emissions from the boilers were calculated based on the square footage of the new buildings
3 and natural gas usage rate of 2.0 cubic feet per square foot per month (SCAQMD, 1993). The
4 increase in personnel and trucks at the base would result primarily in new emissions from
5 increased vehicle trips. The personnel vehicle trip emissions were estimated using the
6 assumption of an average of 30 miles of travel per person per day for 365 days per year, while
7 the 67 new government trucks were assumed to travel 25 miles per day for 260 days per year.

8 Since Mountain Home AFB is located in an “attainment” area for all pollutants, the proposed
9 action would not interfere with any SIP measures, emission budgets, or milestones established
10 to achieve or maintain the NAAQS. Thus, there are no federal conformity requirements that
11 would apply.

12 **4.5.2 Langley AFB Alternative**

13 Construction emissions for the Langley AFB Alternative are projected to be quite similar to
14 those anticipated under the proposed action. In comparison to the Proposed Action, the only
15 differences would be emissions from the construction of the LTA by-pass road and additional
16 emissions from trucks needed to deliver fill material to the building sites. Emissions from the
17 operation of the natural gas-fired boilers, additional personnel, and additional trucks would be
18 the same as the proposed action. Emissions from trucks making seventy 60-mile round trips for
19 7 days to bring fill material to the facility construction areas were estimated using emission
20 factors for heavy duty diesel vehicles from *Calculation Methods for Criteria Pollutant Air Pollutant*
21 *Emission Inventories* (Jagielski and O’Brien, 1994).

22 General conformity regulations set forth in 40 CFR 51 Subpart W, and adopted in the Virginia
23 Administrative Code (9 VAC 5 Chapter 160), outline *de minimis* levels of emissions, below
24 which it is presumed that the action conforms to the SIP. The *de minimis* levels for O₃ precursors
25 in a maintenance area outside of an O₃ transport region (i.e., Hampton Roads AQCR) are 100
26 tons per year of VOCs emissions and 100 tons per year of NO_x. In addition, the action’s

1 emissions (both direct and indirect) must be compared to the regional inventory to determine if
 2 the emissions are “regionally significant.”

4 While construction activities are of short duration,
 6 emissions during the construction period are quantified
 8 to determine their impacts on regional air quality.
 10 These emissions are compared to existing baseline
 12 emissions and federal conformity *de minimis* thresholds
 14 for O₃ precursors (VOCs and NO_x). As shown in Table
 16 4-2, total construction emissions generated on base and
 17 within the Hampton Roads AQCR would be much less than ten percent when compared to
 18 regional emissions and would be below the 100 tons per year *de minimis* federal conformity
 19 thresholds for NO_x and VOCs.

Air quality emissions associated with construction and operations at Langley AFB would not exceed de minimis thresholds and would, thus, be in compliance with CAA conformity requirements.

20 Operational emission increases of O₃ precursors (NO_x and VOCs) are also well below the *de*
 21 *minimis* threshold levels and well below the regional significance threshold defined by 10
 22 percent of the regional emissions (i.e., 836 tons per year of NO_x and 798 tons per year of VOCs),
 23 thus demonstrating compliance with CAA conformity requirements.

24 Relative to overall base emissions, the new emissions from this alternative would result in
 25 negligible increases in pollutants, as shown in Table 4-2. These changes would not measurably
 26 change base air quality or affect the attainment status of the region.

Table 4-2. Langley AFB Alternative Project Emissions

<i>Pollutant</i>	<i>Langley AFB Baseline Emissions (tons per year)</i>	<i>Hampton Roads AQCR Emissions (tons per year)</i>	<i>Temporary Construction Emissions (tons)</i>	<i>Percent of Regional Contribution</i>	<i>Operational Emissions (tons per year)</i>	<i>Percent of Current Langley AFB Baseline ¹</i>
CO	775.4	257,325	2.0	<0.01	48.3	6.2
VOCs	137.6	79,750	0.3	<0.01	4.7	3.4
NO _x	271.0	83,560	1.3	<0.01	9.2	3.4
SO ₂	6.6	110,220	0.1	<0.01	Negligible	Negligible
PM ₁₀	12.7	49,860	0.1	<0.01	0.9	7.1

Note: 1. Baseline includes stationary sources only.

27 **4.5.3 No-Action Alternative**

28 Under the No-Action Alternative, operation of the existing ACS facilities at current staffing
 29 levels would continue and no changes to air quality are anticipated.

1 **4.6 WATER RESOURCES**

2 **4.6.1 Proposed Action at Mountain Home AFB**

3 **SURFACE WATER**

4 Construction projects associated with the proposed action include paving and construction of
5 buildings with impermeable surfacing. The proposed construction area includes both
6 undeveloped and developed space. During construction, soils would temporarily be exposed to
7 compaction, thus reducing water infiltration and increasing water runoff. However, due to the
8 small amount of acreage involved in the proposed construction (less than 3 acres) and the
9 existing impervious layers already affecting the area, the proposed construction is not likely to
10 affect surface water characteristics on base.

11 Since fewer than 5 acres would be disturbed by the proposed construction, a NPDES storm
12 water permit would not be required. However, if the construction footprint exceeded 5 acres,
13 Mountain Home AFB would obtain or update a permit as required. Should construction
14 commence later than March of 2003, such a permit would be required based on the revised
15 requirement stipulating one acre as the triggering mechanism. Under the NPDES permit, a
16 Storm Water Pollution Prevention Plan (SWPPP) addressing erosion and sediment control
17 would be developed prior to construction. The SWPPP would include best management
18 practices addressing the elimination or reduction of sediments and non-storm water discharges.

19 **GROUNDWATER**

20 Construction and paving activities associated with the proposed action would result in slightly
21 less available acres (less than 3 acres) to facilitate groundwater recharge. Given the low average
22 annual precipitation of 11 inches, infiltration historically has not been a critical source of
23 recharge (United States Air Force 1996).

24 **FLOODPLAINS**

25 As no floodplain has been identified on base, and the existing potential for flooding is minimal,
26 the proposed action would not increase or change the flood hazards or floodplain regime.

27 **4.6.2 Langley AFB Alternative**

28 **SURFACE WATER**

29 Implementation of the Langley AFB Alternative would involve the importation of fill material
30 to elevate the proposed new buildings above inundation levels. The building footprints would
31 be engineered to achieve proper drainage and would not noticeably affect surface water
32 characteristics on base.

1 It is likely that construction activity associated with the proposed new ACS facilities and the
2 LTA by-pass road would disturb over 5 acres. This would require Langley AFB to update their
3 existing Virginia Pollution Discharge Elimination System (VPDES) storm water permit. Under
4 the VPDES permit, a Storm Water Pollution Prevention Plan (SWPPP) addressing erosion and
5 sediment control would be developed prior to construction. The SWPPP would include best
6 management practices addressing the elimination or reduction of sediments and non-storm
7 water discharges. Langley AFB has also agreed to abide by the provisions of the Chesapeake
8 Bay Preservation Act.

9 **GROUNDWATER**

10 Construction and paving activities associated with the proposed action would result in slightly
11 fewer available acres (about 5 acres) to facilitate groundwater recharge. Compared to the entire
12 main base area of 2,883 acres, this would represent a negligible reduction in the area on base
13 available for infiltration.

14 **FLOODPLAINS**

16 The site of the proposed project is located within the 100-year
18 floodplain. Under Executive Order 11988 - Floodplain
20 Management of May 24, 1977, the agency (Air Force) shall
22 comply with a number of requirements. To comply with
24 these requirements the Air Force would design or modify
26 facilities to minimize potential harm to or within the
27 floodplain, and prepare and circulate a notice containing an explanation of why the action is
28 proposed to be located in the floodplain. New structures or facilities located in the floodplain
29 would have accepted floodproofing and other flood protection measures applied.

*Construction in the 100-year
floodplain at Langley AFB will
require a finding under
Executive Order 11990 -
Floodplain Management.*

30 **4.6.3 No-Action Alternative**

31 Under the No-Action Alternative there would be no effects to water resources.

32 **4.7 BIOLOGICAL RESOURCES**

33 **4.7.1 Proposed Action at Mountain Home AFB**

35 Construction and ground-disturbing activities would affect
37 approximately three acres. Ground-disturbing activities
39 could occur in an area seeded with winterfat (*Ceratoides*
41 *lanata*) located just to the northwest of the proposed
43 development site. Winterfat is a native, drought-resistant
44 plant in the area whose reintroduction and expansion on the base is a measure designed to
45 reduce the coverage of non-native vegetation species such as cheatgrass and tumbleweed
46 (Angelina Martin, 2002). Winterfat is not a protected species, however, its expansion on the

*No impacts to state and
federally listed species, habitat
or wetlands expected.*

1 base is considered beneficial. No significant effects to listed vegetation and wildlife are
2 expected.

3 Construction of the new ACS buildings and parking lots would not affect wetlands or aquatic
4 habitat occurring at Mountain Home AFB because no such features are within or adjacent to the
5 construction footprint.

6 No impacts to federally listed threatened or endangered species or critical habitat are expected
7 to occur on Mountain Home AFB. Although burrowing owls are known to occur in an area
8 north of the current flightline (United States Air Force 1998c), the proposed construction
9 activities under this alternative would not affect this area.

10 **4.7.2 Langley AFB Alternative**

11 Under this alternative action, construction would disturb approximately five acres in a
12 currently developed area of the base. Due to the small footprint of disturbance, no negative
13 effects to vegetation or wildlife are expected.

14 No wetlands, streams, creeks, or ponds/lakes have been identified in the proposed construction
15 area; therefore, wetlands and freshwater aquatic communities would not be affected. Best
16 management practices would be applied to control sedimentation and erosion during
17 construction, thereby avoiding secondary impacts to wetlands. A Clean Water Act Section 404
18 permit for discharges to waters of the United States is not anticipated. As may be required by
19 Executive Orders 11990 (Protection of Wetlands), the appropriate designee of the Secretary of
20 the Air Force will publish a “finding of no practicable alternative” for any activities impacting
21 floodplains and wetlands, respectively.

22 Species listed, proposed for listing, or candidates for listing as threatened and endangered in
23 accordance with the ESA are not likely to be adversely affected by the proposed project. Critical
24 habitat for the bald eagle does not exist on base. Incidentally occurring federally listed,
25 proposed, or candidate species are not likely to be adversely affected by the proposed project
26 because the construction area is so small.

27 State-protected species would also not be adversely affected by the proposed project because
28 their habitat will not be altered. At Langley AFB, it is expected that no special species or
29 sensitive habitats will be impacted.

30 **4.7.3 No-Action Alternative**

31 No impacts to biological resources are anticipated.

1 **4.8 CULTURAL RESOURCES**

2 **4.8.1 Proposed Action at Mountain Home AFB**

3 Impacts to cultural resources are not expected under the Proposed Action. No historic
4 architectural resources have been identified in the vicinity (United States Air Force 1998).
5 Intensive archaeological survey of the area of proposed development (SAIC 1991) indicated no
6 cultural resources. No traditional resources have been identified at Mountain Home AFB
7 (United States Air Force 1998). The base coordinates Native American issues with the
8 Shoshone-Paiute Tribes of the Duck Valley Reservation and Shoshone-Bannock Tribe of the Fort
9 Hall Reservation. Unanticipated cultural resource discoveries during construction would be
10 handled in accordance with AFI 32-7065 and Federal regulations.

11 **4.8.2 Langley AFB Alternative**

12 Adverse impacts to cultural resources (historic architecture) would potentially occur under this
13 alternative. Relocation of the greenhouse (Building 1001) that was built in 1934 and is a
14 contributing member of the Langley Field Historic District could impact its integrity and NRHP
15 eligibility. Additionally, new construction within the Langley Field Historic District has the
16 potential to impact the visual character of the District. Relocation of Building 1001, facility
17 renovation, and new road and facility construction in the Historic District would be conducted
18 in consultation with the Virginia Department of Historic Resources and in compliance with
19 Section 106 of the NHPA.

21 Open areas in the vicinity of the greenhouse and the old
23 hydrogen plant have the potential to contain unrecorded
25 historic archaeological resources (USACE 1998) that
27 could be adversely impacted by facility construction
29 under this alternative. This area has been recommended
31 for archaeological testing (USACE 1998). Construction of
33 the LTA by-pass road would take place in an area that
35 has not been identified as having a high potential for
36 archaeological resources (USACE 1998) and impacts to significant archaeological resources are
37 not expected. Compliance with Section 106 of the NHPA would take place prior to project
38 construction or demolition. Unanticipated archaeological discoveries during construction
39 would be handled in accordance with AFI 32-7065 and Federal regulations.

*Potentially adverse impacts at
Langley AFB to historic architectural
resources contained in the Langley
Field Historic District. Consultation
with Commonwealth of Virginia
SHPO will be needed if this
alternative were selected.*

40 No impacts to traditional resources are expected under this alternative. No traditional
41 resources or American Indian issues have been identified for Langley AFB (United States Air
42 Force 1996b). No federally recognized American Indian tribes or lands are located in Virginia.

43 **4.8.3 No-Action Alternative**

44 In the absence of new activities there would be no impacts to cultural resources.

5.0 CUMULATIVE EFFECTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

5.1 CUMULATIVE EFFECTS

This chapter 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

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.

In this EA, an effort has been made to identify all actions that are being considered and that are in the planning stage at this time. To the extent that details regarding such actions exist and the actions have a potential to interact with the proposed action outlined in this EA, these actions are included in the cumulative analysis. This approach enables decision-makers to have the most current information available so that they can evaluate fully 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 alternative but also the incremental contribution of past, present, and reasonably foreseeable actions.

PROPOSED ACTION AT MOUNTAIN HOME AFB

PAST AND PRESENT ACTIONS RELEVANT TO THE PROPOSED ACTION

In 1997, the 34th Bomb Squadron (34 BS) and its eight B-1B aircraft relocated to Mountain Home AFB, Idaho from Ellsworth AFB, South Dakota. This action allowed the 366th Composite Wing (366 WG) based at Mountain Home AFB to maintain all its assigned composite wing aircraft in one permanent location. The bed-down of the B-1B aircraft at the base involved the addition of over 570 additional authorizations, a 14 percent increase in manpower authorizations at the time. The bed-down required a substantial construction program that included alterations to existing hangars, two new large aircraft hangars, corrosion control and fuels maintenance, a

1 new squadron operations facility, a new dormitory to accommodate 140 single enlisted
2 personnel, a new avionics facility, new munitions storage facilities, and alterations to operations
3 facilities to accommodate the maintenance requirements of the arriving aircraft. The total cost
4 of the construction program exceeded \$42 million.

5 ***REASONABLY FORESEEABLE FUTURE ACTIONS***

6 Mountain Home AFB is an active military installation that undergoes continuous change in
7 mission and training requirements. This process of change is consistent with the United States
8 defense policy that the Air Force must be ready to respond to threats to American interests
9 throughout the world. The base, like any other major institution, also requires new occasional
10 construction, facility improvements, and infrastructure upgrades. Examples of such potential
11 future activities follow. It is anticipated that an average of 100 military family housing units per
12 year will be replaced from FY03 through FY07, inclusive, at annual cost of about \$25 million.
13 Other MILCON program priorities for FY02 include replacement of aircraft parking apron areas
14 (\$14.6 million), addition to and alteration of the base fitness center (\$10.1 million), a combat
15 supply warehouse (\$10.9 million), and replacement of airfield pavements (\$9.2 million).

16 It is likely that the squadron of B-1B aircraft and the KC-135 refueling tankers associated with
17 the mission that relocated to Mountain Home AFB in 1997 will be re-assigned elsewhere within
18 the coming two years. Also within the next two years it is anticipated that additional F-15E jet
19 fighters and accompanying command and support personnel will be realigned to Mountain
20 Home AFB. It is estimated that there could be a loss of about 750 personnel associated with the
21 B-1B and KC-135 aircraft. However, there will likely be an increase of about 150 personnel tied
22 to the arrival of additional F-15E aircraft and 335 personnel associated with command and
23 control organizations.

24 **LANGLEY AFB ALTERNATIVE**

25 ***PAST AND PRESENT ACTIONS RELEVANT TO THE LANGLEY AFB ALTERNATIVE***

26 In 1998, the Air Force implemented a force structure change that added 12 F-15C aircraft and
27 134 personnel to Langley AFB, increasing the total number of F-15C aircraft to 66. The base, like
28 any other major institution, also requires new occasional construction, facility improvements,
29 and infrastructure upgrades. Langley AFB is currently upgrading portions of its water and
30 wastewater system and has recently completed a new library. In FY 01 the base started
31 demolition of the Langley Tow Tank (water storage) and construction of a new fitness center.

32 Langley AFB has been selected for the bed-down of the Initial Operational Wing of the new F-22
33 aircraft. The majority of the proposed projects associated with the F-22 beddown at Langley
34 AFB will be constructed along the flight-line. Mitigation measures associated with the F-22
35 beddown primarily will document the historic hangars that will be replaced with new facilities.

1 **REASONABLY FORESEEABLE FUTURE ACTIONS**

2 During the timeframe FY 02 to FY 06 Langley AFB has proposed a number of actions that are
3 independent of the action under assessment here and would be implemented regardless of a
4 decision to consolidate the 74th ACS and the 726th ACS. These actions include establishing a
5 Combined Air Operations Center-Experimental and the bed-down of the Aerospace
6 Expeditionary Force Center. Construction programs include a new dormitory and family
7 housing (\$24.8 million in 2002), family housing (\$5.6 million in 2003), privatizing family housing
8 (\$17 million in 2003), an Operations Support Center (\$19 million in 2005), and replacement of
9 water and sanitary mains in a portion of the base. Langley AFB also proposes to develop
10 improved community service facilities. These include the following four construction projects:
11 (1) four new American with Disabilities Act (ADA)-compliant housing units, (2) a new Water
12 Tower, (3) a new Youth Center, and (4) a new Community Services Center.

13 **5.1.3 Analysis of Cumulative Impacts**

14 **PROPOSED ACTION AT MOUNTAIN HOME AFB**

15 The following analysis considers the actions outlined above in combination with the proposed
16 action at Mountain Home AFB to determine whether such a relationship could result in
17 potentially significant impacts not identified when the proposed action is considered alone.

18 The departure of the B-1 and KC-135 aircraft currently stationed at Mountain Home AFB and
19 the virtually concurrent relocation to the base of additional F-15E jet fighters will likely result in
20 minor, if any, environmental impacts except in the area of socioeconomics. With the potential
21 reduction of 265 personnel from these activities at Mountain Home AFB, minor adverse
22 socioeconomic impacts could be anticipated. These cumulative actions in combination with the
23 Proposed Action would ameliorate the potential impacts associated with the departure of the B-
24 1B and KC-135 aircraft. The cumulative results could be a personnel reduction of 20 positions.

25 The potential exists for short-term deterioration in air quality when multiple construction
26 projects involving replacement and re-surfacing of aircraft runways and parking aprons
27 coincide.

28 **LANGLEY AFB ALTERNATIVE**

29 A previous EA for the implementation of a force structure change at Langley AFB and the
30 construction of a new water tower did not identify any significant environmental consequences
31 (United States Air Force 1998, 2001). The result of the force structure change left Langley AFB
32 operating at levels below those occurring in the early 1990s. The establishment of a Combined
33 Air Operations Center-Experimental and the bed-down of the Aerospace Expeditionary Force
34 Center, while adding a total of 122 new personnel, qualified for categorical exclusions because
35 no new construction was required to support the actions.

1 Although not fully analyzed at this time in separate environmental analysis, none of the future
2 infrastructure actions would be expected to result in more than minor impacts either
3 individually or cumulatively. All actions affect very specific, circumscribed areas, and the
4 magnitude of the actions is small. Given that the action alternative would likewise have a
5 minimal effect within the base, the combined impacts of these actions would remain well below
6 the threshold of significance for any resource category. The demolition of the Langley Tow
7 Tank has been evaluated and would generate a considerable amount of truck traffic at the West
8 Gate that might overlap with the truck traffic from the Fitness Center.

9 The beddown of the Initial Operational Wing of F-22 aircraft at Langley AFB has been analyzed
10 in an Environmental Impact Statement. Construction at Langley AFB would impact the
11 architectural and visual aspects of the Langley Field Historic District. The proposed F-22
12 construction would have a minimal effect on noise, air quality, and traffic. The combined
13 environmental consequences of F-22 actions, other foreseeable projects, and the Langley ACS
14 alternative would not be significant for any resource with the exception of historic architectural
15 resources. Mitigation measures would be implemented to address consequences to historic
16 architecture. Cumulative impacts associated with the Langley AFB Alternative could occur in
17 the areas of visual resources and cultural resources. These impacts would both be attributable
18 to the potential effects to the Langley Field Historic District.

19 **5.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF** 20 **RESOURCES**

21 NEPA requires that environmental analysis include identification of any irreversible and
22 irretrievable commitments of resources which would be involved in the proposed action should
23 it be implemented. Irreversible and irretrievable resource commitments are related to the use of
24 nonrenewable resources and the effects that the uses of these resources have on future
25 generations. Irreversible effects primarily result from the use or destruction of a specific
26 resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame.
27 Irretrievable resource commitments involve the loss in value of an affected resource that cannot
28 be restored as a result of the action (e.g., extinction of a threatened or endangered species or the
29 disturbance of a cultural site).

30 **Proposed Action at Mountain Home AFB**

31 For the proposed action, most resource commitments are neither irreversible nor irretrievable.
32 Most environmental consequences are short-term and temporary (such as air emissions from
33 construction) or longer lasting but negligible (e.g., utility increases). Those limited resources
34 that may involve a possible irreversible or irretrievable commitment under the proposed action
35 are discussed below.

36 Construction of the new facilities required for the consolidation of the 726th ACS and 74th ACS at
37 Mountain Home AFB would require consumption of limited amounts of materials typically

1 associated with interior and exterior construction (e.g., concrete, wiring, insulation, and
2 windows). The amount of these materials used is not expected to significantly decrease the
3 availability of the resources.

4 **Langley AFB Alternative**

5 For the Langley AFB alternative, most resource commitments are also neither irreversible nor
6 irretrievable. Construction at Langley AFB could have irreversible consequences for the
7 Langley Field Historic District. Construction of the new facilities required for the consolidation
8 of the 74th ACS and 726th ACS at Langley AFB would require consumption of limited amounts
9 of materials typically associated with interior and exterior construction (e.g., concrete, wiring,
10 insulation, and windows). The amount of these materials used is not expected to significantly
11 decrease the availability of the resources.

12 **No-Action Alternative**

13 For the No-Action Alternative the less efficient commitment of facilities and personnel does not
14 produce definable irreversible and irretrievable commitments of non-renewable resources.

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Appendix A

Agency Coordination and Draft Environmental Assessment Distribution List

1 **1. AGENCY COORDINATION**

2 Governor’s Special Assistant for Military Affairs
3 150 South 3rd East
4 Mountain Home AFB, ID 83647

5 Idaho State Historical Society
6 1109 Main Street, Suite 250
7 Boise, ID 83702-5642

8 United States Fish & Wildlife Service
9 Virginia Field Office
10 6669 Short Lane
11 P.O. Box 99
12 Gloucester VA 23061

13 United States Fish and Wildlife Service
14 1387 Vinnel Way
15 Boise, ID 83709

16 Virginia Department of Environmental Quality
17 Office of Environmental Impact Review
18 629 East Main Street
19 P.O. Box 1009
20 Richmond, VA 23240

21 Virginia Department of Game and Inland Fisheries
22 Environmental Services Section
23 P.O. Box 11104
24 Richmond, VA 23230-1104

25 Virginia State Historic Preservation Office
26 Department of Historic Resources
27 2801 Kensington Avenue
28 Richmond, VA 23221

29

1 **2. DRAFT ENVIRONMENTAL ASSESSMENT DISTRIBUTION LIST**

2 Bruneau District Library
3 P.O. Box 278, #2 Ruth Street
4 Bruneau, ID 83604-0278

5 Governor's Special Assistant for Military Affairs
6 150 South 3rd East
7 Mountain Home AFB, ID 83647

8 Hampton Public Library
9 4207 Victoria Blvd
10 Hampton, VA 23669

11 Idaho State Historical Society
12 1109 Main Street, Suite 250
13 Boise, ID 83702-5642

14 Langley Air Force Base Library
15 Bateman Library
16 42 Ash Avenue
17 Langley AFB, VA 23665-2769

18 Mountain Home Air Force Base Library
19 366 SVS/SVMG Base Library
20 520 Phantom Ave, Bldg 2427
21 Mountain Home, ID 83648

22 Mountain Home Public Library
23 790 North 10th East
24 Mountain Home, ID 83647-2830

25 Poquoson Public Library
26 500 City Hall Avenue
27 Poquoson, VA 23662

28 United States Fish & Wildlife Service
29 Virginia Field Office
30 6669 Short Lane
31 P.O. Box 99
32 Gloucester VA 23061

33 United States Fish and Wildlife Service
34 1387 Vinnel Way
35 Boise, ID 83709

- 1 Virginia Department of Environmental Quality
- 2 Office of Environmental Impact Review (15 Copies)
- 3 629 East Main Street
- 4 P.O. Box 1009
- 5 Richmond, VA 23240

- 6 Virginia Department of Game and Inland Fisheries
- 7 Environmental Services Section
- 8 P.O. Box 11104
- 9 Richmond, VA 23230-1104

- 10 Virginia State Historic Preservation Office
- 11 Department of Historic Resources
- 12 2801 Kensington Avenue
- 13 Richmond, VA 23221

- 14 York County Public Library
- 15 100 Long Green Blvd
- 16 Yorktown, VA 23693

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Appendix B

Biological Resources Tables

1

**Table B-1. Common or Characteristic Flora and Fauna and
Associated Habitats on Mountain Home AFB**

<i>Species</i>	<i>Associated Habitat</i>
PLANTS	
Biscuitroot <i>Lomatium</i> sp.	Sagebrush
Bottlebrush squirreltail <i>Sitanion hystrix</i>	Sagebrush/Grasslands/Urban
Bur buttercup <i>Ranunculus testiculatus</i>	Sagebrush/Urban/Disturbed Areas
Cheatgrass <i>Bromus tectorum</i>	Sagebrush/Grasslands/Disturbed Areas
Halogeton <i>Halogeton glomeratus</i>	Disturbed Areas
Indian ricegrass <i>Oryzopsis hymenoides</i>	Sagebrush
Lupine <i>Lupinus</i> sp.	Sagebrush
Russian thistle <i>Sasola kali</i>	Disturbed Areas
Sagebrush <i>Artemisia</i> spp.	Sagebrush/Grasslands
Sandberg's bluegrass <i>Poa sandbergii</i>	Sagebrush/Grasslands
Tumble mustard <i>Sisymbrium altissimum</i>	Disturbed Areas
Winterfat <i>Eurotia lanata</i>	Sagebrush
Yellow salsify <i>Tragopogon dubius</i>	Sagebrush/Urban
Annual Kochia <i>Kochia scoparia</i>	Roadsides/Irrigated areas
Puncturevine <i>Tribulus terrestris</i>	Sandy soil in warm, dry region
Crested Wheatgrass <i>Agropyron cristatum</i>	Open, dry habitat
Filaree or Crane's Bill <i>Erodium cicutarium</i>	Waste-land/Roadside
AMPHIBIANS	
Pacific tree frog <i>Pseudacris regilla</i>	Aquatic

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Table B-1. Common or Characteristic Flora and Fauna and Associated Habitats on Mountain Home AFB (continued)

<i>Species</i>	<i>Associated Habitat</i>
REPTILES	
Western terrestrial garter snake <i>Thamnophis elegans</i>	Urban/Variou
Gopher snake <i>Pituophis catenifer</i>	Variou
Bullsnake <i>Pituophis melanoleucus sayi</i>	Plains/Prairies
Prairie Rattlesnake <i>Crotalus viridis viridis</i>	Grasslands/Rocky outcrops & ledges
BIRDS	
American robin <i>Turdus migratorius</i>	Variou
Brown-headed cowbird <i>Molothrus ater</i>	Agriculture/Urban
Canada goose <i>Branta canadensis</i>	Aquatic/Urban/Agricultural
Common goldeneye <i>Bucephala clangula</i>	Aquatic
European starling <i>Sturnus vulgaris</i>	Urban/Variou
House finch <i>Carpodacus mexicanus</i>	Urban/Grasslands/Shrubland/Canyon
Killdeer <i>Charadrius vociferous</i>	Grasslands
Mallard <i>Anas platyrhynchos</i>	Aquatic/Urban
Red-tailed hawk <i>Buteo jamaicensis</i>	Variou
Western meadowlark <i>Sturnella neglecta</i>	Fields
American Avocet <i>Recurvirostra Americana</i>	Shallow, marshy or muddy pools
Great Horned Owl <i>Bubo virginianus</i>	Wooded habitat
Bufflehead <i>Bucephala albeola</i>	Small lakes/Bays
Wood Duck <i>Aix sponsa</i>	Sheltered waters with trees/Ponds, rivers & wooded swamps
Blue-winged Teal <i>Anas discors</i>	Shallow water with emergent vegetation
American Coot <i>Fulica Americana</i>	Marshy wetlands
Western Grebe <i>Aechmophorus occidentalis</i>	Marshy ponds/Open water in winter
American Kestrel <i>Falco sparverius</i>	Open areas/Nests in cavities

Table B-1. Common or Characteristic Flora and Fauna and Associated Habitats on Mountain Home AFB (continued)

<i>Species</i>	<i>Associated Habitat</i>
BIRDS	
Black-billed Magpie <i>Pica hudsonia</i>	Open areas with scattered trees
Common Raven <i>Corvus corax</i>	Mainly in mountainous areas. Also in flat, arid grasslands
MAMMALS	
Badger <i>Taxidea taxus</i>	Shrublands/Grasslands
Little brown bats <i>Myotis spp.</i>	Various
Coyote <i>Canis latrans</i>	Shrublands/Grasslands
Hoary bat <i>Lasiurus cinereus</i>	Various
Silver-haired bat <i>Lasionycteris noctivagans</i>	Various
Townsend's ground squirrel <i>Spermophilus townsendii</i>	Grasslands
Vole <i>Microtus spp.</i>	Various
Source: SAIC 2002.	

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Table B-2. Threatened, Endangered, and Special-Status Species/Communities That Occur or Potentially Occur on Mountain Home AFB

<i>Species</i>	<i>Status</i>	<i>Areas of Occurrence</i>
LICHENS		
Wovenspore lichen <i>Texosporium sancti-jacobi</i>	FSC/SGP2	Sagebrush steppe with native bunch grass component. No records from base.
PLANTS		
Bugleg goldenweed <i>Haplopappus insecticuriis</i>	FSC/SGP3	Disturbed sagebrush communities with grass component. No records from base.
Davis' Peppergrass <i>Lepidium davisii</i>	FSC/SGP3	Davis' Peppergrass typically occurs in association with Wyoming Big Sagebrush. Habitat near construction has been removed by recent construction.
Idaho douglasia <i>Douglasia idahoensis</i>	FSC/SGP3	Found in mountains of central Idaho above 7,200 feet. Does not occur on base.
Mourning milkvetch <i>Astragalus atratus var. insepatus</i>	FSC/SGP3	Late seral sagebrush dominated communities. No records from base. No habitat on base.
Slickspot peppergrass <i>Lepidium papilliferum</i>	FC/SGP2	Small sodic playas in shrubsteppe habitat. Endemic to western Idaho. No records from base.
Ute ladies'-tresses <i>Spiranthes diluvialis</i>	FT/SGP2	Sandy gravel bars in a riverine situation. No records from western Idaho. No habitat on base.
INVERTEBRATES		
Bliss Rapids snail <i>Taylorconcha serpenticola</i>	FT	Aquatic habitats. Does not occur on base.
Idaho springsnail <i>Pyrgulopsis idahoensis</i>	FE	Aquatic habitats. Does not occur on base.
Snake River physa snail <i>Physa natricina</i>	FE	Aquatic habitats. Does not occur on base.
FISH		
Bull Trout <i>Salvelinus confluentus</i>	FT	Rivers and streams within Columbia River Basin. Requires high water quality and tree cover.
AMPHIBIANS		
Columbia spotted frog <i>Rana luteiventris</i>	FC/SSC	High elevation riparian areas with appropriate escape cover. Does not occur on base. Subpopulation north of Snake River does not have candidate status.
Northern leopard frog <i>Rana pipiens</i>	FSC/SSC	Riparian areas with high vegetation. No records from base.
Western toad <i>Bufo boreas</i>	FSC/SSC	Variety of forested, meadow, and desert habitats in proximity to appropriate aquatic breeding habitat. Not well known from southwestern Idaho. No records from base.
REPTILES		
Ground snake <i>Sonora Semiannulata</i>	FW/SSC	Sagebrush, grasslands, and salt desert scrub with loose or sandy soil. Does not occur on base.
Longnose snake <i>Rhinocheilus lecontei</i>	FW/SSC	Shrub habitats and grasslands with rocky component. Does not occur on base.
BIRDS		
Bald eagle <i>Haliaeetus leucocephalus</i>	FT/SE	Near rivers and lakes with tall trees or cliffs. Winters along Bruneau, Owyhee, and Snake rivers. No habitat on base. Has potential to range onto base from Snake River habitats.

Table B-2. Threatened, Endangered, and Special-Status Species/Communities That Occur or Potentially Occur on Mountain Home AFB

<i>Species</i>	<i>Status</i>	<i>Areas of Occurrence</i>
BIRDS		
Black tern <i>Chlidonias niger</i>	SSC	Lakeshores and wetlands. Potential habitat exists, but no confirmed occurrences on the base or in the airspace.
Columbian sharp-tailed grouse <i>Tympanuchus phasianellus</i>	FSC/GSC	Open grassland and shrub habitats in proximity to stands of low growing trees. Extirpated from most of its former range. No records from base.
Flammulated owl <i>Otus flammeolus</i>	FW/SSC	Deciduous and evergreen forests, especially ponderosa; nests and roosts in tree cavities. Does not occur on base.
Long-billed curlew <i>Numenius americanus</i>	FSC/SP	Open grasslands in landscapes with good visibility. May occur in non-native seedings and near agricultural fields. No records from base.
Mountain quail <i>Oreortyx pictus</i>	FSC/SSC	Chapparral, brushy ravines, mountain slopes generally at higher elevations. Does not occur on base.
Western burrowing owl <i>Athene cunicularia hypugaea</i>	FSC/SP	Grasslands and shrublands. Frequents disturbed habitats. Associated with Townsend's ground squirrel and badger burrows. Four use areas identified on base.
White-headed woodpecker <i>Picoides albolarvatus</i>	FW/SSC	Nests in open coniferous mountain forests, especially ponderosa and sugar pine. Moves to lower elevations in winter.
Yellow-billed cuckoo <i>Coccyzus americanus</i>	FC/SSC	Higher elevation open woodlands and riparian areas.
MAMMALS		
Canada lynx <i>Lynx Canadensis</i>	FT/GSC	Remote upper montane and subalpine coniferous forest. No habitat on base. Does not occur on base.
Fisher <i>Martes pennanti</i>	FW/SSC	Arboreal species occupying forest habitats. Does not occur on base.
Gray wolf <i>Canis lupus</i>	FE(XN) SE	Historically extirpated from Idaho. An experimental population reintroduced to montane habitats of central Idaho is expanding. Does not occur on base.
Kit fox <i>Vulpes macrotis</i>	FW/SSC	Steppe and desert habitats. Little known for Idaho; occurrence based on very limited data.
Pygmy rabbit <i>Brachylagus idahoensis</i>	FW/GSC	Occurs in dense stands of tall sagebrush (big sagebrush). Distribution not well described. No habitat on base. No records on base.
N. American Wolverine <i>Gulo gulo luscus</i>	FW/SSC	Remote forested wilderness areas. Individuals have large home ranges. Does not occur on base.
<p>Source: SAIC 2002.</p> <p>Key to Status Codes:</p> <p>FE Federally Endangered (Listed by the USFWS and protected under the Endangered Species Act)</p> <p>FT Federally Threatened (Listed by the USFWS and protected under the Endangered Species Act)</p> <p>FC A Candidate species for listing by the USFWS as federally endangered or threatened</p> <p>FSC Federal Species of Concern (a designation by the Snake River Basin Field Office of the USFWS indicating the office is tracking the status and threats to the species)</p> <p>FW Federal Watch species (a designation by the Snake River Basin Field Office of the USFWS indicating the office is tracking the status and threats to the species)</p> <p>XN Experimental population designated nonessential by USFWS</p>		

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**Table B-3. Common or Characteristic Flora and Fauna and
Associated Habitats on Langley AFB**

<i>Species Name</i>	<i>Associated Habitat</i>
PLANTS	
Black cherry <i>Prunus serotina</i>	Deciduous Forest/Mixed Forest
Black willow <i>Salix nigra</i>	Forested Wetlands/Riparian
Cordgrass <i>Spartina spp.</i>	Brackish Coastal Marshes/Wetlands
Flowering dogwood <i>Cornus florida</i>	Deciduous Forest/Urban
Grape <i>Vitis spp.</i>	Riparian/Disturbed Areas
Greenbrier <i>Smilax spp.</i>	Deciduous Forest/Mixed Forest
Hickory <i>Carya sp.</i>	Deciduous Forest/Mixed Forest
Holly <i>Ilex opaca</i>	Deciduous Forest/Mixed Forest
Loblolly pine <i>Pinus taeda</i>	Evergreen Forest/Mixed Forest
Poison ivy <i>Toxicodendron radicans</i>	Riparian/Disturbed Areas
Red maple <i>Acer rubrum</i>	Deciduous Forest/Mixed Forest
Red mulberry <i>Moras rubra</i>	Deciduous
Sassafras <i>Sassafras albidum</i>	Deciduous Forest/Clearings and Openings
Southern red oak <i>Quercus falcata</i>	Deciduous Forest/Mixed Forest
Sweetgum <i>Liquidambar styraciflua</i>	Deciduous Forest/Mixed Forest
Tulip poplar <i>Liriodendron tulipifera</i>	Deciduous Forest
Virginia creeper <i>Parthenocissus spp.</i>	Riparian/Disturbed Areas
Wax myrtle <i>Myrica sp.</i>	Deciduous Forest/ Mixed Forest
White oak <i>Quercus alba</i>	Deciduous Forest
Willow oak <i>Quercus phellos</i>	Deciduous Forest/Mixed Forest

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Table B-3. Common or Characteristic Flora and Fauna and Associated Habitats on Langley AFB (continued)

<i>Species Name</i>	<i>Associated Habitat</i>
INVERTEBRATES	
Clam Species Family: <i>Corbiculidae</i>	Aquatic
Oyster Species Family: <i>Ostreidae</i>	Aquatic
REPTILES	
Black racer <i>Coluber constrictor priapus</i>	Various
Black rat snake <i>Elaphe obsoleta obsoleta</i>	Forests/Fields
Eastern hognose snake <i>Heterodon platyrhinos</i>	Agriculture, Fields, Forests
BIRDS	
American coot <i>Fulica americana</i>	Wetlands
Blue-winged teal <i>Anas discors</i>	Wetlands
Bufflehead <i>Bucephala albeola</i>	Coastal Wetlands
Carolina chickadee <i>Parus carolinensis</i>	Deciduous Forest/Urban
Carolina wren <i>Thryothorus ludovicianus</i>	Forests/Disturbed Areas
Common goldeneye <i>Bucephala clangula</i>	Rivers/Lakes
Double crested cormorant <i>Phalacrocorax auritus</i>	Wetlands
Fish crow <i>Corvus ossifragus</i>	Wetlands/ Aquatic Habitats
Great blue heron <i>Ardea herodias</i>	Wetlands
Greater scaup <i>Aythya marila</i>	Coastal Wetlands
Greater yellowlegs <i>Tringa melanoleuca</i>	Wetlands
Mourning dove <i>Zenaida macroura</i>	Various/Fields
Northern bobwhite <i>Colinus virginianus</i>	Forest Edges/Fields/Shrublands
Northern cardinal <i>Cardinalis cardinalis</i>	Urban/Wetland/Forests
Northern flicker <i>Colaptes auratus</i>	Open Forest

Table B-3. Common or Characteristic Flora and Fauna and Associated Habitats on Langley AFB (continued)

<i>Species Name</i>	<i>Associated Habitat</i>
BIRDS	
Red-bellied woodpecker <i>Melanerpes carolinus</i>	Deciduous Forest/Mixed Forest
Red-eyed vireo <i>Verio olivaceus</i>	Forests
Red-shouldered hawk <i>Buteo lineatus</i>	Forest Edges/ Agricultural Fields
Red-winged blackbird <i>Agelaius phoeniceus</i>	Wetlands
Ruddy duck <i>Oxyura jamaicensis</i>	Wetlands
Ruddy turnstone <i>Arenaria interpres</i>	Coastal Wetlands
Savanna sparrow <i>Passerculus sandwichensis</i>	Fields
Screech owl <i>Otus asio</i>	Forests/Disturbed Areas
Summer tanager <i>Piranga rubra</i>	Mixed Forest
Tufted titmouse <i>Parus bicolor</i>	Deciduous Forest/Urban
Wild turkey <i>Meleagris gallopavo</i>	Forest/Fields
Wood thrush <i>Hylocichla mustelina</i>	Deciduous Forest/Urban
MAMMALS	
Fox squirrel <i>Sciurus niger</i>	Deciduous Forest/Mixed Forest/Coniferous
Gray squirrel <i>Sciurus carolinensis</i>	Deciduous Forest/Mixed Forest
Muskrat <i>Ondatra zibethicus</i>	Aquatic/Forested Wetlands/Non-Forested Wetlands
Raccoon <i>Procyon lotor</i>	Various/Forested Wetlands
Red fox <i>Vulpes vulpes</i>	Various, Mixed Forest/Shrublands
Virginia opossum <i>Didelphis virginiana</i>	Forests/Agriculture
White-tailed deer <i>Odocoileus virginianus</i>	Agriculture/Shrublands/Forest
Source: SAIC 2002.	

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Table B-4. 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 perpusilla</i>	SE	Coastal seasonal ponds.
Virginia least trillium Trillium pusillum var. virginianum	FSC	Forested wetlands and mesic woods including the "green sea" wetlands. Recorded from City of Hampton.
INVERTEBRATES		
Northeastern beach tiger beetle <i>Cicindela dorsalis dorsalis</i>	FT	Broad beaches with well-developed sand dunes.
Tidewater interstitial amphipod <i>Stygobromus araeus</i>	SC	Hydric.
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 tree tops, 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.
Tiger salamander <i>Ambystoma tigrinum</i>	SE	Breeds in coastal seasonal freshwater ponds. Needs fish-free breeding habitat. Varied, from arid pine barrens and mountain forests to damp meadows.
REPTILES		
Canebreak rattlesnake <i>Crotalus horridus atricaudatus</i>	SE	Meadows, canebreak 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 base.
Great egret <i>Asmerodius albus</i>	SC	Palustrine and estuarine wetlands; marshes.
Peregrine falcon <i>Falco peregrinus</i>	SE	Observed foraging over salt marshes on base. Open wetlands near cliffs.
<p>Source: SAIC 2002. Key to Status Codes:</p> <p>FT Federally Threatened (Listed by the USFWS and protected under the Endangered Species Act) SE Species listed as Endangered by the Virginia Department of Conservation and Recreation ST Species listed as Threatened by the Virginia Department of Conservation and Recreation SC Candidate species for listing by the Virginia Department of Conservation and Recreation</p>		

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