CHAPTER 1

# Purpose and Need

## 1.1 Introduction

The U.S. Army (Army) has prepared this *Stationing and Training of Increased Aviation Assets within U.S. Army Alaska Environmental Impact Statement* (Aviation Environmental Impact Statement [EIS] or EIS) to assess the potential environmental impacts of its proposal to station and train a new aviation unit in Alaska. The EIS has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) NEPA-implementing regulations (Title 40 of the Code of Federal Regulations [CFR], Part 1500 [40 CFR 1500]), and Army NEPA-implementing regulations (32 CFR 651).

Under the Proposed Action, the Army would expand and reorganize aviation assets at Fort Wainwright (FWA) in Fairbanks, Alaska. Alternative locations considered for the Proposed Action include Fort Richardson (FRA) in Anchorage and Eielson Air Force Base (AFB) near Fairbanks. Training missions would be conducted on all U.S. Army Alaska (USARAK) lands to include the Donnelly, Tanana Flats, Yukon, Gerstle River, and Black Rapids training areas. Military aviation operates in general and restricted airspace, although typically in certain flight corridors that helicopters would routinely follow between the installations and training areas. The Proposed Action does not include modifications to any existing airspace designations, including Military Operating Areas (MOAs) or visual flight rule (VFR) corridors in these areas. Additional descriptions of the project scope are located in Section 2.2.

The Army proposes to reorganize and augment its aviation assets in Alaska (currently, about 490 personnel and 32 helicopters) to become a front-line aviation unit with an increased combat-readiness capacity. The Proposed Action includes stationing of additional Soldiers and helicopters, construction of a number of facilities in USARAK cantonment areas, and increased aviation training on Army lands and within airspace in Alaska. Further information on the Proposed Action is located in Section 2.3.

This chapter describes the purpose and needs for the proposed stationing and training of a new aviation unit in Alaska; scope and content of the EIS; agency and tribal coordination and public involvement conducted during the scoping process; and decisions to be made by the Army based on the findings presented in this document.

## 1.2 U.S. Army Alaska

USARAK is home to the 1st Stryker Brigade Combat Team (SBCT), 25th Infantry Division (1/25 SBCT), as well as the 4th Brigade Combat Team (Airborne) (ABCT), 25th Infantry Division (4/25 ABCT). The 1/25 SBCT is stationed at FWA and the 4/25 ABCT is stationed at FRA. These two brigades largely comprise the active Army component in Alaska and will be the primary units benefiting from an increase of Army aviation in Alaska. The mission of USARAK is to command and control Army forces in Alaska and to be capable of rapid

deployment from Alaska in the conduct of contingency operations worldwide as directed. Units in Alaska are anchored in the North Pacific and strategically positioned for worldwide deployment. With the large, varied, and tough training environment, USARAK has developed a highly capable, combat-ready force.

USARAK's strategic location, unsurpassed training capabilities, and long-term economic impact and partnership with Alaskan communities make it a significant national asset and world-class power projection platform for military operations anywhere in the world.

## 1.3 Purpose and Need for Action

The purpose of the Proposed Action is to enhance USARAK aviation capabilities, improve training opportunities for existing USARAK forces, and improve the Army's ability to support worldwide military operations. The Proposed Action would further support the Army and the U.S. Department of Defense (DoD) mission requirements, transformation goals, and future combat missions, and would provide a combat multiplier to Alaska brigades—a capability that, when added to and employed by a combat force, significantly increases the combat potential of that force.

The types and numbers of aviation assets currently available to USARAK are not sufficient to employ the full range of integrated tactical combat support options, or to provide the full range of integrated tactical training needs, required by the modern Brigade Combat Team (BCT). To support current and future national defense requirements, USARAK needs to reorganize and augment its existing aviation assets to create a front-line aviation unit. Such a unit would provide the needed local capability for integrated training and the needed force capacity for deployment abroad with the type of Army aviation assets and units that support BCTs in an actual combat environment. The needs for the Proposed Action are further described in the following subsections.

### 1.3.1 Army Transformation

In 1999, the Army initiated a service-wide transformation process to restructure and transform its active-duty forces to respond more rapidly to modern enemy threats. These changes affect most, if not all, aspects of the Army's doctrine, training, leader development, organizations, installations, materiel acquisition and fielding, and Soldiers. The Army's program of transformation is planned to occur in three phases over a 30-year period, as stated in the *Army Transformation Campaign Plan*, the *Programmatic EIS for Army Transformation* (PEIS), and the *PEIS Record of Decision* (ROD). Transformation of USARAK's 172nd Infantry Brigade (Light) into the 1/25 SBCT and the stationing of additional assets to expand the 1-501st Parachute Infantry Regiment into an Airborne Task Force (and eventually into the 4/25 ABCT) have occurred under Army transformation. However, the process of Army transformation in Alaska needs to be continued with the proposed expansion of USARAK's aviation assets and capabilities to support integrated training opportunities for existing USARAK forces and to enhance the Army's capability to support military operations around the globe.

### 1.3.2 Army Transformation in Alaska

USARAK has been at the forefront of Army transformation, converting its light infantry unit (the 172nd Infantry Brigade [Light]) into the 1/25 SBCT as evaluated in the *Final Environmental Impact Statement for Transformation of U.S. Army Alaska* (USARAK, 2004a), and converting its airborne assets into the 4/25 ABCT, as described in the *Conversion of the Airborne Task Force to an Airborne Brigade Combat Team Environmental Assessment* (USARAK, 2005). Two premier training facilities are under construction at the Donnelly Training Area (DTA), as described in the *Final Environmental Impact Statement* (Final EIS) *for the Construction and Operation of a Battle Area Complex* (BAX) *and a Combined-Arms Collective Training Facility* (CACTF) *within U.S. Army Training Lands in Alaska* (USARAK, 2006a). These facilities, in combination with 1.5 million acres of Army training lands in Alaska, are currently used to support Army transformation and training.

The proposed expansion of USARAK's aviation assets and capabilities to support both integrated training and deployment abroad would continue the process of Army transformation in Alaska. Aviation units are expected to fight and train as members of combined-arms teams. The new aviation unit in Alaska would enhance the integrated training of the 1/25 SBCT and 4/25 ABCT to achieve proficiency in the execution of combined-arms, joint, and coalition operations under realistic and challenging conditions.

### 1.3.3 Training Requirements

While USARAK has historically supported unit training with helicopters, the types and numbers of current aviation assets are not sufficient to provide the full range of integrated tactical training required by the modern BCT. The 1/25 SBCT and 4/25 ABCT need additional aviation assets in order to conduct realistic training that complies with Army training doctrines.

An essential element of USARAK capabilities is the development of modern war-fighting skills. Chief among these skills is the ability to integrate 1/25 SBCT and 4/25 ABCT efforts with the vital support offered by modern Army aviation units. This requires frequent training with an aviation unit equipped with the full spectrum of aviation assets, typically deployed to support a BCT during wartime.

Army Training Circular (TC) 25-8, *Training Lands* (U.S. Department of the Army, 2004), requires Soldiers to practice combined-arms teamwork and synchronization to prepare units for wartime operations. Combined-arms teamwork is defined as the coordination of various Army units (i.e., mechanized infantry, airborne paratroopers, and assault or support aviation) on a battlefield working together towards a common objective. At present, the 1/25 SBCT and the 4/25 ABCT train separately or in combined training exercises on Army training lands. These training exercises currently lack the critical element of air support from Army aviation assets. Aviation unit integration is necessary to increase local training complexity and realism by simulating actual combat conditions and allowing units to practice their combined-arms teamwork skills prior to wartime deployment.

The incorporation of aviation assets into existing operations, in accordance with the requirements of TC 25-8, is necessary to expand multi-echelon training and provide the 1/25 SBCT and 4/25 ABCT with better training opportunities. Multi-echelon or collective

training allows unit commanders to integrate training among different unit sizes (platoon to brigade) and across branches (Army and U.S. Air Force [USAF]). It also allows each military unit to achieve required training and proficiency on multiple tasks, to include ground maneuvers with Stryker vehicles, airborne support activities, and the incorporation of aviation assets simultaneously.

Coordinated training requires aviation assets to be stationed near USARAK training lands. Under current USARAK training strategy, companies and smaller-size units must practice collective tasks at their home stations (that is, FWA or FRA). The 1/25 SBCT and 4/25 ABCT conduct the larger combined-unit field training exercises (FTXs) at the DTA, where sufficient maneuver land and airspace exist to accommodate large multi-echelon exercises to train combined-arms teamwork skills.

The BAX and CACTF training facilities are under construction at the DTA, and construction will be completed in fiscal year (FY) 2010. These training facilities will provide year-round, fully automated, comprehensive and realistic training and range facilities for USARAK and other units.

Training needs under the Proposed Action do not require any changes to existing airspace or regulations to be fulfilled. Training activities would comply with applicable airspace requirements both on and off military installations. Army aerial training also complies with Army Regulation (AR) 95-1, *Aviation Flight Regulations* (U.S. Department of the Army, 2008a), which governs training on USARAK installations and provides minimal altitudes of helicopter operations off military installations.

### 1.3.4 Cantonment Facilities and Equipment Requirements

The proposed stationing of additional aviation assets in Alaska requires the construction, demolition, and utilization of Army real property. The Proposed Action requires that adequate support infrastructure either currently exists or that the potential for new support infrastructure to accommodate helicopter basing, maintenance, and storage at a reasonable cost be constructed. In addition, the location of new facilities, as well as the utilization of existing facilities, needs to be adjacent to an operational military airfield in order to adequately support aviation training needs. Siting of new facilities and demolition of existing facilities would be undertaken in accordance with relevant Army installation planning documents such as the *Real Property Master Plan* (RPMP), *Installation Design Guide* (IDG), *Integrated Cultural Resources Management Plan* (ICRMP) (ADNR, 2000), and the *Integrated Natural Resources Management Plan* (INRMP), the Federal Facility Agreement (FFA) (EPA, 1994) under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as well as various real property, airfield construction and management, and environmental regulations.

The need to maintain "unit cohesion" within the Army is an important factor in obtaining the military mission. Unit cohesion is defined as the bonding together of members of a unit or organization in such a way as to sustain their will and commitment to each other, their unit, and the mission. Cohesion is fostered in a military unit when the primary day-to-day goals of the individual Soldier, the small group with which the Soldier identifies, and the unit leaders are parallel. The ultimate goal is for Soldiers to give their primary loyalty to the group so that it trains and fights as a unit with all members willing to train and achieve a

common objective. The co-locating of a Soldier's living and working quarters (to include barracks, office space, maintenance facilities, helicopter storage and parking, etc.) will further support the concept of unit cohesion.

AR 210-20, *Real Property Master Planning for Army Installations* (U.S. Department of the Army, 2005), sets forth the requirements for the installation RPMP. The RPMP is the process used by the Army to plan for the identification of facility requirements, design and construction of new facilities, and reuse or disposal of obsolete facilities. The RPMP includes long- and short-range plans such as *Tabulation of Existing and Required Facilities* (TAB), capital investment strategies, mapping of land use constraints within the installation and surrounding areas, and IDGs that unify the appearance of installation facilities.

Unique local conditions at FWA, particularly along Ladd Army Airfield (AAF), require consideration of various land use constraints when siting new infrastructure. The Army needs to accomplish its facility and land use planning actions to ensure that land is used efficiently for the benefit of the wider economy and population as well as to protect the environment. Master Planners at FWA take into consideration the following during facility siting along Ladd AAF:

- Ladd Field National Historic Landmark (NHL) boundary and buildings, in consultation with the IDG
- Active runway safety buffers to include taxiway setbacks and runway clear zones
- Existing live ammunition storage points and associated safety setbacks
- Anti-terrorism/force-protection facility safety buffers
- Wetlands, floodplains, and other waters of the United States
- Permafrost and other geological hazards
- Known (and potentially unknown) contaminated areas protected by existing agreements between the Army and other State of Alaska and federal entities
- Existing land use and users, and ability to modify current use
- Existing utility infrastructure and ability to support proposed land use
- Existing *Installation Master Plan* and potential for conflicts with other sited facilities
- Adequate physical space to enable compliance with Army facility standards

These factors must be taken into consideration when planning and siting infrastructure to support aviation stationing at FWA.

AR 200-3, *Natural Resources – Land, Forest, and Wildlife Management* (U.S. Department of the Army, 1995), sets forth the requirements for the installation INRMP, which guides the implementation of the natural resources programs for USARAK lands. The INRMP is designed to support the military mission, manage USARAK's natural resources, and ensure compliance with related environmental laws and regulations. The plan also ensures the maintenance of quality training land, allowing USARAK to conduct high-quality training events in support of its critical military missions.

AR 200-4, *Cultural Resources Management* (U.S. Department of the Army, 1998), requires each installation to prepare and implement an ICRMP. The legal foundation for AR 200-4 is the body of federal laws that address historic preservation. The ICRMP establishes explicit responsibilities, standard operating procedures (SOPs), and long-range goals for managing cultural resources on USARAK lands.

AR 420-1, *Army Facilities Management* (U.S. Department of the Army, 2007a), describes the management requirements of public works activities, housing, and other facilities operations; military construction program development and execution; military installation master planning; utilities services and energy management; and fire and emergency services on Army installations. In Alaska, the Army conducts its day-to-day facilities management in accordance with AR 420-1.

Construction, maintenance, and operation of facilities, such as roads, utilities, and buildings, on USARAK lands presents special challenges because of the arctic and subarctic environment, including vast areas of permafrost; frozen soil, rock, and ice; intense cycles of freezing and thawing temperatures; and limited daylight in fall and winter. USARAK employs appropriate construction techniques, as outlined in Unified Facilities Criteria (UFC) 3-130-01, *General Provisions: Construction in Arctic and Subarctic Construction*, to ensure safe and efficient construction and operation of facilities.

UFC 3-260-01, *Airfield and Heliport Planning and Design* (AFCESA, USACE, and NFEC, 2001), provides standardized airfield, heliport, and airspace criteria for the layout, design, and construction of safe and standard runways, helipads, taxiways, parking aprons, and related permanent facilities to meet sustained aviation operations. The criteria in UFC 3-260-01 pertain to all DoD military facilities. Integration of aviation facilities planning with NEPA will assist Army planners when considering environmental factors, land use considerations, airspace constraints, and surrounding infrastructure. The planning process must consider the mission and use of the aviation facility and its effect on the general public as well as the requirement to comply with standardized design and safety criteria. Existing facilities have been assessed as inadequate to meet the mission and, thus, new facilities are required. However, construction of an entirely new aviation facility (airfield and supporting permanent stationing facilities) is not needed because space is present around existing airfields to accommodate new facilities required for aviation assets.

Helicopter storage requirements in Alaska differ from those in temperate regions. As a general practice, helicopter maintenance occurs inside aircraft hangars at all Army installations. Aircraft maintenance hangars are sized (according to the Army Criteria Tracking System, Category Code 21110, and UFC 3-260-01) to house approximately 20 percent of an installation's helicopter inventory. At most installations, helicopters not requiring maintenance are parked outdoors near the maintenance hangar and mobilize from these parking areas. Currently, USARAK has obtained a waiver to construct aircraft maintenance hangars to accommodate 100 percent of FWA's proposed helicopter inventory. Because USARAK and USAF Alaska airfields experience cold-climate extremes and the challenge of operating helicopters in the arctic, USARAK needs to be able to store its entire helicopter inventory indoors. The indoor storage need translates into larger hangars than would be required at other Army installations, or separate warm storage facilities for those helicopter assets. In addition, some of the helicopters stationed in Alaska, such as medical evacuation (MEDEVAC) helicopters that must be ready for operation around the clock,

must be parked indoors at all times. Currently, helicopters parked outdoors are "cold soaked" (which occurs when equipment is exposed to low temperatures for an extended period) and require extensive preheating before use. Maintaining aircraft readiness creates a shuffle of aircraft in and out of hangars in an attempt to ward off cold soaking, requiring hangar doors to be opened frequently, which increases heating costs and introduces operational inefficiencies and logistical challenges.

In addition to the indoor storage requirements, each airfield in Alaska serves as a landing-area to support up to brigade-size training operations; therefore, the number of outdoor, flight-ready parking spaces is greater than the total number of helicopters stationed at each airfield at a time. Outdoor parking for helicopters is designed for the unique maneuvering capabilities of each aircraft as well as appropriate rotary-wing tie-downs or grounding points (UFC 3-260-01). Currently, FWA does not have any of these facilities on the parking apron because Ladd AAF was designed for fixed-wing aircraft. Common activities on the rotary-wing apron include takeoffs, landings, hovering, taxiing, washing, and pre-operational heating. Parking must be directly adjacent to the airfield restricted movement area and cannot be blocked by buildings.

The Chinook CH-47 also has unique operating and storage requirements due to safety. The size, number of rotary blades (twin, three-blade), space requirements for maneuvering, and generation of noise and rotor wash wind forces of the Chinook CH-47s require isolation of other helicopter or administrative operations from the Chinook helicopters (Kiowa and Blackhawk helicopters are more flexible in terms of their size, increased maneuverability on the airfield, and quieter, less turbulent operation). The preferred safety isolation technique is to be able to physically separate the Chinook helicopters from the Kiowa and Blackhawk helicopters as well as from administrative operations by constructing a physical barrier to block rotor wash wind forces.

### 1.3.5 Civilian Infrastructure

The proposed stationing of additional aviation assets in Alaska requires existing civilian infrastructure to support Soldiers and their dependents. The Proposed Action requires that adequate civilian infrastructure either currently exists or that the potential for new civilian infrastructure for Soldiers and their dependents be constructed at a reasonable cost. The need for adequate civilian infrastructure is consistent with the welfare and morale requirements of the Army by providing the same quality of life afforded the society they protect.

### 1.3.6 Mission Sustainability

On October 1, 2004, the Secretary of the Army and Army Chief of Staff issued *The Army Strategy for the Environment – Sustain the Mission, Secure the Future* (U.S. Army, 2004). The strategy focuses on the interrelationships of mission, environment, and community. It transitions the Army's compliance-based environmental program to a mission-oriented approach based on the principles of meeting the needs of the present without comprising the ability to reach future goals. To accomplish this, an installation should simultaneously meet current and future mission requirements, safeguard human health, improve quality of life, and enhance the natural environment. The Army needs a sustainable natural environment to train and maintain military readiness. This strategy is implemented by

AR 200-1, *Environmental Protection and Enhancement* (U.S. Department of the Army, 2007b), which reinforces the Army's commitment to applying policies and practices to safeguard the environment. Army installations must operate in accordance with applicable environmental regulations and Army environmental stewardship responsibilities.

## 1.4 Scope and Content of the EIS

The Army has determined that the proposal to station and train a new aviation unit in Alaska has the potential to result in significant environmental impacts. Consequently, the Army has prepared this EIS to assess the impacts of that action. This section presents the scope of the EIS, including the general approach to the evaluation of alternatives for implementing the Proposed Action.

The study area for this EIS includes USARAK lands in Alaska. Additional descriptions of the project scope are located in Section 2.2.

### 1.4.1 Approach to Proposed Action Description

This EIS evaluates the Proposed Action in the context of two separate action alternatives, each of which is reasonable and feasible under NEPA. The two action alternatives are evaluated equally in comparison with the No Action alternative. The action alternatives include training-related and construction-related activities required for stationing a new aviation unit in Alaska. Under the action alternatives, the existing aviation assets would be reorganized and augmented to support local integrated training on Army training lands in Alaska as either an Aviation Task Force (Task Force) stationed at FWA or as a Combat Aviation Brigade (Brigade or CAB) split stationed between FWA, FRA, and Eielson AFB. Chapter 2 discusses in detail the relevant installations and training lands, as well as proposed increases in personnel and aviation assets for each installation under each action alternative and the No Action alternative.

### 1.4.2 Approach to Environmental Analysis

The direct, indirect, and cumulative impacts of implementing USARAK's Proposed Action are evaluated in accordance with the CEQ's guidance for implementing NEPA (CEQ, 1983; CEQ, 1997) and relevant Army guidance for conducting environmental review under NEPA (U.S. Army Environmental Command [USAEC], 2007a). This subsection summarizes the deliberative approach applied in this EIS for identifying the various resources that could be affected by the Army's proposal.

#### 1.4.2.1 Valued Environmental Components

This Aviation EIS considers relevant resource areas in the context of valued environmental components (VECs), which are the resources, ecosystems, and human communities of concern that could be affected by the increase in aviation assets. Initially, USARAK considered the following comprehensive list of VECs (sorted alphabetically):

- Air Quality
- Airspace Management
- Cultural Resources and Visual Resources
- Environmental Justice
- Fire Management
- Geological Resources
- Hazardous Materials/Hazardous Wastes
- Land Use/Energy/Utilities
- Noise
- Safety
- Socioeconomics
- Soils and Permafrost
- Subsistence and Recreation
- Traffic/Transportation Systems
- Vegetation
- Water Resources (Surface Water and Groundwater)
- Wetlands
- Wildlife and Fisheries (including Threatened or Endangered Species and Species of Concern)

As described below, these VECs were screened and ranked in terms of their relative potential to be affected by the Proposed Action. In addition to the individual VECs, an assessment of potential cumulative effects of the alternatives on each resource area was conducted.

#### 1.4.2.2 Categories and Relative Ranking of Valued Environmental Components

The Army developed and applied a deliberative process to rank the VECs according to their potential to be affected by the Proposed Action. This approach, which was supported by input from the scoping process (see Section 1.8), concentrates the environmental analysis on VECs that could be significantly affected by the Proposed Action (primary areas of focus) and also provides consideration of other less affected (or not affected) VECs at an appropriate level of detail, in compliance with CEQ and Army guidance. The categories of VECs and the associated level of analysis necessary are based on the potential for impacts to occur. For this EIS, the VECs are grouped into primary, secondary, and other areas of focus based on the potential for significant impacts to occur (see Chapter 3). These VECs are grouped in the EIS as follows:

- Primary areas of focus (high potential for impacts):
  - Airspace Management
  - Cultural and Visual Resources
  - Noise
  - Hazardous Materials/Hazardous Waste
  - Wildlife and Fisheries (including Threatened or Endangered Species and Species of Concern)

- Secondary areas of focus (medium potential for impacts):
  - Air Quality
  - Socioeconomics
  - Soils and Permafrost
  - Water Resources
  - Subsistence and Recreation

- Other areas of focus (low to very low potential for impacts):
  - Traffic/Transportation Systems
  - Vegetation
  - Wetlands

- Fire Management
- Geological Resources
- Safety
- Land Use/Energy/Utilities
- Environmental Justice

Resources that had a medium-to-high potential for impacts were included for detailed impact assessment, while those that had low or very low potential to be affected were considered but not analyzed in depth. Chapters 3 and 4 are organized using this focused VEC analysis ranking. An assessment of potential cumulative effects also is included in Chapter 4.

## 1.4.3 Other Relevant Planning Documents

This Aviation EIS focuses specifically on increasing and reorganizing aviation assets in Alaska. In recent years, USARAK and the USAF have analyzed under NEPA a number of military actions that have occurred in Alaska, including various transformation activities, land- and air-based training, unit reorganizations, and infrastructure development. This EIS uses the analysis and conclusions from these prior environmental studies, summarized below, to provide both background and a baseline for this EIS. Where relevant, this EIS adopts all or part of previous NEPA and land management actions.

### 1.4.3.1 Final Legislative EIS for Alaska Army Lands Withdrawal Renewal

The *Final Legislative EIS for Alaska Army Lands Withdrawal Renewal* (USARAK, 1999) evaluated the environmental consequences of the Army's continued use of approximately 1.5 million acres of lands associated with FWA, its training areas, and the DTA (referred to as Fort Greely at the time the EIS was prepared). Land withdrawals of these areas have essentially occurred since the 1930s and 1940s. In the beginning of the withdrawals, the lands were separated by areas and have been continuously withdrawn through a series of public laws and military acts. For more in-depth information about the process, refer to the *Final Legislative EIS for Alaska Army Lands Withdrawal Renewal* (USARAK, 1999). The Preferred Alternative included a 50-year renewal of the land withdrawal for continued military use of Army lands under the same stipulations and conditions as the previous 15 years (at the time of the evaluation). The EIS provides a baseline description of the past impacts of military operations on FWA and the DTA, and outlines the types and effectiveness of mitigation measures undertaken or committed to as part of the Army's past and proposed use of public lands for military purposes. The Legislative EIS provides a baseline discussion of past and current impacts of Army actions on FWA and DTA lands. Public Law (PL) 106-65, the National Defense Authorization Act for Fiscal Year 2000 (22 U.S.C. 5952, 1999), was enacted by Congress on October 5, 1999. PL 106-65 authorized the military withdrawal for 25 years rather than the 50 years that had been proposed by the Army.

### 1.4.3.2 Final EIS and Record of Decision for Alaska Military Operations Areas

In the *Final Environmental Impact Statement for Alaska Military Operations Areas* (USAF, 1995), the USAF proposed improvements to Alaska MOAs. A MOA is a Special Use Airspace designated for nonhazardous military flight activities such as air combat tactics, transition,

formation training, and aerobatics. MOAs are depicted on various aviation charts so that pilots can be aware of their location and parameters. Areas near hazardous flight activities, such as live-fire training, are referred to as restricted airspace. The Final EIS and ROD evaluated new permanent MOAs, modified existing permanent MOAs, defined the use of supersonic aircraft operations in certain MOAs, defined routine training and major flying exercises (MFEs) in certain MOAs, and authorized the use of chaff and flares for routine and MFE training. The USAF continues to use these MOAs to conduct aircraft training. Although these MOAs generally apply to higher-altitude training areas used by USAF jets, the Army uses these MOAs where applicable. USARAK's Proposed Action does not include modifications to the MOAs outlined in the 1995 ROD. Impacts associated with aircraft operations on human and wildlife populations are evaluated extensively in the MOA EIS, and that analysis is referenced where applicable in this Aviation EIS.

#### 1.4.3.3 Final Programmatic EIS and Record of Decision for Army Transformation

In March 2002, the Army published its *Final Programmatic Environmental Impact Statement for Army Transformation* (PEIS) (U.S. Army Corps of Engineers [USACE], 2002) and signed a ROD on April 11, 2002. The PEIS provided the context for the Army to proceed with a 30-year phased implementation of Army "transformation." Army transformation describes the future concept of the Army's plan of modernization through the integration of new concepts, organizations, and technology. Site-specific NEPA documents have been prepared to evaluate the effects of Army transformation at specific installations, including USARAK installations.

#### 1.4.3.4 Final EIS and Record of Decision for Transformation of U.S. Army Alaska

Consistent with the Army Campaign Plan outlined in the Final Transformation PEIS (USACE, 2002), the *Final EIS for Transformation of USARAK* (USARAK, 2004a) and the ROD for that EIS focused on transformation of the 172nd Infantry Brigade into a SBCT (eventually as the 1/25 SBCT), and the stationing of additional assets to expand the 1-501st Parachute Infantry Regiment into an Airborne Task Force. The *Final EIS for Transformation of USARAK* balanced the overall Army Vision of transformation with the various objectives of the USARAK mission. This EIS evaluated the impacts associated with Army transformation of ground-based training in Alaska and provided a platform for the discussions of the integration of aerial and ground-based training of USARAK forces.

#### 1.4.3.5 Final Environmental Assessment and Finding of No Significant Impact for Conversion of the Airborne Task Force to an Airborne Brigade Combat Team, Fort Richardson, Alaska

The *Conversion of the Airborne Task Force to an Airborne Brigade Combat Team, Fort Richardson, Alaska EA* and the subsequent *Final Finding of No Significant Impact* (USARAK, 2005) found no significant impact to FWA, FRA, or the DTA from training activities associated with converting the 1-501st Aviation Task Force to an ABCT (4/25 ABCT). The Environmental Assessment (EA) provided a description and analysis of training at FWA, FRA, and the DTA, and construction activities on FRA to support the 4/25 ABCT. This Aviation EIS references this EA for discussion of potential coordinated training activities between aviation units and the 4/25 ABCT, and analysis of cumulative effects.

#### 1.4.3.6 Final EIS and Record of Decision for Construction and Operation of a Battle Area Complex and Combined-Arms Collective Training Facility within U.S. Army Training Lands in Alaska

The ROD (USARAK, 2006a) for construction and operation of a BAX and CACTF at DTA East was signed in July 2006. The BAX provides a rural setting for company-level, live-fire training exercises, while the CACTF provides an urban setting for battalion-level weapons training exercises using training munitions. This large training facility was designed to support company, battalion, and brigade-size training exercises. Aviation support associated with the Proposed Action would occur at the BAX CACTF facility during training events conducted by the 1/25 SBCT and 4/25 SBCT. The BAX CACTF EIS evaluated the impacts associated with use of the new training facilities and contained a comprehensive analysis of cumulative effects of Army training at the DTA. The mitigation measures committed to by the Army in the BAX CACTF EIS and Memorandum of Agreement with the City of Delta Junction would continue under the Proposed Action in the Aviation EIS.

#### 1.4.3.7 Draft Environmental Assessment and Draft Finding of No Significant Impact for the Charting of the Delta Military Operations Area Complex

In November 2008, the USAF published its Draft EA and Draft Finding of No Significant Impact (FONSI) for *Charting the Delta Military Operations Area (MOA) Complex at Eielson AFB, Alaska* (USAF, 2008). The USAF proposes to improve required training for MFEs, including Red Flag Alaska (RF-A) and Northern Edge (NE) training exercises, by charting the Delta MOA Complex. The Delta MOA would become part of the Pacific Area Range Complex (PARC). The purpose of charting the Delta MOA is to establish connecting airspace that would provide USAF and other military services with a realistic setting for MFEs. The expanded capability of aircraft establishes the need for contiguous airspace to meet MFE training objectives. The Delta corridor separates the Yukon MOAs from Ranges R-2202, R-2205, and R-2211, and the Fox and Eielson MOAs. The proposed airspace would be in use during two 2.5-hour periods for up to but not exceeding 60 days per year. The airspace would provide the USAF the capability to train aircrews as they fight and ensure that aircrews experience the critical first 10 combat missions in as realistic a setting as possible. The first 10 combat missions have been found to be the most critical for aircrew survival in combat. The *Charting of the Delta Military Operations Complex EA* addresses the potential environmental consequences from implementing the Proposed Action and includes the No Action Alternative. Public and agency comments during scoping focused the environmental analysis on airspace management, safety, socioeconomics, biological resources, and land use. Additional environmental resources considered in the EA include noise, air quality, physical resources, cultural resources, environmental justice, and cumulative effects. The EA demonstrates that the proposed charting of the Delta MOA, including schedule and other mitigations developed through experience with the Delta T-MOA and the 1995 MOA EIS, would not result in significant environmental impacts to any environmental resources area.

## 1.5 Decision to be Made

This Final EIS provides Army decision makers (Headquarters Commander U.S. Army Installation Command) with the information necessary to evaluate the environmental and socioeconomic impacts of implementing the proposed alternatives in accordance with the

CEQ's guidelines and NEPA-implementing regulations. It also provides a record of public, tribal, and agency comments received on the action and the environmental analysis presented in the Draft EIS. This EIS evaluates the following range of alternatives that is presented to Army decision makers for consideration:

- **Alternative 1: No Action.** Existing USARAK aviation assets would not be reorganized and augmented. No new Soldiers or helicopters would be permanently assigned to USARAK, and integrated aviation support training of USARAK BCTs would be limited.
- **Alternative 2: Aviation Task Force.** Existing aviation assets would be converted into a Task Force to include the stationing of 710 additional Soldiers and 40 additional helicopters, construction of sufficient new infrastructure, and an increase in aviation training on existing Alaskan airspace, military ranges, and training lands. This alternative primarily involves the use of FWA and the DTA.
- **Alternative 3: Combat Aviation Brigade.** Existing aviation assets would be converted into a Brigade to include the stationing of 2,360 additional Soldiers and 84 additional helicopters, construction of sufficient new infrastructure, and an increase in aviation training on existing Alaskan airspace, military ranges, and training lands. This alternative involves the use of FWA, DTA, FRA, and Eielson AFB.

Section 2.8 of this Final EIS identifies Alternative 2, Aviation Task Force, as the Army's Preferred Alternative. The final decision will be documented in a ROD and take into account technical, economic, and political feasibility; environmental and social issues; and the ability to meet objectives of the USARAK mission and the overall Army mission. The ROD will explain the decision and identify mitigation measures that the Army will include to lessen environmental and social impacts.

## 1.6 Interagency Coordination

Throughout the development of the EIS, the Army has coordinated with various local, state, and federal agencies about its proposal to reorganize existing aviation assets. Involvement activities included scoping, in-progress review meetings, and distribution and review of the Draft EIS.

USARAK sent scoping invitation letters to agencies, organizations, and tribal government representatives (see Appendix B). The Army held scoping meetings in April 2007 at the initiation of the EIS. Agency representatives provided a number of comments that helped the Army to focus the important environmental issues to be considered in the Draft EIS.

During development of the Draft EIS, the Army continued coordination with groups interested in airspace, historic preservation, hazardous waste, and other environmental issues. The Army provided updates on the progress of the EIS and sought input regarding technical analysis and mitigation measures that might be effective to lessen environmental or social impacts. In addition to these general updates, the Army specifically engaged parties interested in historic property impacts related to the Proposed Action, in accordance with Section 106 of the National Historic Preservation Act (see Sections 3.3 and 4.3 of the EIS).

When the Draft EIS was released in May 2009, letters were sent to more than 70 interested agency representatives announcing the release and inviting comments on the Draft EIS. Meetings were held in Anchorage and Fairbanks in May 2009 to brief agencies on the Army's Proposed Action and findings of the Draft EIS, and to collect comments on the Draft EIS. The meetings were held in a roundtable format where the Army provided a briefing, and agency representatives were given an opportunity to ask questions and provide comments. Display boards summarizing key aspects of the Draft EIS were also presented at these meetings. The Draft EIS was distributed to a wide range of agency representatives, as listed in Chapter 6 of this Final EIS. Comments submitted were thoroughly considered, and responses to those comments are presented in Chapter 9 of this Final EIS.

## 1.7 Government-to-Government Consultation

USARAK has consulted with Alaska Native Tribes and Tribal organizations in accordance with the requirements of Executive Order (E.O.) 13175, *Consultation and Coordination with Indian Tribal Governments*, and E.O. 13007, *Indian Sacred Sites*, to avoid adversely affecting the physical integrity of sacred sites, and with the DoD *American Indian and Alaska Native Policy: Alaska Implementation Guidance* (DoD, 2001). Eleven federally recognized tribes were sent letters, maps, and supplemental information notifying them of the Army's intent to prepare an EIS (see Appendix B). The letters also provided information about the public scoping meeting times and locations. Tribes were offered the opportunity to enter into government-to-government consultation. The Army presented information on the Proposed Action during four quarterly meetings with the Upper Tanana Inter-tribal Coalition between 2006 and 2009, and provided updates on the Proposed Action via newsletters between 2007 and 2009.

Meetings were held in Anchorage and Fairbanks in May 2009 to brief tribes on the Army's Proposed Action and findings of the Draft EIS, and to collect comments on the Draft EIS. As with the agency meetings, the tribal meetings were held in a roundtable format that included a presentation by the Army and an open question and comment period. Tribal representatives provided comments, and formal responses to those comments are presented in Chapter 9 of this Final EIS.

## 1.8 Public Involvement

The Army invites public participation in the NEPA process. Consideration of the comments of all interested persons promotes open communication and enables better decision making. All agencies, tribal entities, organizations, and members of the public with a potential interest in the Proposed Action, including minority, low-income, disadvantaged, and tribal groups, are provided the opportunity to participate in the decision-making process.

### 1.8.1 Overview of the Public Involvement Process

Public participation opportunities for this EIS and decision making on the Proposed Action are guided by 32 CFR Part 651. The EIS process begins with a Notice of Intent (NOI) to prepare an EIS published in the *Federal Register*, after which the scoping process begins. Scoping identifies the important issues to be addressed in the EIS. A Draft EIS is then prepared and filed with the U.S. Environmental Protection Agency (EPA), and the Army publishes a Notice of Availability (NOA) in the *Federal Register* and in newspapers in

communities that could be affected by the Proposed Action. A 45-day comment period begins on the date EPA announces the availability of the Draft EIS in the *Federal Register*. During the 45-day comment period, but after at least 15 days following publication of the NOA, a public meeting is held to provide an opportunity for the public, organizations, and regulatory agencies to present comments and information. A Final EIS is then prepared that addresses all comments received on the Draft EIS. The Final EIS is filed with EPA and made available to the public through a NOA publication in the *Federal Register*. A final decision on the Proposed Action, which is documented in a Record of Decision (ROD), may be made after a 30-day waiting period. A ROD is a public document that states the decision, the alternatives and factors considered, and any mitigation measures outlined in the Final EIS. The NOA of the ROD is published in the *Federal Register*.

Throughout this process, the public may obtain information on the status and progress of the Proposed Action and the EIS through the U.S. Army Garrison (USAG) Alaska (USAG-AK) Conservation website (http://www.usarak.army.mil/conservation/).

### 1.8.2 Scoping and Public Notice

The Army published a NOI to prepare an EIS in the *Federal Register* on April 4, 2007 (72 FR 16331) (see Appendix A). Publication of the NOI began a 30-day scoping period. The Army used the scoping period to determine the scope of issues to be addressed in the EIS and to identify the significant issues related to the Proposed Action. Advertisements for scoping meetings were published in local newspapers, posted at community centers, and advertised on the USAG-AK Conservation website (http://www.usarak.army.mil/conservation/).

The public scoping meetings, which were held in Delta Junction, Fairbanks, and Anchorage, were announced by newspaper advertisements in appropriate local papers (*Fairbanks Daily News-Miner*, *Delta Wind*, and *Anchorage Daily News*) following publication of the NOI. The public meetings were held at the following locations:

| | | |
|---|---|---|
| April 10, 2007 | Princess Hotel | Fairbanks |
| April 12, 2007 | Delta Junction Community Center | Delta Junction |
| April 19, 2007 | Marriott Hotel | Anchorage |

The comment period extended from publication of the NOI on April 4, 2007, through May 4, 2007. In all, more than 50 attendees participated in the scoping meetings. The public and agencies submitted 20 written comment letters, e-mails, or comment forms. Additional oral comments or questions were received at public and agency scoping meetings.

The public and agencies commented on the areas previously identified by USARAK as VECs of primary concern—Airspace Management, Cultural Resources, Noise, Hazardous Materials/Hazardous Waste, and Wildlife and Fisheries (see Section 1.4). The following summaries represent the comments received during public scoping and consultation.

- **Airspace Management**. Airspace management was the most frequently raised comment, and concerns were closely linked to the need for more detail about training activities and coordination of airspace use by the military with the general aviation community.

- **Cultural Resources.** Several agencies and organizations identified cultural resources (both historic and archaeological) as significant issues to be addressed in the EIS. The EPA also stressed the need for tribal consultation on cultural resource issues.
- **Noise.** Noise was identified by EPA and several members of the public as an important issue to be addressed in the EIS, including consideration of noise effects on both human and wildlife populations.
- **Hazardous Materials/Hazardous Waste.** Disturbance of hazardous waste sites and management of hazardous materials during construction activities also were frequently raised issues both by agencies and by the public.
- **Wildlife and Fisheries.** The National Oceanic and Atmospheric Administration (NOAA)/National Marine Fisheries Service (NMFS) raised a concern about the effect of the Proposed Action on marine mammals in the Cook Inlet, particularly beluga whales. One public commenter also raised concerns about the effect of training activities on wildlife, principally bison and moose.
- **Description of the Proposed Action.** The public asked questions about the Proposed Action and emphasized the need for the EIS to explain clearly the increase in personnel, construction, and training activities under each alternative. The public expressed at each meeting and in most comment letters the need for additional details on aerial training activities. In addition, commenters requested details on integrated training and potential effects to the training lands.
- **Other Issues.** Other general socioeconomic or environmental issues that were identified as important for analysis in the EIS included air quality, recreation, housing availability, crime, and traffic.

The Draft EIS considered and addressed these issues raised during the scoping process.

### 1.8.3 Review of the Draft EIS

The NOA for the Draft EIS was published in the *Federal Register* on May 1, 2009 (74 FR 20291), and EPA published its receipt of the Draft EIS on May 8, 2009 (74 FR 21684). The publication by the EPA of the NOA initiated a 45-day comment period, during which the Army invited the general public, local governments, other federal agencies, tribal organizations, and state agencies to submit written comments or suggestions concerning the analyses and alternatives addressed in the Draft EIS. During the comment period, copies of the Draft EIS were distributed to interested individuals and organizations, and provided to local libraries. The distribution list is contained in Chapter 6 of this Final EIS. Electronic files of the Draft EIS also were posted on the USAG-AK Conservation website (http://www.usarak.army.mil/conservation/). A copy of the NOA is included in Appendix A.

The Army held three public meetings in Anchorage, Fairbanks, and Delta Junction, respectively, to receive comments on the Draft EIS. Notices of these meetings were published in the *Anchorage Daily News*, *Fairbanks Daily News-Miner*, and *Delta Wind* newspapers four times each between the Draft EIS release and the public meetings, and a final notice was published in each newspaper prior to the end of the comment period. Notices also were mailed to 129 agency and tribal representatives, and private individuals

or organizations that expressed interest in the EIS. Approximately 30 people, not including Army staff, attended any one of these meetings, with the greatest number attending the Fairbanks public meeting. Governmental agencies and tribal representatives were invited to and attended separate meetings, as described previously. A court reporter was available at each meeting to take verbal comments, and comment forms were distributed to each attendee inviting written comments. The Army's presentation included detailed instructions on how to comment and provided contact information for submitting comments verbally at the meetings or by telephone, and in written form via comment forms, letter, or e-mail. All notices provided instructions and contact information for submitting comments, and this information also was included on the website.

The comment period for the Draft EIS ended on June 22, 2009. Approximately 11 individuals and 15 agencies or organizations provided comments on the Draft EIS; most comments were provided at the public meetings or in written format (letter or e-mail). Comment topics covered a range of issues but focused primarily on airspace management, timing for implementing the Proposed Action, support or opposition to the Proposed Action and alternatives, and various environmental issues. A detailed list of comment topics is included in the beginning of Chapter 9. All comments received have been considered and published in the Final EIS. Comments and responses to each are included in Chapter 9 of the Final EIS.

The NOA for the Final EIS was published in the *Federal Register* (Appendix A includes a copy of the NOA) and advertised in local newspapers. Copies of the Final EIS were provided to the entire Draft EIS distribution list (Chapter 6) and all individuals that commented on the Draft EIS (Chapter 9). Hard copies were placed in local libraries, and electronic copies were posted on the USAG-AK Conservation website (http://www.usarak.army.mil/conservation/).

The Army plans to publish a ROD documenting its decision.

## 1.9 Regulatory Requirements

A number of federal, State, and local permits, licenses, and other entitlements must be obtained prior to implementing the Proposed Action. These are provided in Table 1.9.a.

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TABLE 1.9.a
Permits, Licenses, and Other Entitlements Required Prior to Implementing the Proposed Action
*USARAK Aviation EIS*

| Law or Regulation | Description |
|---|---|
| American Antiquities Act (16 U.S.C. 431 et seq.) | Requires the agency to protect historic and prehistoric ruins, monuments, and objects of antiquity including vertebrate paleontological resources, on lands owned or controlled by the federal government. |
| American Indian Religious Freedom Act (AIRFA) [42 U.S.C. 1996] | Establishes federal policy to protect and preserve the right of American Indians to believe, express, and exercise their religions. Requires federal agencies to prepare a report evaluating how their actions might interfere with these beliefs, expressions, and actions. |
| Archeological and Historic Preservation Act (AHPA) [16 U.S.C. 469 et seq.] | Authorizes all federal agencies to expand program or project funds to evaluate, protect, or recover archeological and historical data jeopardized by their projects; explicitly calls for analysis and publication of data. |
| Archaeological Resources Protection Act (ARPA) [16 U.S.C. 470aa et seq.] | Requires a permit for excavation or removal of archaeological resources from publicly held or Native American lands. |
| Bald and Golden Eagle Protection Act [16 U.S.C. 668 et seq.] | Consultations should be conducted to determine if any protected birds are found to inhabit the area. If so, the agency must obtain a permit that may be required because of construction and operation of project facilities before moving any nests. |
| Clean Air Act (CAA) [42 U.S.C. 7401 et seq.] | Requires sources to meet standards and obtain permits to satisfy National Ambient Air Quality Standards (NAAQS), State Implementation Plans (SIPs), New Source Performance Standards, National Emission Standards for Hazardous Air Pollutants (NESHAPs), and New Source Review (NSR). |
| Clean Water Act (CWA) [33 U.S.C. 1251 et seq. Sections 401 and 402] | Requires U.S. Environmental Protection Agency (EPA) or state-issued permits, National Pollutant Discharge Elimination System (NPDES) permits, and compliance with provisions of permits regarding discharge of effluents to surface waters and additional wetland protection requirements. |
| CWA [33 U.S.C. 1313 Section 404] | Requires permits for discharge or fill placed in jurisdictional waters, including wetlands. Requires alternatives analysis including practicable alternatives that avoid impacts [Section 404(b)(1) Guidelines]. |
| Endangered Species Act of 1973 (ESA) [16 U.S.C. 1531 et seq.] | Requires consultation to identify endangered or threatened species and their habitats, assess impacts, obtain necessary biological opinion, and if necessary, develop mitigation measures to reduce or eliminate adverse effects of construction or operation. |
| E.O. 11988: Floodplain Management<br>E.O. 11990: Protection of Wetlands Management | Requires that where there is no practicable alternative to development in floodplains and wetlands, federal agencies are required to prepare a floodplains and wetlands assessment, design mitigation measures, and provide public review. For floodplain involvement, federal agencies must issue a Floodplain Statement of Findings. |
| E.O. 13186: Responsibilities of Federal Agencies to Protect Migratory Birds [66 FR 63349, December 6, 2001] | Requires federal agencies to avoid or minimize the negative impacts of their actions on migratory birds and to take active steps to protect birds and their habitats. |
| E.O. 13007: Indian Sacred Sites [61 FR 26771] | Directs federal agencies to avoid adverse effects to sacred sites, provide access to those sites for religious practices, and to plan projects to provide protection for and access to sacred sites. |
| E.O. 13175 Consultation and Coordination with Indian Tribal Governments | Directs federal agencies to establish regular and meaningful consultation and collaboration with Tribal officials in the development of federal policies that have Tribal implications. |

TABLE 1.9.a
Permits, Licenses, and Other Entitlements Required Prior to Implementing the Proposed Action
*USARAK Aviation EIS*

| Law or Regulation | Description |
|---|---|
| Marine Mammal Protection Act (MMPA) [16 U.S.C. 31] | The MMPA prohibits the harassment or take of marine mammals with exceptions for certain limited activities. |
| Migratory Bird Treaty Act (MBTA) [16 U.S.C. 703 et seq.] | Requires consultation to determine whether construction or operation of project facilities has any impacts on migrating bird populations. *Note: Military readiness activities are exempt from some provisions of the Act.* |
| National Historic Preservation Act (NHPA), as amended [16 U.S.C. 470 et seq.] | For a federal undertaking, Section 106 requires consultation with State Historic Preservation Officers (SHPOs), federally recognized Tribes, and other consulting parties to evaluate effects on historic properties (properties eligible for listing in the National Register of Historic Places), and consider ways to avoid effects or reduce them to the level of no adverse effect. |
| Native American Graves Protection and Repatriation Act (NAGPRA) [25 U.S.C. 3001] | Requires the development of procedures to address unexpected discoveries of Native American graves or cultural items during activities on federal or Tribal land. |
| NEPA [42 U.S.C. 4321 et seq., 40 CFR 1500-1508] and ARs 200-1 and 200-4, 32 CFR Part 651 | Follows 40 CFR 1500-1508, which directs all federal agencies in the implementation of NEPA.<br>U.S. Army regulations for implementing NEPA. |
| Noise Control Act [42 U.S.C. 4901 et seq.] | Requires facilities to maintain noise levels that do not jeopardize the health and safety of the public. Applicable to construction noise. |
| Protection of Historic Properties [36 CFR 800] | Lists implementing regulations that specify process for above-listed requirements of Section 106 of the National Register of Historic Places (NRHP). |
| Section 402 of the Clean Water Act (CWA) [33 U.S.C. § 1342] | Permits point source discharges that require a NPDES permit. |
| Section 401 of the Clean Water Act (CWA) [33 U.S.C. § 1341] | Requires certification from the State of Alaska that a permitted discharge is in compliance with Alaska Water Quality Standards. |

CHAPTER 2

# Description of the Proposed Action and Alternatives

## 2.1 Introduction

This chapter describes the U.S. Army Alaska's (USARAK) Proposed Action to station and train a new aviation unit in Alaska. Two action alternatives are presented for implementing the Proposed Action. This chapter also describes the No Action alternative as the comparative baseline used in Chapter 4 of this *Stationing and Training of Increased Aviation Assets within U.S. Army Alaska Environmental Impact Statement* (Aviation Environmental Impact Statement [EIS] or EIS) for assessing impacts, as required by National Environmental Policy Act (NEPA) [Title 40 of the Code of Federal Regulations (CFR) Part 1502.14(d)].

In 2004, the Army published the *Final Environmental Impact Statement for Transformation of U.S. Army Alaska* and issued its Record of Decision (ROD) (USARAK, 2004a) to extend the transformation of Army doctrine, training, leader development, organizations, installations, materiel, and Soldiers to Alaska. Continuing this process, the Proposed Action for the Aviation EIS would advance the Army's ongoing effort to transform its force structure in Alaska.

In addition to this introduction, this chapter includes the following sections:

- Section 2.2 defines the study area for this EIS.
- Section 2.3 describes the general components of the Proposed Action, including proposed changes to aviation personnel levels, aviation assets, construction, and training.
- Section 2.4 presents the screening criteria for alternatives.
- Section 2.5 describes the two action alternatives and the No Action alternative evaluated in this EIS.
- Section 2.6 describes the alternatives that were considered but eliminated.
- Section 2.7 presents a comparison of environmental consequences by alternative.
- Section 2.8 identifies the Preferred Alternative.

## 2.2 EIS Study Area

The study area for this EIS includes USARAK lands and installations in Alaska, and other lands and airspace in Alaska that could be affected by implementing the Proposed Action. Figures 2.2.a, 2.2.b, and 2.2.c illustrate the military installations and flight corridors currently used by USARAK. Activities contemplated under the Proposed Action would use these same areas because no change to flight corridors, airspace, or land areas is proposed.

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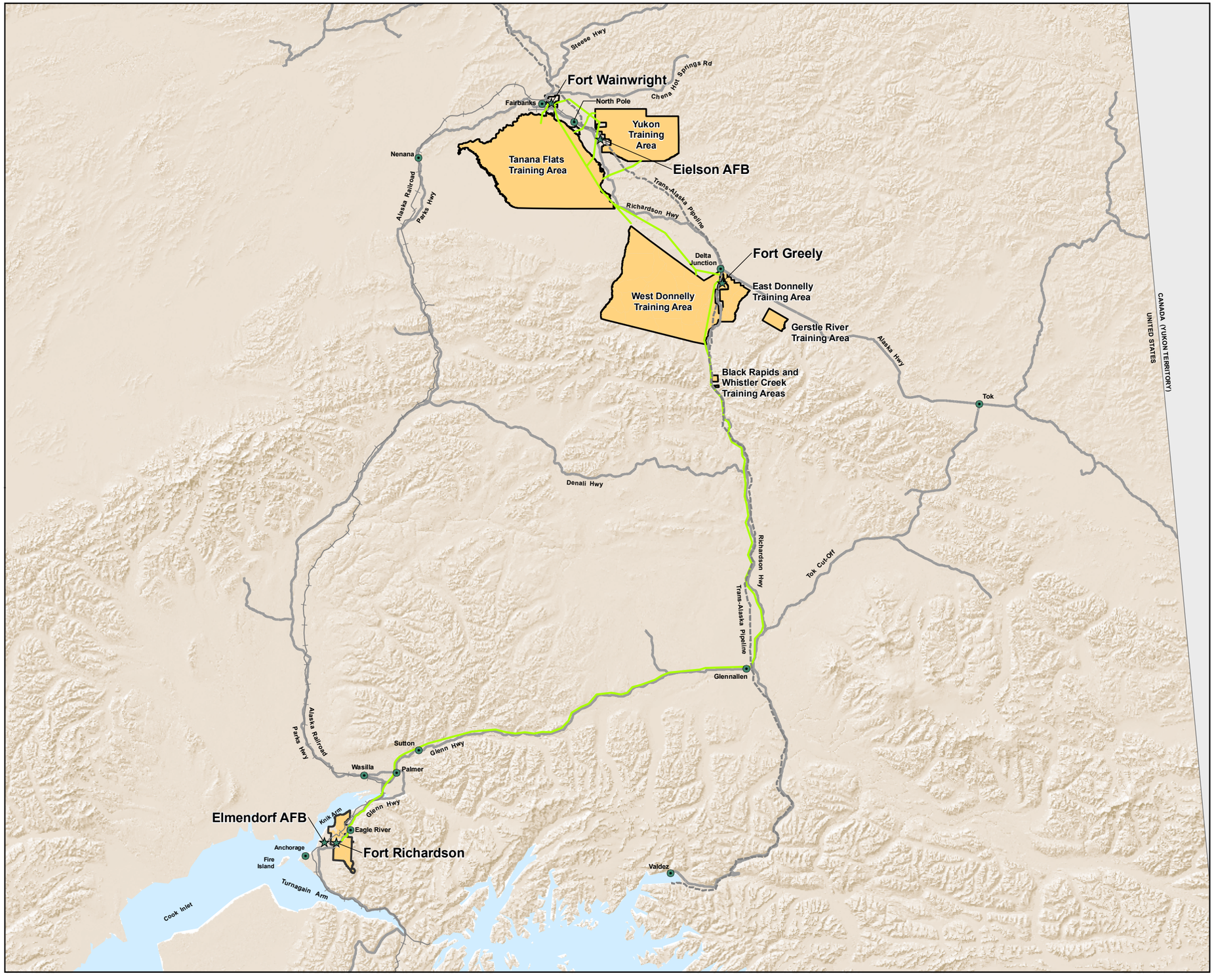
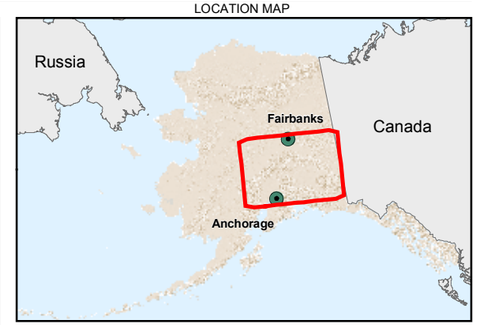



LOCATION MAP




**LEGEND**

- Cantonment Area
- Town; North Pole
- Flight Corridor between Installations
- Railroad
- Major Road
- Trans Alaska Pipeline
- Installation Boundary
- Training Area

N

0 15 30 60

Miles

**FIGURE 2.2.a**
**General Study Area Features**
*USARAK Aviation EIS*

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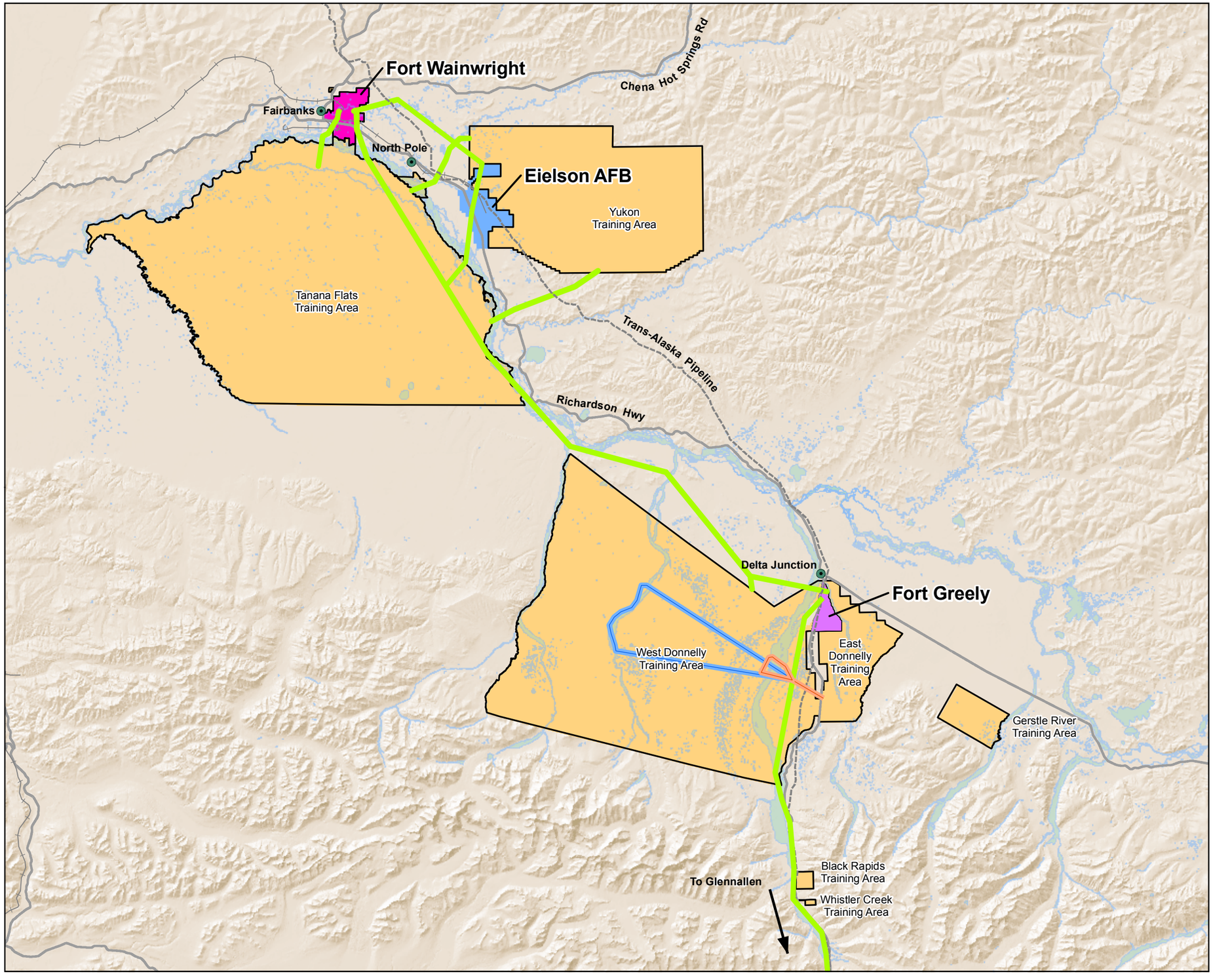


LOCATION MAP


**LEGEND**

- Town
- Helicopter Flight Route
- Railroad
- Major Road
- Trans Alaska Pipeline
- Donnelly Training Area Collective Training Range Flight Corridor
- Donnelly Training Area Oklahoma Door Gunnery
- Installation Boundary
- Training Area
- Fort Wainwright Cantonment Area
- Fort Greely Cantonment Area
- Eielson Air Force Base (AFB) Cantonment Area
- Surface Water Body

N

0 10 20
Miles

**FIGURE 2.2.b**
**Flight Corridors Near Fort Wainwright**
*USARAK Aviation EIS*

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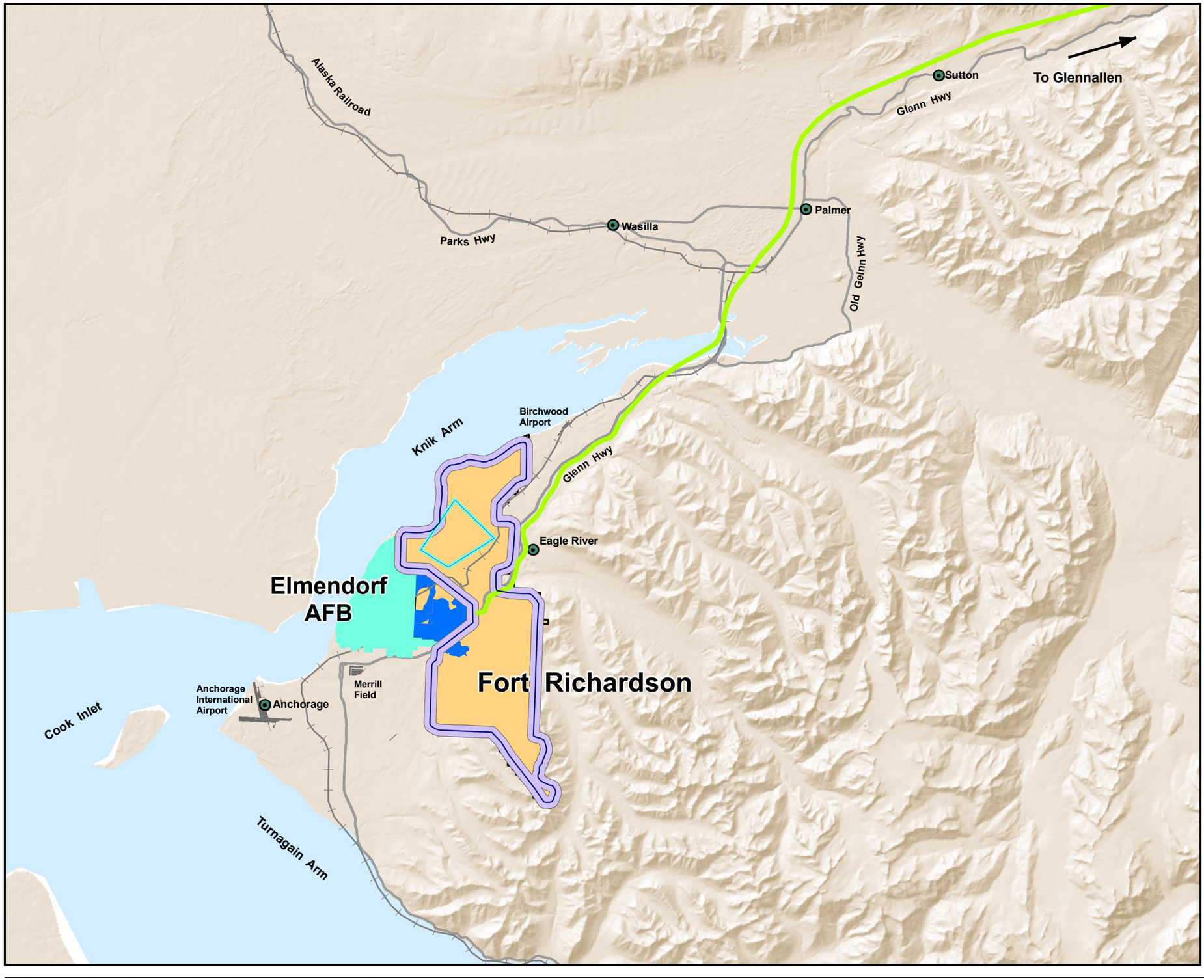


LOCATION MAP


**LEGEND**

- Town
- Helicopter Flight Route
- Railroad
- Major Road
- Fort Richardson Eagle River Flats Impact Area
- Installation Boundary
- Training Area
- Fort Richardson Nap of the Earth Flight Buffer
- Fort Richardson Cantonment Area
- Elmendorf Air Force Base (AFB) Cantonment Area

0 5 10
Miles

N

**FIGURE 2.2.c**
**Flight Corridors Near Fort Richardson**
*USARAK Aviation EIS*

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The military installations included in the study area are:

- Fort Wainwright (FWA)
- Fort Richardson (FRA)
- Eielson Air Force Base (AFB)

The study area includes the Cantonment and training areas associated with each of these installations to include the Tanana Flats Training Area (TFTA), Yukon Training Area (YTA), DTA East and West, Gerstle River Training Area (GRTA), and the Black Rapids Training Area (BRTA). Eielson AFB is included as a potential location for one alternative under the Proposed Action. The 354th Fighter Wing (FW) would continue to manage real property at Eielson AFB under the Proposed Action.

## 2.2.1 Fort Wainwright

FWA is located in Interior Alaska north of the Alaska Range in the Tanana River Valley east of the city of Fairbanks and approximately 120 miles south of the Arctic Circle. FWA is bordered on the north by Tanana Valley State Forest and on all other sides by a mixture of private land, Alaska Native-owned land, and undeveloped State lands. Seasonal temperature extremes, which can range from more than 90 degrees Fahrenheit (°F) in the summer to below -40°F in the winter, can affect all aspects of FWA's activities and operations.

### 2.2.1.1 Cantonment

FWA's Main Cantonment encompasses 13,700 acres of mixed development and undeveloped land. Developed areas consist of administrative and mission-support facilities, single Soldier housing, family housing, Ladd Army Airfield (AAF), small-arms training range facilities, and other local training areas. As of December 2007, the population of FWA totaled 14,998, including 6,341 military personnel, 7,400 dependents, and 1,257 civilians (civil service and nonappropriated fund [NAF] personnel) (U.S. Department of the Army, 2008b).

### 2.2.1.2 Non-Cantonment

FWA includes three training areas: TFTA, located immediately south of FWA; YTA, located southeast of FWA; and the DTA, located approximately 100 miles south of Fairbanks. The DTA is discussed separately in Subsection 2.2.4. TFTA comprises 655,000 acres, stretches 32 miles south of the FWA Main Cantonment, and occupies most of the land between the Tanana and Wood rivers (USARAK, 2004a). YTA comprises 247,952 acres and is bordered on the north by Chena River State Recreation Area and adjoined on the western boundary by Eielson AFB. Both training areas are suitable for various military training activities; including artillery, aerial gunnery, field training exercises (FTXs), bivouacs, and unit live-fire exercises (LFXs).

USARAK units also perform aerial reconnaissance training exercises outside areas of FWA's main Cantonment and training lands. Urban reconnaissance training involves helicopters in flight following or tracking ground-based vehicles in urban terrain. The FWA Main Cantonment and training lands do not provide terrain that is sufficiently realistic to satisfy

this training requirement; consequently, urban reconnaissance training currently occurs within general airspace above the cities of Fairbanks and North Pole.

## 2.2.2 Fort Richardson

FRA is located in South-Central Alaska directly north of downtown Anchorage and is the headquarters for USARAK. The installation is bordered by Elmendorf AFB to the west, Knik Arm to the north, the city of Anchorage to the south, and the community of Eagle River to the east.

### 2.2.2.1 Cantonment

FRA's Cantonment is approximately 6,000 acres and consists of USARAK Headquarters, administrative and mission-support facilities, single Soldier housing, family housing, and Bryant AAF. In addition to the main administrative cantonment area, sections of the installation have been allotted to the National Guard and other tenant units. The largest military tenant at FRA is the Alaska Army National Guard, which manages two facilities within the installation (Camp Carroll and Camp Denali). As of December 2007, FRA's population totaled 14,562, including 5,677 military personnel, 7,722 dependents, and 1,163 civilians (civil service and NAF personnel) (U.S. Department of the Army, 2008b).

### 2.2.2.2 Non-Cantonment

FRA is comprised of 62,000 acres, with 47,000 acres available for training. The FRA training areas and ranges consist of parachute unit drop zones (DZs), unit training complexes, weapon impact areas (IAs), small-arms firing ranges, and helicopter flight areas.

## 2.2.3 Eielson Air Force Base

Eielson AFB, located 23 miles southeast of Fairbanks along the Richardson Highway, contains 19,790 acres, consisting of a Main Post and an airfield operations area of 3,408 acres. The population of Eielson AFB totals 4,500. Eielson AFB is located in a relatively undeveloped area, bordered on the north, east, and west by undeveloped military reservations lands. The U.S. Air Force (USAF) in cooperation with the Army utilizes lands within the YTA to meet its mission requirements. Coordination of airspace is primarily controlled by the USAF through the 611th Air Operations Group (AOG) at Elmendorf AFB.

## 2.2.4 Donnelly Training Area

The DTA is located approximately 100 miles southeast of Fairbanks within the Tanana River Valley near the city of Delta Junction. The DTA has two components that together encompass 624,000 acres (DTA West [531,000 acres] and DTA East [93,000 acres]). In addition, the DTA includes two outlying parcels: the GRTA (19,000 acres), about 30 miles southeast of Delta Junction, and the BRTA (2,780 acres), located approximately 35 miles south of Delta Junction. USARAK's Battle Area Complex (BAX) and Combined-Arms Collective Training Facility (CACTF), currently under construction, are located on the DTA. The BAX is used to train company-size units in warfare against stationary and moving infantry and armor targets in a rural setting. The CACTF is used to train up to battalion-size units in urban warfare (USARAK, 2006a). The DTA also supports other training (e.g., bivouac, artillery/mortar training, and small-arms ranges), and is home to the Cold Regions

Test Center (CRTC) facilities. Construction of the BAX and CACTF will be complete in FY 2010.

Aviation training operations at the DTA also utilize Allen AAF, which is located on Fort Greely. Fort Greely is operated by the Army Space and Missile Defense Command and is independent of USARAK. Allen AAF is the only portion of Fort Greely that is included in the scope of the Proposed Action.

### 2.2.5 Flight Corridors

Within USARAK installations, Army pilots typically follow habitual flight corridors, but are not required to utilize those travel paths exclusively. In the airspace outside USARAK installations, military aviation is permitted to operate wherever general aviation is allowed by following established flight corridors and operating under established flight regulations.

The flight corridors outside of USARAK installation boundaries, as shown in Figures 2.2.b and 2.2.c, generally follow existing highways. Pilots follow the Glenn Highway corridor between Anchorage and Glennallen, and the Richardson Highway corridor between Glennallen and Fairbanks by way of Delta Junction. In addition to Federal Aviation Administration (FAA) flight regulations, USARAK helicopters follow USARAK Flight Regulations 95-1 and 350-2, which regulate military helicopter travel outside USARAK lands, including operations over populated areas, livestock, dwellings, and other noise-sensitive areas.

## 2.3 Proposed Action

The Army proposes to reorganize and augment its aviation assets (currently, about 490 personnel and 32 helicopters) to become a front-line aviation unit with an increased combat-readiness capacity. The new aviation unit would require additional Soldiers, helicopters, and support vehicles. The Proposed Action includes stationing of additional Soldiers and helicopters, construction of a number of facilities within USARAK cantonment areas, and increased aviation training.

This section describes the following key components of the Proposed Action:

- An assignment of aviation personnel, including additional Soldiers, dependents, and support personnel
- Increase in aviation assets, including additional helicopters, generators, and ground-based vehicles
- Facilities construction and demolition to support the expanded force
- Increased training activities, which would result in an increased frequency of helicopter flights on and around USARAK training lands, and increased use of existing training facilities

### 2.3.1 Aviation Personnel

Under the Proposed Action, USARAK would increase the number of aviation personnel in Alaska. Military dependent and civilian contractor populations would also increase on and

around the stationing installations. The amount of the population increase and the location of that increase vary by alternative, as detailed in Section 2.5.

### 2.3.2 Aviation Assets

The Proposed Action would reorganize and augment the Army's helicopter assets, ground-based vehicles, and generators used in Alaska. The type, number, and location of helicopters vary by alternative, as detailed in Section 2.5. The types of helicopters that would be included under the alternatives are described below and illustrated in Figure 2.3.a.

- Blackhawk (UH-60 and HH-60): The Blackhawk (UH-60) series of aircraft can perform a wide array of missions, including tactical transport of Soldiers, electronic warfare, and evacuation. The Blackhawk (HH-60), known as the MEDEVAC Blackhawk, is used to conduct day-and-night combat search-and-rescue operations. Blackhawks are typically armed with 7.62-millimeter (mm) machine guns mounted in the windows and .50-caliber machine guns mounted in the doors. Blackhawk helicopters are already associated with aviation support in Alaska.

- Chinook (CH-47): Chinooks are dual-rotor, heavy-lift helicopters typically used for troop movement, artillery emplacement, battlefield mobility for tactical vehicles, and battlefield resupply. Chinooks are typically armed with 7.62-mm door-mounted machine guns. Chinooks currently make a substantial contribution to military aviation in Alaska.

- Kiowa (OH-58): Kiowas are light attack or combat scout helicopters. The relatively small size and signature of the Kiowa allow it to maneuver with greater ease than larger helicopters, such as the Blackhawk. Kiowas are typically armed with .50-caliber heavy machine guns, 70-mm folding-fin aerial rockets, air-to-air Stinger missiles, and the Hellfire module missile. Kiowas are stationed in Alaska temporarily, and the Proposed Action would permanently station Kiowas in Alaska.

- Apache (AH-64): Apaches are the Army's principal attack helicopter. Built to endure military front-line environments, these helicopters can operate during day or night and in adverse weather. The Apache is typically armed with an M230 automatic gun, 70-mm folding-fin aerial rockets, Hellfire missiles, AGM-122 Sidearm anti-radar missile, and AIM-9 Sidewinder missiles. The Apache helicopters would be new to Alaska.

**BLACKHAWK (UH-60)**

**BLACKHAWK (HH-60)**

**CHINOOK (CH-47)**

**KIOWA WARRIOR (OH-58)**

**APACHE (AH-64)**

FIGURE 2.3.a
USARAK Aviation Assets (Helicopters)
*USARAK Aviation EIS*

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In addition to helicopters, aviation units are assigned numerous generators and vehicles. Generators range in size from small, 1.5-kilowatt (kW) camping-size units to large, 50 kW generators that could power a hangar. Generators provide electricity to field facilities and power aircraft while they are on the ground to reduce engine usage. Vehicles include the following:

- **Highly Mobile Multipurpose Wheeled Vehicle (HMMWV**): The HMMWV or Humvee is a four-wheel-drive vehicle used to transport personnel. Humvees also serve as ambulances, mobile offices, and shelter.
- **Medium and Light Medium Tactical Vehicle (MTV and LMTV):** MTVs and LMTVs have a 5-ton and 2.5-ton capacity, respectively, and are typically used for personnel and equipment transport
- **Heavy Expanded Mobility Tactical Truck (HEMTT):** The HEMTT is an eight-wheeled, 10-ton capacity truck. HEMTTs typically transport vehicles, weapons systems, and supply containers.
- **Heavy Engineer Equipment**: Heavy Engineer Equipment is a general term describing vehicles such as tractors and backhoes that perform specific engineering tasks.
- **Palletized Load System (PLS):** The PLS is a 15-ton capacity tactical cargo vehicle used to transport shelters, ammunition, and supply containers.

### 2.3.3 Facilities Construction and Demolition

The Proposed Action would require the construction of new buildings, parking areas, and fencing, and the renovation or demolition of other structures. Under both action alternatives, facilities construction and demolition would occur only at FWA; however, the scope of activities differs between the alternatives. Construction and facility siting would occur within established constraints. Personnel and aviation assets assigned to FRA or Eielson AFB would use existing buildings.

### 2.3.4 Military Training

Training is a top priority on all USARAK installations. The Army must prepare its Soldiers to deploy, fight, and win in combat at any intensity level, anywhere, anytime. Therefore, training must realistically mimic current and potential combat conditions. The Proposed Action would allow USARAK units could conduct more realistic and complex training. The frequency and intensity of current aviation training would also increase under the action alternatives.

#### 2.3.4.1 New Training Capabilities

Under the Proposed Action, brigade-level ground-based training exercises would be enabled with aviation support components, including air transport, air reconnaissance, and close air support. USARAK lacks these capabilities currently. Aviation support components would allow USARAK to integrate aviation training into existing 1/25 Stryker Brigade Combat Team (SBCT) and 4/25 Airborne Brigade Combat Team (ABCT) FTXs.

Air transport consists of troop movement, artillery placement, battlefield mobility for tactical vehicles, and battlefield resupply. Air reconnaissance includes acquisition of

information by employing visual observation and/or sensors in air vehicles. Close air support involves action by aircraft against hostile targets, which are in close proximity to friendly forces. These aviation support activities are necessary to adequately train USARAK units in accordance with Army doctrine and recreate current battlefield conditions.

#### 2.3.4.2 Increased Training Activities

Most of the training activities under the Proposed Action would be similar to the No Action alternative, but the intensity and frequency would increase substantially. The frequency of training and number of training exercises vary by alternative. Increased training activities can be sorted into live-fire and non-live-fire training events. A live-fire event is defined as a training event that uses service (or real) ammunition rather than blank ammunition.

Non-live-fire aviation training includes:

- Helicopter pilot proficiency
- Maintenance and improvement of individual Soldier, squad, platoon, and company skills (i.e., vehicle driver training, maintenance of weapons, teamwork methods)
- Aviation-only training exercises (primarily conducted at the DTA)
- Support of and participation in large brigade-size (1/25 SBCT and 4/25 ABCT) FTXs

Non-live-fire training events include the day-to-day activities required to maintain individual and crew-level skills. This type of training requires takeoff and landing points, DZs, and use of forward area arming and refueling points. As noted in Subsection 1.3.4, companies and smaller-size units would practice their collective tasks at their home stations (FWA, FRA, or Eielson AFB). FTXs, which involve all brigade units, are conducted on DTA. FTXs are comprised of both live-fire and non-live-fire elements.

Under the Proposed Action, helicopters would continue to follow existing flight corridors to move between the Cantonment and USARAK training areas. Flight corridors would not change, but the increased number of helicopters proposed for the reorganized aviation unit would result in more helicopters using the corridors with greater frequency. No new flight corridors would be established under any alternative.

Live-fire training includes:

- Individual weapons training
- Helicopter gunnery
- Support of and participation in large brigade-size (1/25 SBCT and 4/25 ABCT) FTXs

Individual weapons training is dependent on the types of weapons assigned to the Soldiers in the unit, but typically include the M9 pistol, M16 rifle, M203 grenade launcher, M249 SAW, MK19 machine gun, M1200 shotgun, and AT-4 anti-tank weapon. Soldiers assigned these weapons will typically have to verify the accuracy of the weapon, and meet qualification standards every 6 to 12 months. Soldiers also participate in platoon/company-level LFXs annually (Standards in Training Commission [STRAC], 2004).

Helicopter gunnery is a training event where individuals, crews, teams, and companies show proficiency and validate the operational readiness of their helicopter weapon systems.

The helicopter gunnery program begins with individual qualification on aircraft systems and progresses through crew qualification to unit-collective training (Field Manual [FM] 1-140 [U.S. Department of the Army, 1996]). The use of the Kiowa and Apache helicopters under the Proposed Action would introduce high-explosive rounds, including the Hellfire and Stinger missiles, during helicopter gunnery. However, training missiles rather than live missiles will normally be used during training events. Units conduct helicopter gunnery based on mission training requirement and unit Mission-Essential Task Lists (METLs) (STRAC, 2004). Training using high-explosive rounds would occur within restricted airspace and established IAs.

#### 2.3.4.3 Training Impacts

Under one or both of the Proposed Action alternatives, squad, platoon, and some company training events would be conducted at FRA and FWA, and remaining company, battalion, and brigade training events would be conducted at the DTA. Training events are defined by the event type (e.g., FTX), the size of the unit (e.g., company, battalion), and the type of unit (e.g., infantry, engineer). Each training event requires different range or training assets and has a different impact on training lands. The largest anticipated training event would occur at DTA East and involve a brigade-size unit (approximately 3,400 Soldiers) training its four assigned battalions over a 45-day period (USARAK, 2006a). Activities associated with these events have been analyzed in the *Final Legislative Environmental Impact Statement for Alaska Lands Withdrawal Renewal* (USARAK, 1999), and the *Final Environmental Impact Statement for Transformation of U.S. Army Alaska* (USARAK, 2004a).

No new ranges or facilities would be built in response to the Proposed Action; however, the following facilities would potentially receive increased use under the Proposed Actions (see Figures 2.3.b through 2.3.e for further detail):

- **Impact Areas (IAs):** IAs serve as the receiving points for live-fire ammunitions. IAs are required to conduct live-fire training at USARAK. Dedicated IAs that receive dud-producing munitions are located within YTA, TFTA, DTA, and FRA.
- **Landing Zones (LZs):** LZs are designated locations where helicopters land and take off, generally for the insertion of troops or provisions. There are 43 LZs on YTA, TFTA, DTA, and FRA.
- **Drop Zones (DZs):** DZs are designated areas where personnel or equipment are delivered by parachute or for certain items, by free-drop. There are 18 DZs on YTA, TFTA, DTA, and FRA.
- **Firing Points (FPs):** FPs are prepared fighting positions from which infantry can defend territory from minimal exposure to return fire. There are 47 FPs on YTA, TFTA, DTA, and FRA.
- **Small-Arms Ranges:** Small-arms ranges are training facilities designed for weapon systems with bore sizes of 20-mm or less. Small-arm ranges are located on FWA, FRA, and the DTA.

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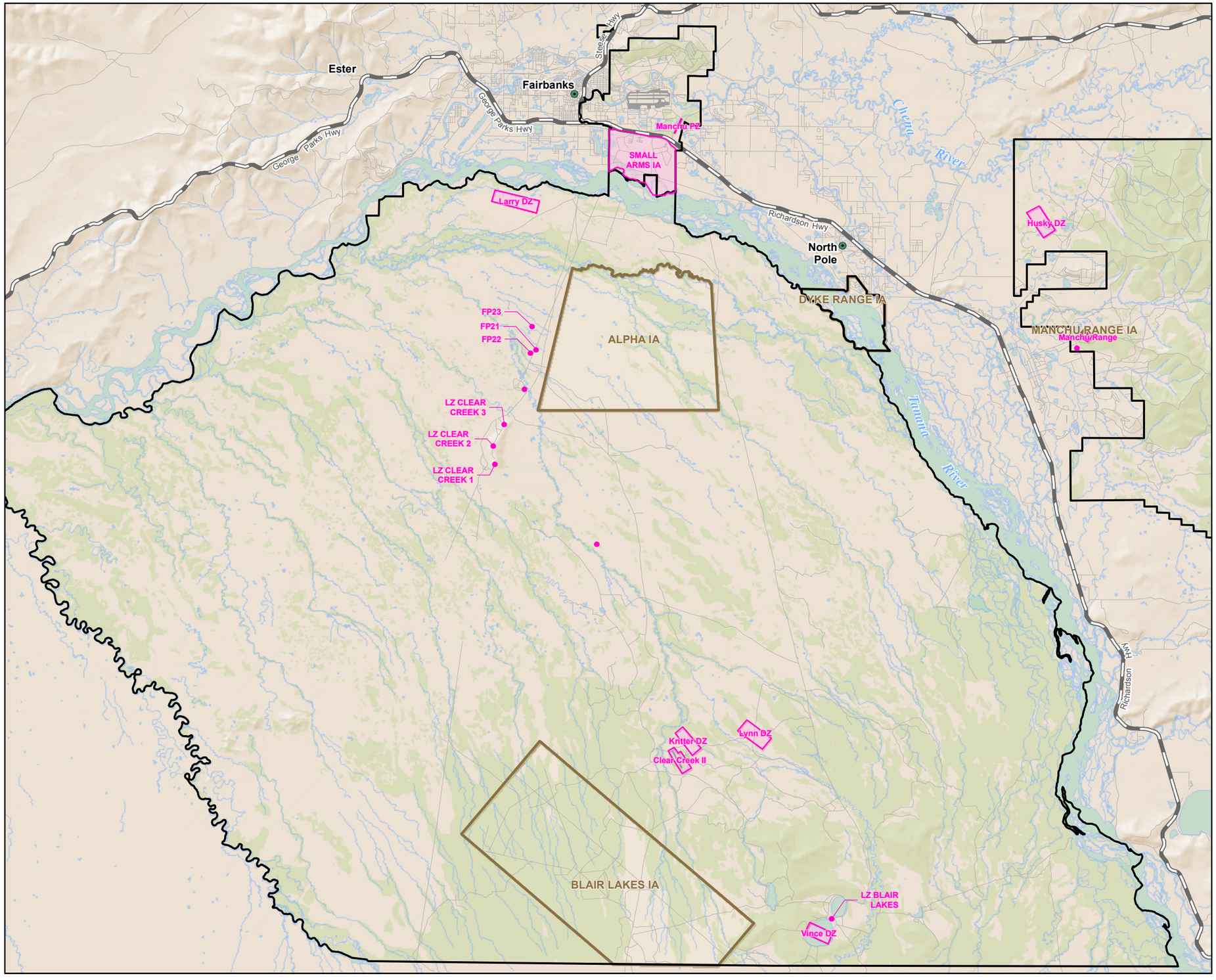
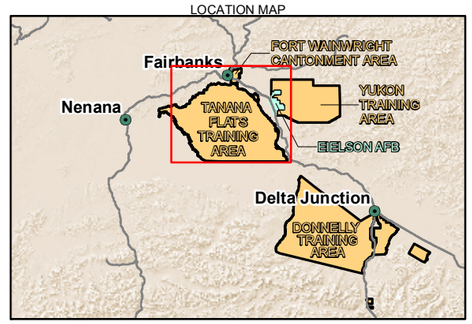



LOCATION MAP




**LEGEND**

- Town
- Major Roads
- Training Site
- Impact Area
- Surface Water Body
- Vegetation

**Location Map**

- Air Force Installation Area
- Army Installation

Note:
Training Site Acronyms:
- FP - Firing Points
- LZ - Landing Zone
- DZ - Drop Zone
- OP - Observation Point
- IA - Impact Area
- PZ - Pick Up Zone
- ASP - Ammo Supply Point
- UAV - Unmanned Aerial Vehicle
- FOB - Forward Operating Base
- BAX - Battle Area Complex
- FAARP - Forward Area Arming and Refuel Point
- FLS - Field Landing Strip

N

0 2 4
Miles

**FIGURE 2.3.b**
**Fort Wainwright Aviation Training Sites**
*USARAK Aviation EIS*

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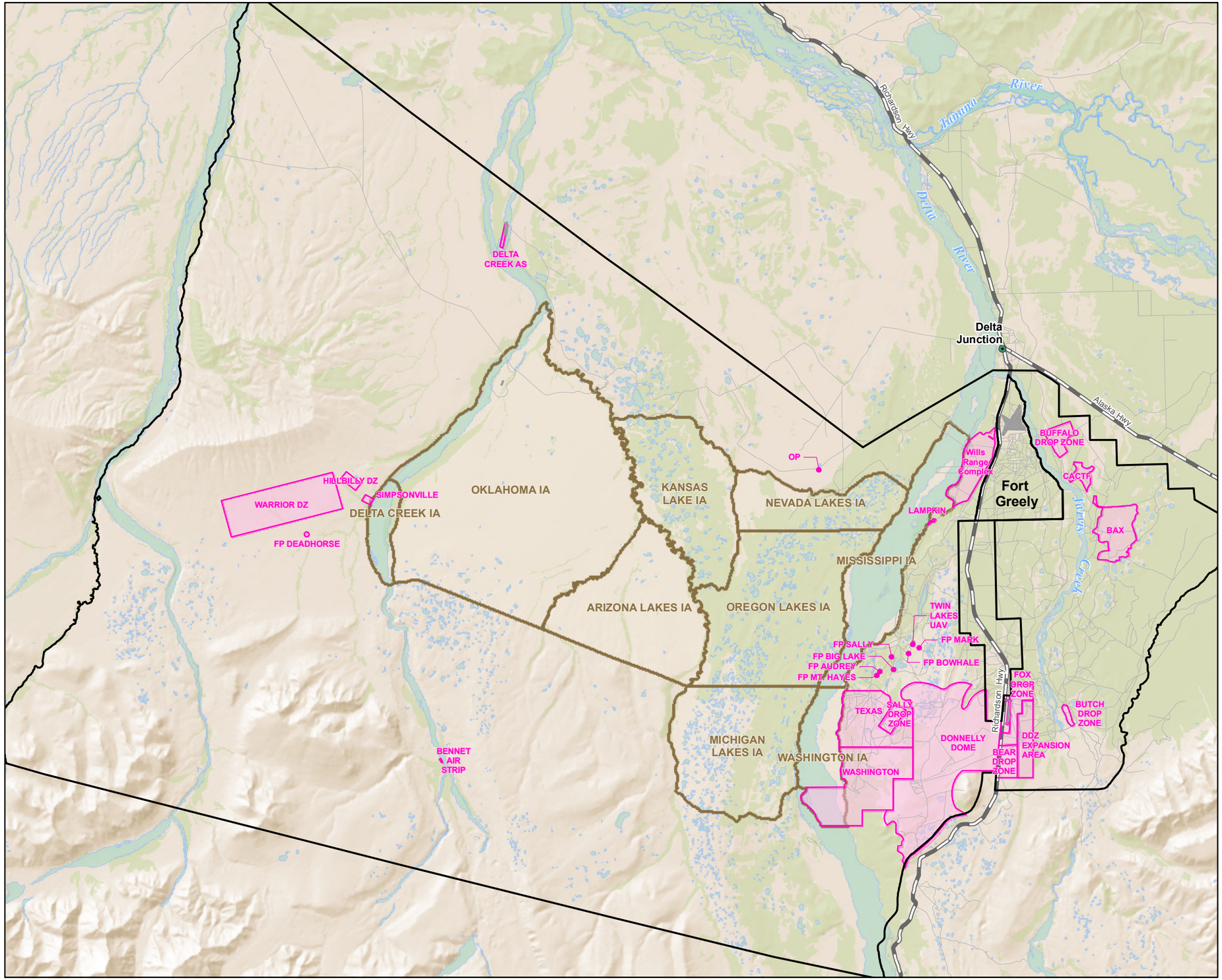
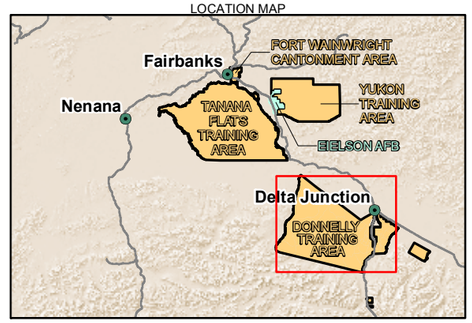



LOCATION MAP




**LEGEND**

- Town
- Major Roads
- Training Site
- Impact Area
- Surface Water Body
- Vegetation

**Location Map**

- Air Force Installation Area
- Army Installation

Note:
Training Site Acronyms:
- FP - Firing Points
- LZ - Landing Zone
- DZ - Drop Zone
- OP - Observation Point
- IA - Impact Area
- PZ - Pick Up Zone
- ASP - Ammo Supply Point
- UAV - Unmanned Aerial Vehicle
- FOB - Forward Operating Base
- BAX - Battle Area Complex
- FAARP - Forward Area Arming and Refuel Point
- FLS - Field Landing Strip

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**FIGURE 2.3.c**
**Donnelly Training Area Aviation Training Sites**
*USARAK Aviation EIS*

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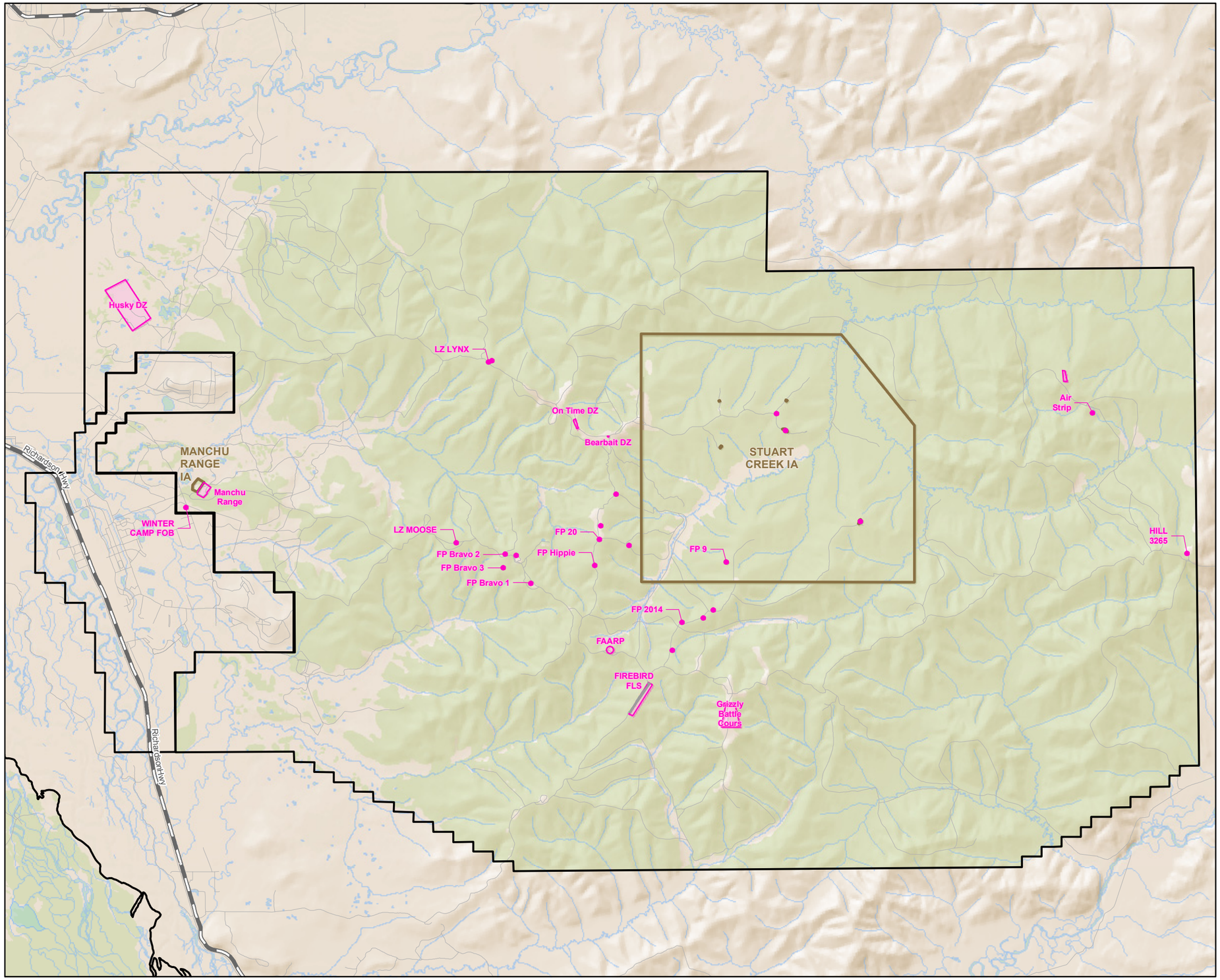


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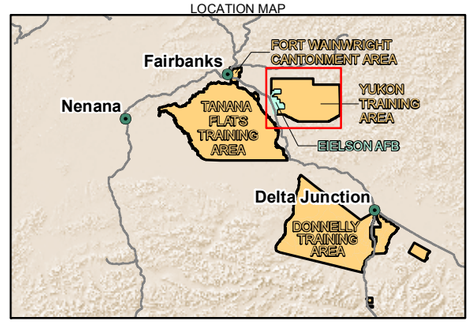


**LEGEND**

- Town
- Major Roads
- Training Site
- Impact Area
- Surface Water Body
- Vegetation

**Location Map**

- Air Force Installation Area
- Army Installation

Note:
Training Site Acronyms:
FP - Firing Points
LZ - Landing Zone
DZ - Drop Zone
OP - Observation Point
IA - Impact Area
PZ - Pick Up Zone
ASP - Ammo Supply Point
UAV - Unmanned Aerial Vehicle
FOB - Forward Operating Base
BAX - Battle Area Complex
FAARP - Forward Area Arming and Refuel Point
FLS - Field Landing Strip

N

0 1.25 2.5
Miles

**FIGURE 2.3.d**
**Yukon Training Area Aviation Training Sites**
*USARAK Aviation EIS*

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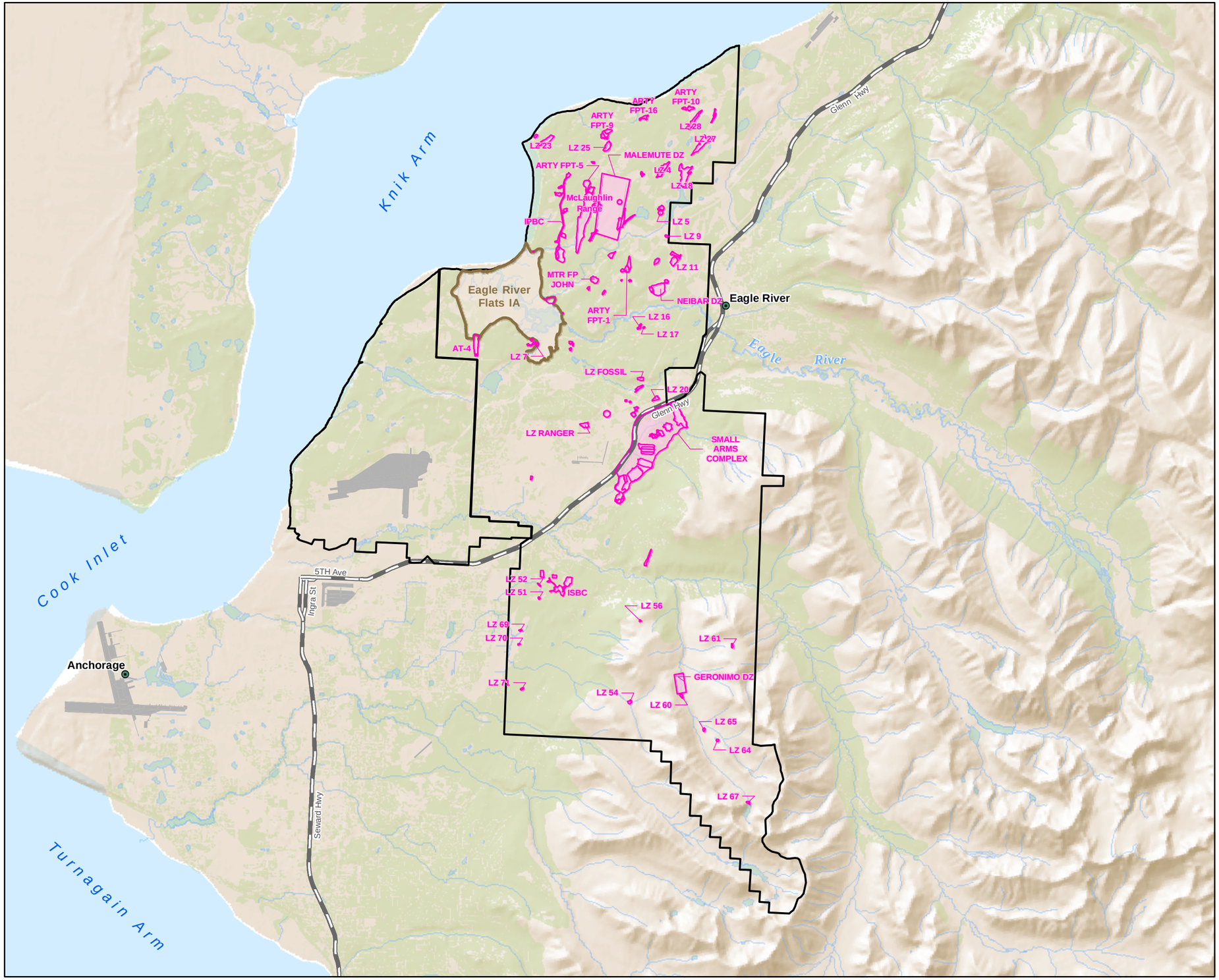


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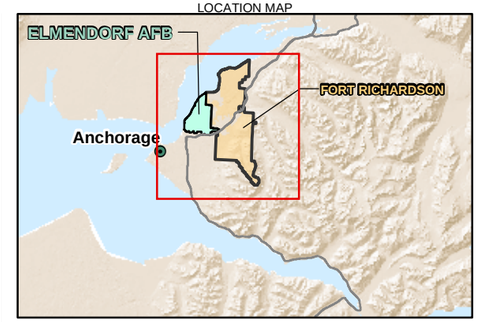


**LEGEND**

- Town
- Major Roads
- Training Site
- Impact Area
- Surface Water Body
- Vegetation

**Location Map**

- Air Force Installation Area
- Army Installation

Note:
Training Site Acronyms:
FP - Firing Points
LZ - Landing Zone
DZ - Drop Zone
OP - Observation Point
IA - Impact Area
PZ - Pick Up Zone
ASP - Ammo Supply Point
UAV - Unmanned Aerial Vehicle
FOB - Forward Operating Base
BAX - Battle Area Complex
FAARP - Forward Area Arming and Refuel Point
FLS - Field Landing Strip

N

0 1.25 2.5
Miles

**FIGURE 2.3.e**
**Fort Richardson Aviation Training Sites**
*USARAK Aviation EIS*

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- **Forward Operating Base (FOB):** An FOB is a secured forward position that is used for an extended period to support tactical operations and may contain an airfield, hospital, or other facilities. FOBs are present throughout USARAK training lands.
- **Collective-Training Ranges:** Collective-training ranges provide realistic training opportunities to develop and improve Soldier proficiency and competence in the use of sophisticated weaponry and to mold teams into effective fighting units (TC 25-8 [U.S. Department of the Army, 2004]). There are a number of collective training ranges on USARAK lands, including the Simpsonville, Texas, and Wills Range Complex on DTA; Manchu and Grizzly Battle Course on YTA; and McLaughlin Range on FRA.
- **Battle Area Complex (BAX):** A BAX is a fully automated, collective live-fire range that supports company-size (200 Soldiers) units performing mounted (using vehicles) and dismounted (on foot) live-fire operations. The BAX construction will be complete in FY 2010.
- **Combined-Arms Collective Training Facility (CACTF):** A CACTF supports battalion-size (800 Soldiers) force-on-force training using blank ammunition, short-range training ammunition (SRTA) rounds, lasers, or other simulated munitions in an urban environment. The CACTF construction will be complete in FY 2010.

## 2.4 Alternatives Screening Criteria

The Army developed the following criteria to develop a reasonable range of action alternatives for the Proposed Action. Reasonable alternatives are those that meet the purpose and need to support the increase and reorganization of aviation assets, provide facilities that meet Army standards and the requirements of installation master plans, can be accomplished within USARAK's existing lands, and do not require relocation of USARAK's existing aviation assets and personnel.

The Army considered the following criteria when developing action alternatives to be evaluated in the EIS. These criteria were based on the purpose and needs for the Proposed Action.

1. Furthers Transformation of USARAK
2. Supports integrated training needs and requirements of BCTs in Alaska:
    a. Augments USARAK's existing force to provide additional aviation capability (in accordance with Training Circular [TC] 25-8 training requirements [U.S. Department of the Army, 2004])
    b. Uses airfield and support facilities located within a reasonable distance of USARAK training lands to minimize refueling of aircraft supporting BCT training
    c. Supports training that is compatible with existing airspace designations and uses (that is, does not require modification of airspace)
    d. Uses existing military training range infrastructure and targetry to support USARAK mission training needs
    e. Does not require relocation of USARAK's existing assets and personnel

3. Has infrastructure or the potential for new infrastructure construction to accommodate helicopter basing, maintenance, and storage at a reasonable cost, adjacent to an operational military airfield, and in accordance with relevant installation planning documents (as outlined by the criteria in Subsection 1.3.4)
4. Has civilian infrastructure capable of providing life-style needs of Soldiers and dependents

These criteria relate to the primary needs of the Proposed Action: training and stationing of Soldiers and equipment. They apply to potential spatial and infrastructure constraints of cantonment and non-cantonment areas.

## 2.5 Alternatives

Possible scenarios for the creation of a new aviation unit include the No Action and two action alternatives. Table 2.5.a summarizes the key components of each alternative: stationing locations, aviation personnel, facilities construction, and training.

- **Alternative 1: No Action**. Under the No Action alternative, USARAK would continue to use existing units and assets to support aviation and integrated training requirements. USARAK's current aviation assets consist of 490 Soldiers and 32 helicopters.
- **Alternative 2: Aviation Task Force**. This alternative would convert existing USARAK aviation assets into a Task Force. An Aviation Task Force consists of approximately 1,200 personnel and 72 helicopters. An additional 710 Soldiers and 40 helicopters would augment USARAK's existing aviation assets. The Kiowa helicopter would also be added to the current inventory of Chinooks and Blackhawks. Additional Soldiers and helicopters would be stationed only at FWA, and increased aviation training would be conducted on existing USARAK lands at FWA and DTA. New infrastructure would be required at FWA.
- **Alternative 3: Combat Aviation Brigade.** This alternative would expand existing USARAK aviation assets into a Brigade. A CAB consists of approximately 2,850 personnel and 116 helicopters. An additional 2,360 Soldiers and 84 helicopters would augment USARAK's existing aviation assets. The Kiowa and Apache helicopters would also be added to the current inventory of Chinooks and Blackhawks. Although USARAK would prefer to station all new Soldiers and helicopters at FWA, it is unlikely that FWA would have the capacity to accommodate the additional aircraft, support staff, and dependents. For this reason, Alternative 3 includes stationing of a portion of Soldiers and helicopters at FRA and Eielson AFB. Of the 2,360 additional Soldiers, an estimated 1,476 would go to FWA, and 442 each would go to FRA and Eielson AFB. Dependents and civilian workers associated with these Soldiers would be divided proportionately among the three installations. An additional 40 helicopters would be stationed at FWA, 20 helicopters would be stationed at FRA, and 24 helicopters would be stationed at Eielson AFB. Increased aviation training would occur on existing USARAK lands at FWA, FRA, and DTA. Additional infrastructure would be required at FWA.

TABLE 2.5.a
Key Components of Alternatives
*USARAK Aviation EIS*

| Component | Alternative 1: No Action (Pre-2006) | | | Alternative 2: Aviation Task Force | | | Alternative 3: Combat Aviation Brigade | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Fort Wainwright** | **Fort Richardson** | **Eielson AFB** | **Fort Wainwright** | **Fort Richardson** | **Eielson AFB** | **Fort Wainwright** | **Fort Richardson** | **Eielson AFB** |
| **Army Aviation Personnel and Others** | | | | | | | 5,515 (+4,125) | 1,235 (+1,235) | 1,235 (+1,235) |
| Total (+ increase from No Action) | 1,390 (+0) | 0 (+0) | 0 (+0) | 3,395 (+2,005) | 0 (+0) | 0 (+0) | | | |
| Soldiers | 490 (+0) | 0 (+0) | 0 (+0) | 1,200 (+710) | 0 (+0) | 0 (+0) | 1,966 (+1,476) | 442 (+442) | 442 (+442) |
| Family Members | 690 (+0) | 0 (+0) | 0 (+0) | 1,685 (+995) | 0 (+0) | 0 (+0) | 2,694 (+2,004) | 598 (+598) | 598 (+598) |
| Civilian Support Personnel | 210 (+0) | 0 (+0) | 0 (+0) | 510 (+300) | 0 (+0) | 0 (+0) | 855 (+645) | 195 (+195) | 195 (+195) |
| **Helicopters** Total (+ increase from No Action) | 32 (+0) | 0 (+0) | 0 (+0) | 72 (+40) | 0 (+0) | 0 (+0) | 72 (+40) | 20 (+20) | 24 (+24) |
| Blackhawk UH-60 | 18 (+0) | 0 (+0) | 0 (+0) | 18 (+0) | 0 (+0) | 0 (+0) | 18 (+0) | 20 (+20) | 0 (+0) |
| Blackhawk HH-60 | 2 (+0) | 0 (+0) | 0 (+0) | 12 (+10) | 0 (+0) | 0 (+0) | 12 (+10) | 0 (+0) | 0 (+0) |
| Chinook CH-47 | 12 (+0) | 0 (+0) | 0 (+0) | 12 (+0) | 0 (+0) | 0 (+0) | 12 (+0) | 0 (+0) | 0 (+0) |
| Kiowa OH-58 | 0 (+0) | 0 (+0) | 0 (+0) | 30 (+30) | 0 (+0) | 0 (+0) | 30 (+30) | 0 (+0) | 0 (+0) |
| Apache AH-64 | 0 (+0) | 0 (+0) | 0 (+0) | 0 (+0) | 0 (+0) | 0 (+0) | 0 (+0) | 0 (+0) | 24 (+24) |
| **Construction and Demolition** | | | | | | | | | |
| New Construction Footprint | 0 $ft^2$ | 0 $ft^2$ | 0 $ft^2$ | 2,379,159 $ft^2$ (54.6 acres) | 0 $ft^2$ | 0 $ft^2$ | 3,178,788 $ft^2$ (73.0 acres) | 0 $ft^2$ | 0 $ft^2$ |
| Demolition | 0 $ft^2$ | 0 $ft^2$ | 0 $ft^2$ | 47,675 $ft^2$ | 0 $ft^2$ | 0 $ft^2$ | 47,675 $ft^2$ | 0 $ft^2$ | 0 $ft^2$ |
| **Training** | | | | | | | | | |
| Type of Training | Existing aviation personnel and equipment at FWA would conduct limited integrated training to support the 1/25 SBCT and 4/25 ABCT, as well as individual and crew proficiency training. No training would be conducted at FRA or Eielson AFB. | | | Aviation personnel and equipment at FWA would conduct Task Force-level integrated training with the 1/25 SBCT and 4/25 ABCT, as well as individual and crew proficiency training. Training would be conducted at FWA and its training areas, and DTA. No training would be conducted at FRA or Eielson AFB. | | | Aviation personnel and equipment from FWA, FRA, and Eielson AFB would conduct Brigade-level integrated training with the 1/25 SBCT and 4/25 ABCT, as well as individual and crew proficiency training. Training would be conducted at FWA and its training areas, DTA, and FRA. Training at Eielson AFB would be limited to takeoffs and landings at the airfield. | | |
| Number of Annual Takeoffs and Landings Total (+ increase from No Action) | 3,672 (+0) | 4,800[a] (+0) | 0 (+0) | 9,972 (+6,300) | 4,800[a] (+0) | 0 (+0) | 9,972 (+6,300) | 9,592[a] (+4,792) | 960 (+960) |

[a] For all alternatives, 4,800 annual takeoffs and landings from FRA are included. These are associated with the Alaska Army National Guard and are not associated with USARAK operations. In addition to the total number of takeoffs and landings from FWA, FRA, and Eielson AFB, all three alternatives include an additional 188 USARAK takeoffs and landings from Allen AAF.

Sources:
Davis, 2009; USARAK, 2004a; Reid, 2006 and 2007.

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### 2.5.1 Alternative 1: No Action

The No Action alternative is analyzed in accordance with NEPA as a benchmark against which to compare the expected environmental impacts of the action alternatives. The No Action alternative does not meet the purpose and needs for the Proposed Action or the screening criteria established for reasonable alternatives.

Under the No Action alternative, the proposal to increase the Army's aviation assets in Alaska would not be implemented. No additional Soldiers and helicopters would be permanently stationed in Alaska, and no new facilities would be constructed (see Figure 2.5.a). Existing aviation assets would continue to use current training locations and transportation corridors, and USARAK lands would continue to support 1/25 SBCT and 4/25 ABCT training. The 1/25 SBCT and 4/25 ABCT support facilities, ranges, and training would remain unchanged (USARAK, 2004a; USARAK, 2005). USARAK would continue to conduct mission-sustaining training activities, but integrated aviation support training to USARAK BCTs would be limited and critical wartime mission-oriented training could not take place.

Since 2006, USARAK has received additional Soldiers and helicopters on a temporary basis. The Army analyzed the temporary stationing of these assets and concluded that the potential environmental impacts associated with the short-term stationing of these assets had been covered by previous NEPA documentation (USARAK, 2006a). The No Action alternative does not include these temporarily stationed Soldiers or helicopters. Their permanent stationing is analyzed under Alternatives 2 and 3.

#### 2.5.1.1 Aviation Personnel (and Others)

Under the No Action alternative, aviation personnel permanently stationed at FWA include 490 Soldiers, 690 dependents, and 210 civilian support personnel. USARAK Soldiers currently involved in aviation-related activities provide limited support to the 1/25 SBCT at FWA and to the 4/25 ABCT at FRA. They also conduct day-to-day routine proficiency training activities.

#### 2.5.1.2 Aviation Assets

There are 32 helicopters (12 Chinooks and 20 Blackhawks) assigned to FWA. These numbers exclude the Alaska Army National Guard helicopters presently stationed at FRA that will remain there under the No Action alternative as well as under Alternatives 2 and 3.

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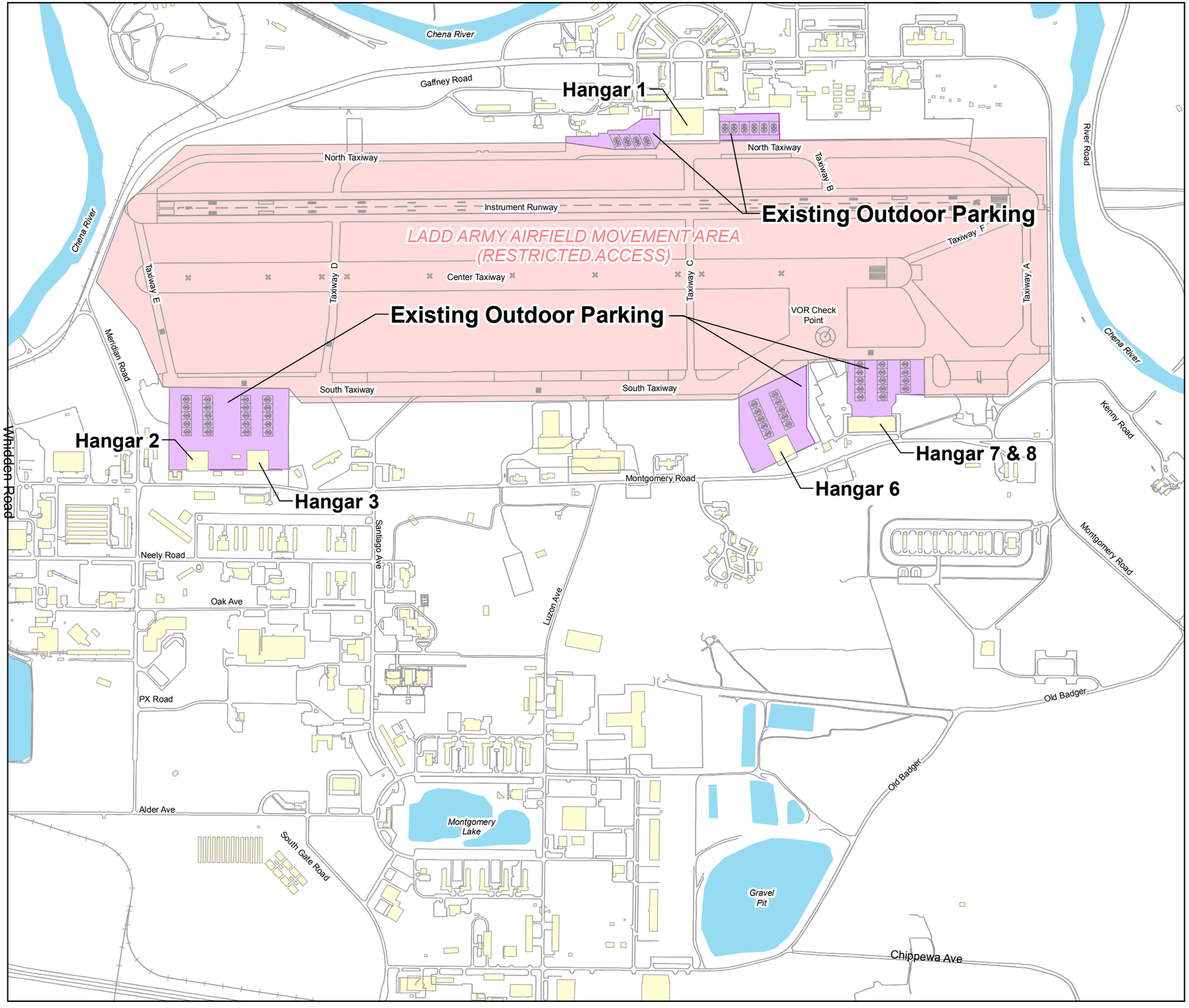
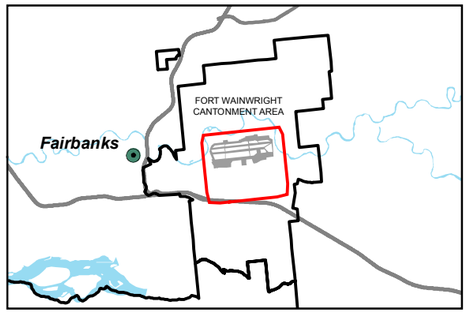



LOCATION MAP




**LEGEND**

- Town
- Stream
- Railroad
- Installation Boundary
- Existing Building
- Ladd Army Airfield Movement Area
- Existing Outdoor Parking
- Single Rotar Helicopter (Blackhawk, VH-60 and HH-60, Kiowa OH-58)
- Double Rotar Helicopter (Chinook)

0 500 1,000 2,000 Feet

1 inch equals 1,029.31425 feet

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**FIGURE 2.5.a**
**Facilities at Fort Wainwright with No Action Alternative**
*USARAK Aviation EIS*

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Vehicles and generators assigned to USARAK units are provided in Table 2.5.b.

TABLE 2.5.b
Alternative 1: No Action Generator and Vehicle Assets
*USARAK Aviation EIS*

| Additional Assets | Number (All Installations) |
|---|---|
| **Generators** | **60** |
| **Vehicles** | |
| Heavy Engineer Equipment | 45 |
| HEMTT | 203 |
| HMMWV | 1,390 |
| LMTV | 244 |
| MTV | 508 |
| PLS | 74 |
| **Vehicle Total** | **2,464** |

### 2.5.1.3 Facilities Construction

The construction of additional helicopter hangars and other aviation asset support facilities would not occur under the No Action alternative. FWA, FRA, and Eielson AFB would continue to implement construction plans for other facilities not related to the aviation mission. Mission-sustaining activities, home station operations and maintenance (O&M), and facility upgrades would continue as needed to support the existing force. O&M activities would be comprised of aircraft maintenance and repair activities, equipment-storage logistics activities, administrative support, and personnel training. Existing helicopters would continue to be stored outside and in Hangars 2 and 3, and no new hangars would be constructed.

### 2.5.1.4 Military Training

Under the No Action alternative, USARAK's 1/25 SBCT and 4/25 ABCT would continue to conduct separate and combined training exercises. Training exercises would not contain support components (such as air transport, air reconnaissance, and close air support). The complexity and realistic nature of training would not simulate actual combat conditions. Consequently, the No Action alternative would not support the current training needs of BCTs in Alaska and would not meet the stated purpose and needs for the Proposed Action (Section 1.3).

USARAK aviation units based at FWA would conduct the same types of training described in Subsection 2.3.4. USARAK would conduct the same number of takeoffs and landings, estimated at 3,860 annually, of which 188 would occur at Allen AAF. In addition, the Alaska Army National Guard would continue to conduct 4,800 annual takeoffs and landings from FRA.

Section 3.2, Airspace Management, Table 3.2.a, provides additional details on current operations. A comparison of total operations between alternatives can be found in Table 2.5.a.

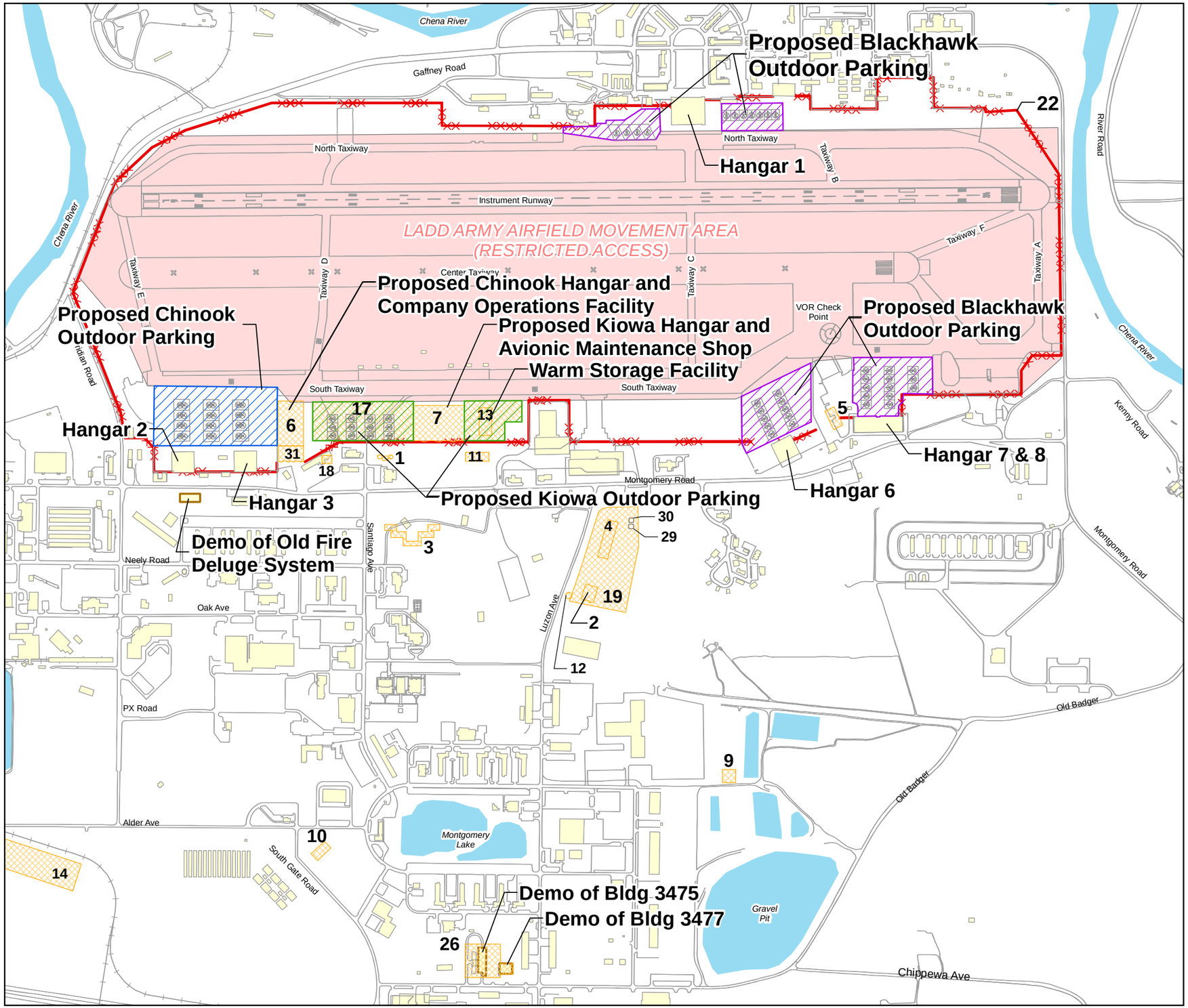
## 2.5.2 Alternative 2: Aviation Task Force

Alternative 2 would form an Aviation Task Force by augmenting USARAK's existing aviation unit with 40 additional helicopters and 710 additional Soldiers. The Task Force would be stationed at the FWA Main Post. Alternative 2 would include construction to support indoor storage of 100 percent of the Task Force's aviation inventory as well as other required facilities (see Figure 2.5.b). Training would occur on current USARAK training lands and use existing flight corridors (see Figures 2.2.a, 2.2.b, 2.2.c, 2.3.b, 2.3.c, 2.3.d, and 2.3.e). No training would be conducted at FRA or at Eielson AFB. Implementing this alternative would provide integrated first-line air transport, air reconnaissance, and close air support during training exercises with the existing 1/25 SBCT and 4/25 ABCT. This would increase the complexity and realistic nature of training exercises to simulate actual combat conditions. Table 2.5.a provides a summary of the equipment, personnel, construction, and training by location under Alternative 2.

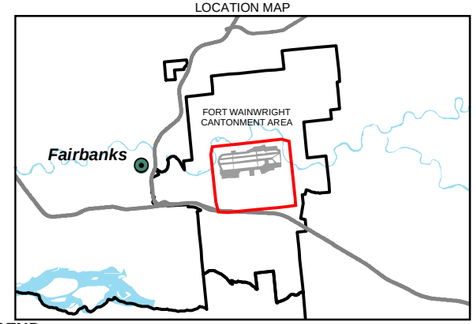
### 2.5.2.1 Aviation Personnel (and Others)

Under Alternative 2, the number of military aviation personnel in Alaska would increase from the current 490 Soldiers to approximately 1,200, for a net increase of about 710 Soldiers. The FWA population would also increase by an estimated 995 family members and approximately 300 supporting employees (both federal and contracted employees). The total FWA population would increase by 2,005, including Soldiers, family members, and civilian support personnel.

The Task Force would be comprised of the 1-52 General Support Aviation Battalion, C-123 Aviation Regiment, 209th Aviation Support Battalion, 58th Company Battalion Air Traffic Services, and the 6-17th Cavalry Attack/Reconnaissance Squadron.




LOCATION MAP




**LEGEND**

- Proposed Demolition
- Proposed Aviation Task Force Construction
- Proposed CH-47 Chinook Outdoor Parking
- Proposed OH-58D Kiowa Outdoor Parking
- Proposed UH-60 and HH-60 Outdoor Blackhawk Parking
- Proposed Airfield Fencing
- Town
- Stream
- Installation Boundary
- Existing Building
- Ladd Army Airfield Movement Area
- Railroad
- Single Rotar Helicopter (Blackhawk and Kiowa)
- Double Rotar Helicopter (Chinook)

**Proposed Aviation Task Force Facilities**

| ID | House Description | Sq Ft |
|---|---|---|
| 1 | Fire Deluge System - New Well | 8,000 |
| 2 | Duplex COF | 31,878 |
| 3 | Barracks (294 Person) | 114,072 |
| 4 | Vehicle Maintenance Facility (Motor pool) | 35,290 |
| 5 | Aircraft Parts Storage Building | 20,000 |
| 6 | Chinook CH-47 Hangar with three-plex COF | 125,870 |
| 7 | Kiowa OH-58 Hangar with four-plex COF | 145,797 |
| 9 | Organizational Storage Building | 14,350 |
| 10 | Combined Brigade/Battalion Headquarters Facility | 49,546 |
| 11 | Headquarters Company Operations Facility | 19,500 |
| 12 | Fire Protection Well | 300 |
| 13 | Warm Storage Facility | 52,000 |
| 14 | Recreational Vehicle Parking Replacement | 401,364 |
| 17 | Rotary Wing Apron | 729,000 |
| 18 | Brigade Operations Facility | 16,015 |
| 19 | Organizational Vehicle Parking 1 | 476,136 |
| 22 | Airfield Fence | [25,080 feet] |
| 26 | Organizational Vehicle Parking 2 | 118,881 |
| 29 | POL Storage Building | 1,080 |
| 30 | Hazardous Materials Storage Building | 1,080 |
| 31 | Headquarters Company Operations Facility | 19,000 |

0 500 1,000 2,000 Feet

1 inch = 1,000 feet

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**FIGURE 2.5.b**
**Proposed New Construction and Demolition at Fort Wainwright with Alternative 2**
*USARAK Aviation EIS*

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### 2.5.2.2 Aviation Assets

Under Alternative 2, 72 helicopters (30 Blackhawks [UH-60 and HH-60], 12 Chinooks [CH-47], and 30 Kiowas [OH-58]) would be stationed at FWA. Hangars would be constructed to provide indoor storage for helicopters. In addition to the helicopters, the Task Force would be assigned an additional 77 generators and 285 support vehicles (see Table 2.5.c for a detailed listing); these increases represent an approximate 130 percent increase in the number of USARAK generators and a 12 percent increase in the number of USARAK vehicles.

TABLE 2.5.c
Alternative 2: Aviation Task Force Generator and Vehicle Assets
*USARAK Aviation EIS*

| Additional Assets | Increased Number (All Installations) |
|---|---|
| **Generators** | |
| Generator Set – 10kW 60HZ | 9 |
| Generator Set – 15kW 50/60HZ | 1 |
| Generator Set – 3kW 60HZ | 17 |
| Generator Set – 5kW 60HZ | 29 |
| Diesel Engine – 5kW 60HZ | 1 |
| Diesel Engine – 3kW 60HZ | 1 |
| Generator Pulse | 2 |
| Generator Set – Diesel Engine | 9 |
| Generator Set – Diesel: 60HZ AC | 2 |
| Generator Set – Diesel 60kW 50/60HZ | 6 |
| **Generators Total** | **77** |
| **Vehicles** | |
| Heavy Engineer Equipment | 3 |
| HEMTT | 47 |
| HMMWV | 126 |
| LMTV | 56 |
| MTV | 53 |
| PLS | 0 |
| **Vehicle Total** | **285** |

Notes:
AC = alternating current
HZ = hertz
kW = kilowatt

### 2.5.2.3 Facilities Construction and Demolition

Construction of new facilities would only be required at FWA to support the expanded force structure of an Aviation Task Force (Table 2.5.d). Site improvement, demolition, information systems, anti-terrorism measures, and utilities are associated with Task Force construction. Construction and demolition will involve approximately 54.6 acres of new construction that is focused primarily around the existing, active military runway. The majority of the new construction is infill. For the purpose of this EIS, infill refers to new construction that is constructed within the boundaries of already existing buildings. Most of the areas that have been considered for new construction had previously been disturbed by

various military activities; therefore, construction in these areas maintains the areas' current land use. Construction and improvement of standard supporting utilities and features, including electric service, water, sewer, district heating, paving, walkways, curbs and gutters, and storm drainage, are not included in the total square footage calculations.

TABLE 2.5.d
Alternative 2: Aviation Task Force Construction Footprint at Fort Wainwright
*USARAK Aviation EIS*

| New Facilities | Footprint (square feet) |
|---|---|
| Fire Deluge System – New Well | 8,000 |
| Duplex Company Operations Facility (COF) | 31,878 |
| Barracks | 114,072 |
| Vehicle Maintenance Facility (Motor Pool) | 35,290 |
| Aircraft Parts Storage Building | 20,000 |
| Chinook CH-47 Hangar with three-plex COF | 125,870 |
| Kiowa OH-58 Hangar with four-plex COF | 145,797 |
| Organizational Unit Storage (Secure Storage Area) | 14,350 |
| Combined Brigade/Battalion Headquarters Facility | 49,546 |
| Warm Storage Facility | 52,000 |
| Recreational Vehicle Parking Replacement | 401,364 |
| Rotary-Wing Apron | 729,000 |
| Organizational Vehicle Parking 1 | 476,136 |
| Organizational Vehicle Parking 2 | 118,881 |
| Airfield Fence[a] | [25,080 feet] |
| Fire Protection Well House | 300 |
| Petroleum, oil, and lubricant (POL) Storage Building | 1,080 |
| Hazardous Materials Storage Building | 1,080 |
| Headquarters COF | 19,000 |
| Brigade Operations Facility | 16,015 |
| Headquarters Company Operations Facility | 19,500 |
| **Total Footprint** | **2,379,159 (54.6 acres)** |

[a] Measured in linear feet and, therefore, not counted towards the total square footage.
Sources:
Davis, 2009, E-mail Communication, February 4, 2009

The new hangars built under this alternative would provide consolidated, indoor storage and space for maintenance and repair/reconditioning of helicopter engines, airframes, and electronic and optical systems. The vehicle maintenance shop would provide a facility and equipment for the repair and maintenance of fleet, service, and transportation vehicles. The Kiowa Warm Storage facility would provide the necessary space for temperature-regulated Kiowas.

O&M activities would be similar in type to the support activities conducted for existing USARAK aviation units. The only change under any action alternative would be that O&M activity levels would increase proportionately to the increase in the numbers of Soldiers and helicopters.

Demolition of three facilities would occur under Alternative 2: Building 3475 (shipping/ receiving and administrative facility), Building 3477 (vehicle maintenance shop), and Building 3011 (Water Treatment Building). Demolition of Hangars 2 and 3 is not proposed as part of this action alternative. Under Alternative 2, Hangars 2 and 3 would continue to be used to support aviation operations until both of the new helicopter hangars are constructed and fully operational, which is expected to be in 2013 or 2014. At that time, the Army intends to evaluate all reasonable courses of action for the future management of Hangars 2 and 3 as part of a separate NEPA analysis. In the interim period between when Hangars 2 and 3 will no longer be used to support aviation operations and when a decision is made on the future disposition of Hangars 2 and 3, the facilities will be adequately maintained and likely assigned a different use that is still compatible with aviation operations occurring on an active military airfield.

#### 2.5.2.4 Military Training

Under Alternative 2, Task Force operations would continue to include helicopter pilot proficiency, maintenance and improvement of skills, aviation-only training exercises, individual weapons training, and helicopter gunnery. In addition, the Task Force would participate in joint training exercises in Alaska with the 1/25 SBCT and 4/25 BCT. Task Force aviation assets assist the 1/25 SBCT and 4/25 BCT with the necessary first-line air transport, air reconnaissance, and close air support.

The Task Force units would fight and train as members of combined-arms teams as well as complete individual and crew proficiency training. In joint training exercises, the Task Force would train individually with each BCT as well as participate in training involving all three units. Modern war-fighting skills are developed through the completion of METLs for each unit. The Mission-Essential Task List (METL) is an unconstrained statement of tasks required to accomplish wartime missions. It establishes individual and integrated aviation training requirements for modern aviation units. The METLs required of the Task Force include:

- Attack Operations
- Combat Support and Combat Service Support Operations
- Deploy the Force
- Exercise Network-Enabled Battle Command
- Reconnaissance and Surveillance
- Vertical Maneuver

The Task Force would use established ranges, helicopter LZs, DZs, and IAs on USARAK lands, as described in Section 2.2. All aircraft tactical training and joint air/ground-training activities would occur over Army training lands and within existing military airspace where established procedures are used to maximize flight safety for both military and civilian aircraft. Helicopters would transit between FWA, the FWA training areas, and DTA following existing air travel corridors, as described in Section 2.2.

Under Alternative 2, the Task Force would conduct 9,972 takeoffs and landings annually from Ladd AAF at FWA, an increase of 6,300 takeoffs and landings from existing conditions. These takeoffs and landings result from a variety of individual and smaller-unit training as well as larger, multi-echelon training events described in Subsection 1.3.4. Training from

FWA would occur year-round with some restrictions on season, time, altitude, and location. A majority of the training is projected to occur between February and May, although the timing of training could vary depending on mission requirements and world conditions. On an annual basis, the Task Force would conduct 42 takeoffs and landings during an average day from Ladd AAF, most (75 percent) of which would occur during the daytime. Helicopters would average 20 operating days per month.

Under Alternative 2, the 188 takeoffs and landings at Allen AAF would be the same as for the No Action alternative. The 4,800 Alaska Army National Guard takeoffs and landings at FRA are also not part of this action and would remain unchanged from the No Action alternative. No USARAK aviation training would occur at either FRA or Eielson AFB.

Detailed daily helicopter operation values for the Aviation Task Force can be found in Section 4.2, Airspace Management, Table 4.2.c. The total annual takeoffs and landings by location for Alternative 2 are summarized in Table 2.5.a.

## 2.5.3 Alternative 3: Combat Aviation Brigade

Alternative 3 would form a CAB by augmenting USARAK's existing aviation unit with 84 additional helicopters and 2,360 additional Soldiers. Most (60 percent) of the Brigade would be stationed at FWA, with the remaining Soldiers distributed evenly between FRA and Eielson AFB. Aircraft also would be distributed among the three installations.

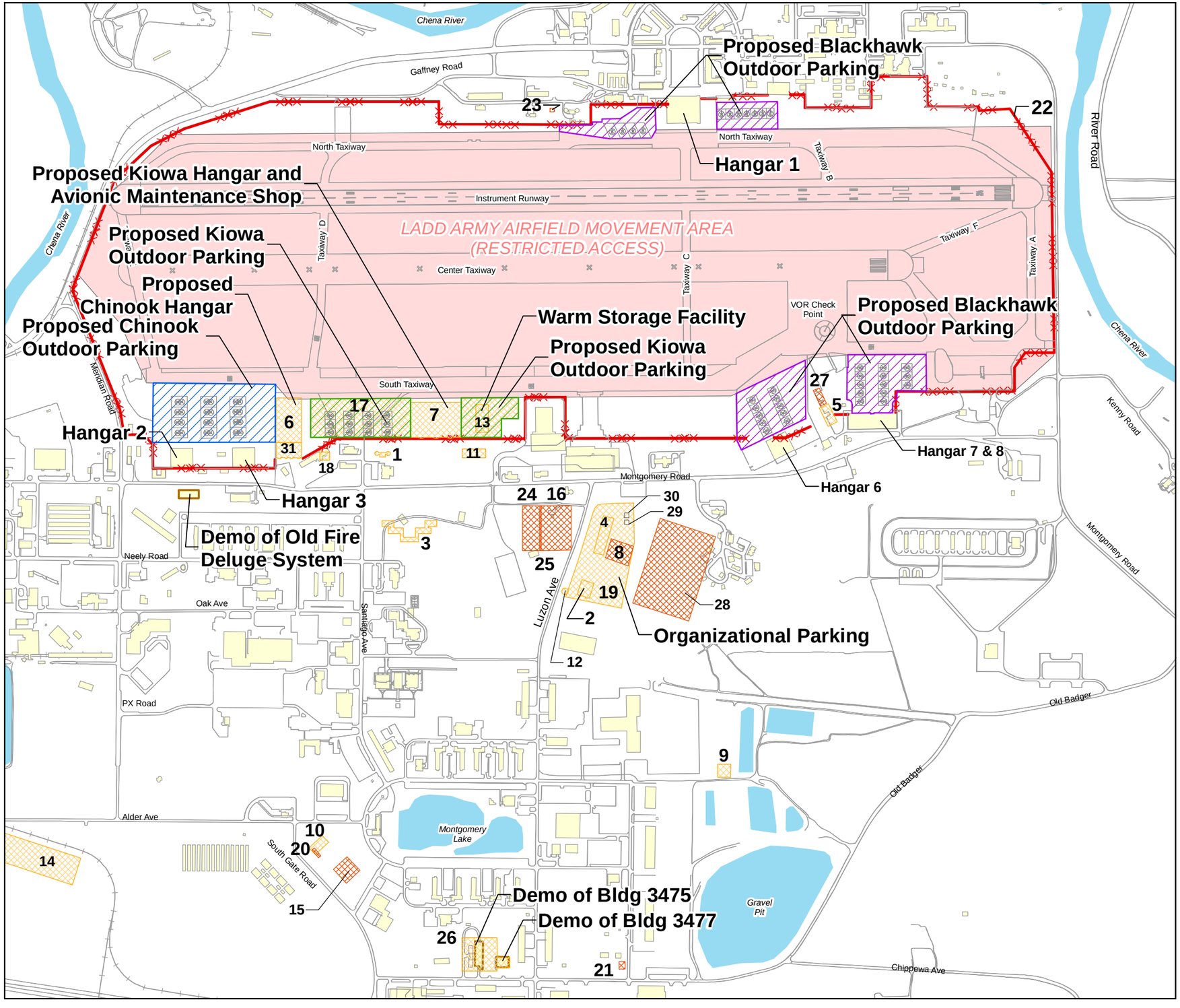
All of the construction described in Alternative 2, as well as some additional facilities, would be required for Alternative 3 (see Figure 2.5.c).

Training would occur on all USARAK training lands and use existing flight corridors (see Figures 2.2.a, 2.2.b, 2.2.c, 2.3.b, 2.3.c, 2.3.d, and 2.3.e). Implementing this alternative would provide USARAK with the capability to train up to three full brigades simultaneously.

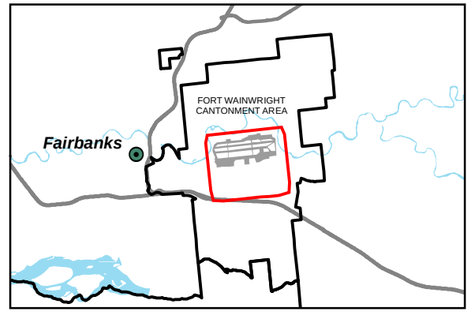
### 2.5.3.1 Aviation Personnel (and Others)

The number of military aviation personnel in Alaska under Alternative 3 would increase from the current 490 Soldiers to approximately 2,850, a net increase of 2,360 Soldiers. An estimated increase of 3,200 family members and 1,035 civilian support staff (federal and private contractor employees) would accompany the increase in Soldiers. The additional personnel would increase FWA's total population by 4,125, and would increase each of FRA's and Eielson AFB's total population by 1,235 for each installation. The total population increase includes USARAK Soldiers, family members, and civilian support personnel.

The Brigade would be comprised of the 2nd CAB Headquarters Company, 602nd Aviation Support Battalion, 58th Company Battalion Air Traffic Services, 1-52nd General Support Aviation Battalion, and the 6-17th Cavalry Attack/Reconnaissance Squadron, all at FWA. The Brigade also includes the 2-2nd Assault Battalion, to be stationed at FRA, and the 1-2nd Attack Battalion, to be stationed at Eielson AFB.




LOCATION MAP




**LEGEND**

- Proposed Demolition
- Proposed Aviation Task Force Construction
- Proposed Combat Aviation Brigade Construction
- Proposed CH-47 Chinook Outdoor Parking
- Proposed OH-58D Kiowa Outdoor Parking
- Proposed UH-60 and HH-60 Outdoor Blackhawk Parking
- Airfield Fencing
- Town
- Stream
- Installation Boundary
- Existing Building
- Ladd Army Airfield Movement Area
- Railroad
- Single Rotar Helicopter (Blackhawk and Kiowa)
- Double Rotar Helicopter (Chinook)

**Proposed Combat Aviation Brigade Facilities**

| ID | House Description | Sq Ft |
|---|---|---|
| 1 | Fire Deluge System - New Well | 8,000 |
| 2 | Duplex COF | 31,878 |
| 3 | Barracks (294 Person) | 114,072 |
| 4 | Vehicle Maintenance Facility (Motor pool) | 35,290 |
| 5 | Aircraft Parts Storage Building | 20,000 |
| 6 | Chinook CH-47 Hangar with three-plex COF | 125,870 |
| 7 | Kiowa OH-58 Hangar with four-plex COF | 145,797 |
| 8 | Vehicle Maintenance Facility | 49,288 |
| 9 | Organizational Storage Building | 14,350 |
| 10 | Combined Brigade/Battalion Headquarters Facility | 49,546 |
| 11 | Headquarters Company Operations Facility | 19,500 |
| 12 | Fire Protection Well | 300 |
| 13 | Warm Storage Facility | 52,000 |
| 14 | Recreational Vehicle Parking Replacement | 401,364 |
| 15 | Battalion Headquarters | 15,253 |
| 15 | Brigade Headquarters | 17,656 |
| 16 | UPH Barracks (540 persons) | 121,878 |
| 17 | Rotary Wing Apron | 729,000 |
| 18 | Brigade Operations Facility | 16,015 |
| 19 | Organizational Vehicle Parking 1 | 476,136 |
| 20 | CAB Administration | 2,592 |
| 21 | Land Vehicle Fuel Storage, Diesel | 4,225 |
| 22 | Airfield Fence | [25,080 feet] |
| 23 | Aviation Operations Building | 1,362 |
| 24 | Company Headquarters | 71,541 |
| 25 | Battalion Operations Facilities | 4,585 |
| 26 | Organizational Vehicle Parking 2 | 118,881 |
| 27 | Secure Storage Area (SSA), Org Storage | 11,200 |
| 28 | Organizational Parking | 500,049 |
| 29 | POL Storage Building | 1,080 |
| 30 | Hazardous Materials Storage Building | 1,080 |
| 31 | Headquarters Company Operations Facility | 19,000 |

0 500 1,000 2,000 Feet

1 inch = 1,000 feet

N

**FIGURE 2.5.c**
**Proposed New Construction and Demolition at Fort Wainwright with Alternative 3**
*USARAK Aviation EIS*

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### 2.5.3.2 Aviation Assets

The Brigade would add 84 helicopters (30 Kiowas [OH-58], 30 Blackhawks [HH-60 and UH-60], and 24 Apaches [AH-64]) to USARAK's existing inventory and bring the total number of helicopters assigned to USARAK to 116. The Apache, the Army's principal attack helicopter, has never before been used in Alaskan airspace, and the Kiowa helicopter is relatively new to the USARAK inventory following its introduction in 2006 (see Subsection 2.5.1).

Helicopters would be stationed among FWA, FRA, and Eielson AFB, as detailed in Table 2.5.a. In addition to helicopters, the CAB would be assigned an additional 136 generators and 522 support vehicles (see Table 2.5.e for a detailed listing); these increases represent an approximate 230 percent increase in the number of USARAK generators and a 21 percent increase in the number of USARAK vehicles.

TABLE 2.5.e
Alternative 3: Combat Aviation Brigade Generator and Vehicle Assets
*USARAK Aviation EIS*

| Additional Assets | Increased Number (All Installations) |
|---|---|
| **Generators** | |
| Generator Set – 10kW 60HZ | 29 |
| Generator Set – 5kW 60HZ | 35 |
| Generator Set – 15kW 50/60HZ | 2 |
| Generator Set – 3kW 60HZ | 36 |
| Generator Set – 60kW 50/60HZ | 1 |
| Generator Set – Diesel Engine | 20 |
| Generator Set – Diesel 28V DC | 4 |
| Generator Set – Diesel 60HZ AC | 1 |
| Generator Set – Diesel 15kW 60HZ | 2 |
| Generator Set – Diesel 60kW 50/60HZ | 6 |
| **Generators Total** | **136** |
| **Vehicles** | |
| Heavy Engineer Equipment | 2 |
| HEMTT | 77 |
| HMMWV | 304 |
| LMTV | 84 |
| MTV | 53 |
| PLS | 2 |
| **Vehicle Total** | **522** |

Notes:
AC = alternating current
DC = direct current
HZ = hertz
kW = kilowatt
V = volt

### 2.5.3.3 Facilities Construction and Demolition

New and, in some cases, renovated buildings would be required to support the stationing of a CAB. As with Alternative 2, construction of new facilities would only be required at FWA

to support the expanded force structure of a Brigade. Existing facilities will be used to station Soldiers and helicopters at FRA and Eielson AFB. Renovations may or may not be required at either of these locations to support the stationing of the various CAB subunits. Construction and improvement to standard supporting utilities and features, including electric service, water, sewer, district heating, paving, walkways, curbs and gutters, and storm drainage, are not included in the total square footage calculations (Table 2.5.f). Associated with Brigade construction would be the considerations of site improvement, demolition, information systems, anti-terrorism measures, and utilities. Permanent stationing of the Brigade under Alternative 3 would require facilities included in Alternative 2 (detailed in Table 2.5.d) as well as additional facilities. The Brigade construction program is summarized in Table 2.5.f. Construction and demolition will involve approximately 73.0 acres of new construction that is focused primarily around the existing, active military runway. The majority of the new construction is infill. For the purpose of this EIS, infill refers to new construction that is constructed within the boundaries of already existing buildings. Most of the areas that have been considered for new construction had previously been disturbed by various military activities; therefore, construction in these areas maintains the areas' current land use.

Alternative 3 also includes demolition of the same three buildings described in Alternative 2 (Buildings 3475, 3477, and 3011). Demolition of Hangars 2 and 3 is not proposed as part of this alternative. Under Alternative 3, Hangars 2 and 3 would continue to be used to support aviation operations until both of the new helicopter hangars are constructed and fully operational, which is expected to be in 2013 or 2014. At that time, the Army intends to evaluate all reasonable courses of action for the future management of Hangars 2 and 3 as part of a separate NEPA analysis. In the interim period between when Hangars 2 and 3 will no longer be used to support aviation operations and when a decision is made on the future disposition of Hangars 2 and 3, the facilities will adequately maintained and likely assigned a different use that is still compatible with aviation operations occurring on an active military airfield.

#### 2.5.3.4 Military Training

Under Alternative 3, Brigade operations would include training activities described under Alternative 2 as well as new training. As with Alternative 2, training would occur on existing USARAK lands and helicopters would follow existing flight corridors. The METLs required of the Brigade include:

- Air Assault
- Air Defense
- Air–Ground Integration and Close Combat Attack
- Air Movement
- Army Airspace Command Control
- Attack
- Casualty Evacuation

TABLE 2.5.f
Alternative 3: Combat Aviation Brigade Construction Footprint at Fort Wainwright
*USARAK Aviation EIS*

| New Facilities | Footprint (square feet) | New Facilities | Footprint (square feet) |
|---|---|---|---|
| Fire Deluge System – New Well | 8,000 | POL Storage Building | 1,080 |
| Duplex COF | 31,878 | Fire Protection Well Houses | 300 |
| Barracks | 114,072 | Airfield Fence[a] | [25,080 feet] |
| Vehicle Maintenance Facility (Motor Pool) | 35,290 | Vehicle Maintenance Facility | 49,288 |
| Aircraft Parts Storage Building | 20,000 | Battalion Headquarters | 15,253 |
| Chinook CH-47 Hangar with three-plex COF | 125,870 | Brigade Headquarters | 17,656 |
| Kiowa OH-58 Hangar with four-plex COF | 145,797 | Unaccompanied Personnel Housing (UPH) Barracks (540 persons) | 121,878 |
| Organizational Storage Building | 14,350 | CAB Administration | 2,592 |
| Combined Brigade/Battalion Headquarters Facility | 49,546 | Land Vehicle Fuel Storage (Diesel)[b] | 4,225 |
| Warm Storage Facility | 52,000 | Aviation Operations Building | 1,362 |
| Recreational Vehicle Parking Replacement | 401,364 | Company Headquarters | 71,541 |
| Rotary-Wing Apron | 729,000 | Battalion Operations Facilities | 4,585 |
| Organizational Vehicle Parking 1 | 476,136 | Secure Storage Area (SSA), Org Storage | 11,200 |
| Organizational Vehicle Parking 2 | 118,881 | Brigade Operations Facility | 16,015 |
| POL Storage Building | 1,080 | Organizational Parking | 500,049 |
| Headquarters Company Operations Facility | 19,000 | Headquarters Company Operations Facility | 19,500 |
| **Total Footprint** | | | **3,178,788 (73.0 acres)** |

[a] Measured in linear feet and, therefore, not counted towards the total square footage.
[b] Storage of 67,020 gallons of aircraft fuel in a 30-foot-tall, 20-foot-diameter vertical steel tank is estimated to have a 4,225-square-foot secondary containment around the tank.

Sources:
Davis, 2009, E-mail Communication, February 4, 2009
White, 2007, Personal Communication; USARAK, 2004a.

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- Command, Control, Communications, Computers, and Intelligence
- Defend
- Deploy
- Fire Support
- Force Protection
- Mobile Strike Operations
- Personnel Recovery
- Reconnaissance and Surveillance
- Security Operations
- Stability Operations and Support Operations
- Staff Planning and Coordination
- Sustainment
- Tactical Movement
- Urban Operations

Under Alternative 3, the Brigade would annually conduct 9,972 takeoffs and landings from Ladd AAF at FWA, an increase of 6,300 takeoffs and landings from existing conditions. These takeoffs and landings include a variety of individual and smaller-unit training as well as larger, multi-echelon training events described in Subsection 1.3.4. Training from FWA would occur year-round with some restrictions on season, time, altitude, and location. A majority of the training is projected to occur between February and May, although the timing of training could vary depending on mission requirements and world conditions. On an annual basis, the Brigade would conduct 42 combined takeoffs and landings during an average day from Ladd AAF, most (75 percent) of which would occur during the daytime. Helicopters would average 20 operating days per month.

Under Alternative 3, the Brigade would annually conduct 4,792 takeoffs and landings from FRA. These takeoffs and landings would represent routine individual and crew proficiency training events, averaging approximately 20 takeoffs and landings per day, with 20 operating days per month. The CAB would also conduct a one-time, 14-day duration, annual training event at FRA. The event would involve 10 Blackhawk and six Chinook helicopters, each of which would conduct eight door-gunnery training operations per day. The 16 helicopters would travel between FWA and FRA once annually (once from FWA to FRA and once from FRA back to FWA).

Under Alternative 3, a total of 188 takeoffs and landings would occur from Allen AAF, which is unchanged from both the No Action alternative and Alternative 2. The 4,800 Alaska Army National Guard takeoffs and landings at FRA are not part of this action and would be the same as described for the No Action alternative and Alternative 2.

The 24 new Apache helicopters stationed at Eielson AFB would conduct about four flights a day (four takeoffs and four landings), 20 days a month, totaling 960 annual operations. Integrated Apache training exercises would be anticipated to occur at FWA and the DTA.

Detailed daily helicopter operation values for the CAB can be found in Section 4.2, Airspace Management, Table 4.2.d. The total annual takeoffs and landings by location for Alternative 3 are summarized in Table 2.5.a.

# 2.6 Alternatives Eliminated from Further Consideration

The Army considered several additional alternatives, including several raised at the scoping meetings, but determined that they did not meet one or more of the screening criteria (summarized in Section 2.4) for reasonable alternatives, as summarized in Table 2.6.a and further described in the subsections below.

TABLE 2.6.a
Alternatives Considered but Dismissed from Further Evaluation
*USARAK Aviation EIS*

| | Criteria | | | |
|---|---|---|---|---|
| **Alternative** | **Furthers Army Transformation (see Subsections 1.3.1 and 1.3.2)** | **Supports Integrated Training in Alaska (all sub-criteria) (see Subsection 1.3.3)** | **Sufficient Aviation Infrastructure Capabilities (see Subsection 1.3.4)** | **Sufficient Civilian Infrastructure (see Subsection 1.3.5)** |
| Alternative 4: New Training Areas | YES | NO | NO | N/A |
| Alternative 5: Use of FRA or Eielson AFB Infrastructure | YES | NO | YES | NO |
| Alternative 6: Use Hangars 2 and 3 at FWA to support Task Force or Brigade | YES | YES | NO | N/A |
| Alternative 7: Alternative Siting of Facilities in the FWA Airfield Area | YES | YES | NO | YES |
| Alternative 8: Use of Fort Greely | YES | NO | NO | NO |
| Alternative 9: Use of Elmendorf AFB | YES | NO | YES | NO |
| Alternative 10: Use of Installations Outside of Alaska | NO | NO | N/A | N/A |

N/A = Not applicable

## 2.6.1 Alternative 4: New Training Areas

Alternatives that would require new training areas, or the expansion of existing training areas, do not meet the screening criteria for integrated training or the criteria for infrastructure. Acquisition of new training lands in Alaska, or expansion of existing USARAK training areas, is not necessary to meet purpose and need, and would require lengthy negotiations and permitting processes with the controlling federal, State, and borough agencies. Acquiring new lands is not a practical alternative to accommodate reorganization of USARAK's aviation assets. In addition, expanded or new training areas may not be compatible with existing airspace designations and uses.

## 2.6.2 Alternative 5: Use of FRA or Eielson AFB Infrastructure

Fully stationing a Task Force or Brigade at FRA or at Eielson AFB is impractical because these installations would not support USARAK's integrated training needs and lack sufficient infrastructure for the full Task Force or Brigade. Stationing the Task Force or Brigade at either FRA or Eielson would mean that the Army would not be able to use the aviation support facilities already existing on FWA, and require building all new facilities at FRA or Eielson. In addition, FRA does not have the flight line and runway area needed to support either a full Task Force or Brigade, and FRA is not sufficiently proximate to

established aviation training areas. Eielson AFB does not have the required free space within the operational section of the installation to allow construction of all the facilities needed to site an Aviation Task Force or Brigade completely on the Base. Should the Army conclude that a Brigade is needed to meet its needs, it will be necessary to locate some portion of the Brigade at FRA and Eielson AFB. Both installations have the limited amount of space that would be required to support a portion of the Aviation Brigade.

### 2.6.3 Alternative 6: Use Hangars 2 and 3 at FWA to Support Task Force or Brigade

*Condition Assessment and Rehabilitation Plans* (CARP) were recently completed to determine the feasibility of using Hangars 2 and 3 to support an Aviation Task Force or Aviation Brigade (i.e., Alternatives 2 or 3 in this EIS) (Louis Berger Group, Inc., 2008). The study concluded that due to the configuration and size of the World War II-era hangars, the facilities were not sufficient to meet future asset storage and maintenance needs of either a Task Force or Brigade. As a separate undertaking from the Proposed Action being evaluated in this EIS, USARAK plans to evaluate various options for the long-term use of the two hangars. More information regarding this future analysis is provided in Section 4.3 of this EIS.

### 2.6.4 Alternative 7: Alternative Siting of Facilities in the FWA Airfield Area

USARAK has limited space to construct new hangars, apron areas, and support facilities within the FWA airfield area. Because of the airfield's status as an NHL, USARAK considered numerous options to siting new facilities to minimize the effects of new construction on historic properties within the NHL. While most construction would occur outside of the historic "core," construction along the airfield is necessary under the Proposed Action because of the basing and storage requirements for helicopters. This construction has the potential to change the setting of the NHL, particularly around Hangars 2 and 3 on the southern boundary of the NHL. USARAK, therefore, considered options to construct facilities and parking away from Hangars 2 and 3 to avoid visually affecting these properties. Due to the space constraints of the airfield and the specific O&M requirements of the equipment associated with all alternatives in the EIS (see criteria in Subsection 1.3.4), there were no alternate sites where helicopters could be based or maintained, and construction around Hangars 2 and 3 is unavoidable.

#### 2.6.4.1 Chinook Storage and Parking

The primary facilities included in the Proposed Action that have the greatest adverse effect to the NHL are the construction of a new Chinook Hangar and helicopter parking near the southwest corner of the airfield. The new construction will change the viewshed between Hangar 1 and North Post and Hangars 2 and 3. To avoid or minimize these visual effects, USARAK considered seven alternate locations for the new Chinook Hangar and parking.

Reasonable alternate locations for the Chinook Hangar and parking were determined using the following assumptions (which also are related to the overall Alternatives Screening Criteria for the Proposed Action and specifically to the facilities and equipment requirements outlined in Subsection 1.3.4):

- Helicopters need to be parked next to their designated hangar.

- Hangars and helicopter parking need to be located on the airfield.
- Helicopters need indoor as well as outdoor storage/parking.
- Aviation units need to retain personnel, support, maintenance, and Command and Control cohesion.
- Hangars 2 and 3 do not fully support current or future aviation mission needs (USARAK, 2007).
- Chinook Hangar placement is important to reduce damaging effects of rotary-wash forces to Kiowa helicopters.

Seven sites around Ladd Field were determined to meet these requirements. To determine if these sites were feasible, additional criteria were developed to evaluate the sites. Twelve "reasonableness" criteria were developed. Alternative locations could not result in demolition of a historic structure; cause other environmental issues (e.g., encroach on wetlands, permafrost, or explosive areas, or compromise environmental remediation activities); or encroach on other planned facilities or utilities. Additionally, locations must comply with operational requirements for the military installation such as security, airfield operations criteria, anti-terrorism force protection requirements, life-safety codes, and space requirements in Army standards.

After consideration of these factors and analysis of seven sites along the flight line, only the southwest portion of Ladd Field (where the Proposed Action facilities are sited) meet all the reasonableness criteria established for construction of the Chinook Hangar and helicopter parking. Other sites failed to meet between four and seven of the 12 reasonableness criteria. Additional information on the alternate sites and can be found in the *Siting Analysis of Chinook Helicopter Hangar and Outdoor Parking at Fort Wainwright, Alaska* (USARAK, 2009).

#### 2.6.4.2 Other Facilities Siting

The locations of other facilities associated with the Proposed Action were considered to pose less of an adverse effect to the NHL. Although not as thoroughly analyzed as the Chinook Hangar and parking siting analysis (USARAK, 2009), USARAK did consider alternate location of other facilities within and near the NHL with the potential to visually affect the NHL. USARAK planners involved a multi-disciplinary team to select the locations of facilities for the Proposed Action that best meet the operational and environmental requirements and minimize effects to historic resources. The conclusion of the analysis was that the locations selected for the facilities associated with the Proposed Action were the best optimization of mission needs while minimizing or avoiding other environmental or historic properties effects.

### 2.6.5 Alternative 8: Use of Fort Greely

Fort Greely was considered but eliminated from further consideration as a potential cantonment area for a new USARAK aviation unit because it would not allow for the use of existing aviation infrastructure or capacity. The Fort Greely option would require the Army to build all new facilities needed to service an Aviation Task Force or Aviation Brigade. In addition, Fort Greely does not have the housing or other support infrastructure capable of providing lifestyle needs of Soldiers and dependents without significant additional

construction. Although public comments at both scoping and Draft EIS review meetings indicated support for stationing at Fort Greeley, the considerable additional costs associated with this option make this option impracticable.

### 2.6.6 Alternative 9: Use of Elmendorf AFB

Elmendorf AFB was eliminated from further consideration as the location for the Aviation Task Force or Brigade due to impracticability. All operational facilities within the area of the Elmendorf AFB airfield are currently dedicated to the USAF mission. Free space for new construction within the airfield operations area is extremely limited. Locating the Task Force or Brigade at Elmendorf AFB would not allow use of existing Army aviation support assets, thereby requiring new construction of all necessary support facilities at substantially greater cost.

### 2.6.7 Alternative 10: Use of Installations Outside Alaska

Installations outside Alaska were eliminated from consideration because they would not serve USARAK's purpose and need.

## 2.7 Comparison of Environmental Consequences by Alternative

Table 2.7.a provides a detailed summary of the impacts for each alternative, and suggested mitigation measures for each VEC.

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TABLE 2.7.a
Summary of Environmental Impacts[a] and Mitigation Measures
*USARAK Aviation EIS*

| Alternative 1 No Action | Alternative 2 Aviation Task Force | Alternative 3 Combat Aviation Brigade | Mitigation[b] |
|---|---|---|---|
| **Airspace Management** | | | |
| No change to existing based helicopter levels. | Addition of 40 based helicopters over Alternative 1 conditions. | Addition of 84 based helicopters over Alternative 1 conditions. | None required. |
| No change to existing annual, average-day, or peak-day airfield operation levels. | Increased operations would originate from Ladd AAF at FWA and would transit in flight corridors to conduct training operations at TFTA, YTA, and DTA. | Increased operations would originate from Ladd AAF, Eielson AFB, and Bryant AAF and would transit in flight corridors to conduct training operations at TFTA, YTA, DTA, and FRA. | None required. |
| No change to existing estimated average daily transits between north and south training areas. | No change to existing estimated average daily transits between north and south training areas. | Transits between north and south training areas would increase by 32 trips annually. | None required. |
| No change to safety, predictability, and accessibility. | **Safety**: Increased potential for interaction with general aviation, particularly near the airfields and in the VFR corridors.<br>**Predictability**: No change would occur to the predictability of USARAK aviation training activities from existing conditions.<br>**Accessibility**: No change to airspace structure; increased activity would not preclude access to public airspace. | **Safety**: Increased potential for interaction with general aviation, particularly near the airfields and in the VFR corridors; increased interaction with general aviation while transiting south to FRA and in airspace near Anchorage.<br>**Predictability**: Same as Alternative 2.<br>**Accessibility**: Same as Alternative 2. | USARAK will continue its program of coordination with local civilian aviation interests and the USAF to reduce potential conflicts in corridors used heavily by both military and civilian air traffic. Specific measures include the use of the Notice to Airmen (NOTAM) system and participation in Alaska Civil Military Aviation Council (ACMAC) meetings. Continue to advise airspace users over FREQ (FM) 38.30 regarding operational ranges and areas to avoid. Evaluate participation in the USAF SUAIS program.<br>USARAK operations in and outside of training areas will continue to be governed by existing policies and doctrine including U.S. Army Regulation 95-1, *Aviation Flight Regulations*, USARAK Airborne Standing Operating Procedures (ASOP), USARAK 350-2, *Range Regulation*, July 2002, and Army Pamphlet 385-63.<br>Conduct quarterly USARAK Aviation Safety Standard Council meetings with the FAA, USAF, and GA representatives to alert the civilian and military aviation communities about upcoming exercises and other periods of intense training activity. |

TABLE 2.7.a
Summary of Environmental Impacts[a] and Mitigation Measures
*USARAK Aviation EIS*

| Alternative 1 No Action | Alternative 2 Aviation Task Force | Alternative 3 Combat Aviation Brigade | Mitigation[b] |
|---|---|---|---|
| **Cultural and Visual Resources** | | | |
| No impacts associated with construction projects. | Demolition of structures (Building 3475, Building 3477, and Building 3011) would not result in any direct or adverse impacts to any historic structures or districts. The impacts would be less than significant.<br><br>New construction of buildings and structures would result in adverse effects to the National Historic Landmark (NHL). Adverse effects from infill construction, altering viewsheds, and change in use for Hangars 2 and 3. The impacts would be significant.<br><br>Potential for inadvertent impact to archaeological resources uncovered during ground-disturbing construction activities. | Same as Alternative 2. | To mitigate the effects of infill construction, the Army will utilize a sympathetic design for the new hangars; will involve the Section 106 consulting parties in the Request for Proposal (RFP) process to secure services for the design and construction of the new facilities; will follow guidelines for buildings in the NHL that are contained in the Fort Wainwright Army IDGs.<br><br>To mitigate the effects on the viewshed between Hangars 2 and 3 and the North Post within the NHL, the Army will involve the consulting parties in the RFP for the construction and contractor selection process, as outlined in the Programmatic Agreement.<br><br>To mitigate the potential change of use for Hangars 2 and 3, the Army will prepare a reuse study and would complete Historic Buildings Survey documentation of Hangars 2 and 3.<br><br>The Army will construct a viewing platform for visitors; will help the SHPO update and finalize the SHPO's report, *The Coldest Front: Cold War Military Properties in Alaska* (which will provide the historic context for resources associated with the Cold War in Alaska); will develop new design guidelines to help preserve the integrity and the heart of the NHL and the Cold War Historic District; will prepare a historic context document for cold weather research in Alaska to support evaluation of this important but relatively unstudied area of Alaska's history; and will develop a "Teaching with Historic Places" lesson plan in partnership with Fairbanks North Star Borough (FNSB) School District.<br><br>If during the course of the Undertaking any unforeseen or unanticipated effects are discovered, USAG FWA shall initiate consultation pursuant to 36 C.F.R. § 800.13 to resolve the unforeseen effect. If human remains are inadvertently discovered, USAG-FWA shall cease all work and ensure that the remains are secured from further disturbance or vandalism until a plan for treatment has been developed. If USAG-FWA determines that the remains are Native American, the Garrison Commander shall immediately undertake any actions necessary under the Native American Graves Protection and Repatriation Act, as amended. If USAG-FWA determines that the remains are not Native |

TABLE 2.7.a
Summary of Environmental Impacts[a] and Mitigation Measures
*USARAK Aviation EIS*

| Alternative 1 No Action | Alternative 2 Aviation Task Force | Alternative 3 Combat Aviation Brigade | Mitigation[b] |
|---|---|---|---|
| | | | American, and do not warrant criminal investigation, USAG-FWA shall immediately notify the SHPO and consult with the SHPO to identify descendants or other interested parties, if any. USAG-FWA, in consultation with the SHPO and any interested parties, shall develop a plan for the respectful treatment and disposition of the remains. No mitigation will be required. |
| No change to cultural resources as a result of helicopter training exercises. | No adverse effects to cultural or visual resources are anticipated as a result of the increased military training. There would be no impact. | Same as Alternative 2. | New archaeological sites, if any, discovered during training will be evaluated for eligibility for inclusion in the NRHP. If found to be eligible, appropriate mitigation will be required. |
| **Noise** | | | |
| No change in noise levels as a result of increased aviation personnel and increased aviation assets. There would be no impact. | No adverse environmental effects are expected as a result of noise from increased aviation personnel, dependents, and civilian support personnel. Additional vehicles and generators would create additional noise, but it is not expected increases would create noise contours that extend beyond the installation boundary into a noise sensitive area. | Similar to Alternative 2. Additional vehicles and equipment would be operated because the number of soldiers supported would be greater, but there would be no change in existing noise contours. | Follow existing standard practices to locate facilities for noise-sensitive receptors (e.g., residential housing, hospitals) in areas compatible with such uses as part of the master planning process. |
| No impacts associated with construction projects. | Temporary, short-term elevation in noise levels on FWA, including at noise-sensitive locations adjacent to construction sites, during construction of facilities. | Similar to Alternative 2. Construction of additional facilities may increase the duration of noise-generating activities during construction. | No mitigation required. |
| No change in extent of NZ II contour at Ladd AAF beyond installation boundary into residential development. | Noise zones would be the same as under the No Action alternative.<br>The noise levels would not change. The frequency of noise annoyance experienced with helicopter flights and take-offs and landings would increase, including in areas over non-military lands. | Same as Alternative 2. Noise-generating activities would be more frequent than under Alternative 2, but there would be no change in existing noise contours. | Continued implementation of existing measures and guidelines for avoiding and minimizing noise impacts, such as: collect comments or complaints regarding noise, including a 24-hour feedback line; continue public notification of nighttime firing; and public notification of exceptions to firing hours (6 a.m. to 10 p.m. for demolitions, field artillery, and mortars) by the Public Affairs Office through publication of a Notice of Firing. |
| No change in extent of NZ II contour from small-arms firing beyond the installation boundary; no incompatible land uses contained within contours. | No change in noise impact beyond USARAK installation boundaries as a result of small-arms firing. | Same as Alternative 2. | No mitigation necessary. |

TABLE 2.7.a
Summary of Environmental Impacts[a] and Mitigation Measures
*USARAK Aviation EIS*

| Alternative 1 No Action | Alternative 2 Aviation Task Force | Alternative 3 Combat Aviation Brigade | Mitigation[b] |
|---|---|---|---|
| **Hazardous Materials/Hazardous Waste** | | | |
| There would be no increased risk for explosions, spills, or release of hazardous materials or waste. There is no change in risk of spilling hazardous or toxic materials near bodies of water. | Earthwork during construction of new facilities could result in the exposure of previously unknown subsurface contamination. The increased training activities would increase the likelihood of spills. There would be an increase of hazardous materials and hazardous wastes used for training and to maintain increased aviation assets. | Impacts would be similar to Alternative 2, but increased generation of hazardous materials and hazardous waste to operate and maintain increased aviation assets. | Continued management of hazardous materials using existing environmental systems and programs (USARAK Pamphlet 200-1), to manage the handling and disposal of hazardous materials and waste encountered on a more frequent basis.<br>Contaminated soil encountered during construction would be removed and properly disposed of in accordance with appropriate State and/or federal regulations. In the event that munitions and explosives of concern are discovered in areas of proposed construction, they would not be disturbed until qualified personnel could properly assess and disposition. |
| There would be no increase in training activities that could increase the likelihood of spills. | The increased training activities would increase the likelihood of spills. There would be an increase of hazardous materials and hazardous wastes used for training and to maintain increased aviation assets. The Defense Reutilization and Marketing Office (DRMO) reports adequate capacity to handle additional wastes and hazardous materials. | Increased generation of hazardous materials and hazardous waste to operate and maintain increased aviation assets. The Defense Reutilization and Marketing Office (DRMO) reports adequate capacity to handle additional wastes and hazardous materials. | Continued management of hazardous materials using existing environmental systems and programs (USARAK Pamphlet 200-1), to manage the handling and disposal of hazardous materials and waste encountered on a more frequent basis.<br>Use of portable containment systems at in-field refueling points that would be capable of containing potential fuel releases from fuel tanker vehicles, effectively minimizing the risk of training area contamination from inadvertent petrochemical release. |
| The No Action alternative will not affect contaminated sites. Past contamination would remain under CERCLA enforcement. | Construction impacts would require additional negotiations with EPA and State of Alaska. | Impacts are anticipated to be the same as under Alternative 2. | If necessary, negotiations with the regulating agencies over specific Cantonment construction projects will need to take place prior to final siting analysis, project award, and construction of new facilities. Any additional sampling and monitoring of contaminated sites required for construction of new facilities will take place prior to the start of construction. Any Records of Decision, two-party agreements, or other binding documentation agreed upon by the Army, EPA, and Alaska Department of Environmental Conservation (ADEC) will be implemented. The Army is committed to continuing monitoring in areas where the presence of contamination is possible but has not been previously identified. |

TABLE 2.7.a
Summary of Environmental Impacts[a] and Mitigation Measures
*USARAK Aviation EIS*

| Alternative 1 No Action | Alternative 2 Aviation Task Force | Alternative 3 Combat Aviation Brigade | Mitigation[b] |
|---|---|---|---|
| **Wildlife and Fisheries (including Threatened and Endangered Species and Species of Concern)** | | | |
| No change to wildlife resulting from facilities construction, operation, and maintenance. | No impacts to wildlife resulting from facilities construction, operations, and maintenance. | Same as Alternative 2. | Survey construction sites, based on U.S. Fish and Wildlife Service (USFWS) criteria, to ensure construction and occupancy of facilities would not impact eagle nesting and feeding habits. |
| No change to current levels of wildlife populations and disturbance resulting from training operations. | None to minor impacts on wildlife species located on USARAK training lands resulting from increased training operations. A potential for disturbance or displacement occurs for select species exists. Increased flight activity increases the potential for bird-aircraft collisions during migration. Impacts to bald eagles could potentially occur. | Similar to Alternative 2, however, impacts may be slightly greater due to increased training activities. Noise from training at Eagle River Flats Impact Area could disturb beluga whales. Impacts to bald eagles could potentially occur. | Additional monitoring to evaluate whether moose herd health, reproduction, or movement are changing as a result of helicopter use.<br><br>Develop a wildlife awareness program for pilots and Soldiers in concert with Range Control, Natural Resources, and the unit.<br><br>Pilots will be made aware of sandhill crane roosts along the Delta River and in the DTA during spring and fall migration, and advised to alter travel paths during these times. This advisory will reduce potential for disturbance of those areas.<br><br>Work with USFWS to increase monitoring frequency of trumpeter swans in the Tanana Flats from every 5 years to annually to detect impacts from increased training. Annual monitoring will evaluate whether increased training affects the breeding success of trumpeter swans in the Tanana Flats, including the TFTA and DTA West.<br><br>Conduct surveys for raptor nests in the TFTA, YTA, and DTA, and along the flight corridors between FWA to TFTA and FRA to DTA to locate nesting bald eagles and other raptors that may be affected by helicopter overflights and training activities.<br><br>Consult with the USFWS to determine the best methods to reduce and/or prevent harassment of migratory birds and raptors during military helicopter training.<br><br>Should Alternative 3 be implemented, consultation with NMFS in compliance with the requirements of the ESA and Marine Mammal Protection Act must be completed for beluga whales. |

TABLE 2.7.a
Summary of Environmental Impacts[a] and Mitigation Measures
*USARAK Aviation EIS*

| Alternative 1<br>No Action | Alternative 2<br>Aviation Task Force | Alternative 3<br>Combat Aviation Brigade | Mitigation[b] |
|---|---|---|---|
| No change to current levels of wildlife disturbance resulting from flight corridors. | None to minor impacts on wildlife species located on USARAK training lands resulting from increased use of flight corridors. A potential for disturbance or displacement occurs for select species exists. Increased flight activity increases the potential for bird-aircraft collisions during migration. | Similar to Alternative 2, however, impacts may be slightly greater due to increased flight activities. | The Army will implement the same mitigation measures as for training operations (see above). |
| **Air Quality** | | | |
| No change in CO emissions and no impact to the remaining NAAQS as a result of increased aviation personnel. | Increased vehicle emissions resulting from additional aviation personnel. Increase is not expected to exceed NAAQS. | Same as Alternative 2. | None required. |
| No change in emissions resulting from facilities construction, operations, and maintenance. | Under continued compliance with the terms in the Title V permit and with implementation of requirements under the permit to construct, the NAAQS threshold would not be exceeded and there would be no adverse effects to ambient air quality resulting from construction and operation of new sources. | Similar to alternative 2, increased emissions due to facilities construction; however, the increase is not expected to exceed NAAQS. | Establish and implement a dust control plan to reduce impacts from fugitive dust during construction.<br>Re-evaluate need for construction and/or operating air quality permit modifications based on final site selection and design prior to start of construction (USARAK, 2004a).<br>Submit construction permit applications to ADEC as required and appropriate (USARAK, 2004a).<br>Conduct permit compliance audits (USARAK, 2004a). |
| No change in emissions resulting from training exercises and maintenance. | Increased emissions caused by training exercises are less than those for Alternative 3 and are not expected to exceed NAAQS thresholds in the any air quality region. | Very low to no impacts to ambient air quality resulting from training exercises, which are not expected to exceed NAAQS thresholds. | Abide by USARAK's Air Quality Management Program (USARAK, 2004a).<br>Collect localized air quality sampling parameters to assess training impacts (USARAK, 2004a). |

TABLE 2.7.a
Summary of Environmental Impacts[a] and Mitigation Measures
*USARAK Aviation EIS*

| Alternative 1 No Action | Alternative 2 Aviation Task Force | Alternative 3 Combat Aviation Brigade | Mitigation[b] |
|---|---|---|---|
| **Socioeconomics** | | | |
| No change resulting from increased aviation personnel and dependents. | Minor increase in population in the communities surrounding FWA would occur. Impact to population would be minor.<br>Minor but beneficial economic impact resulting from additional persons in the region.<br>Demand for housing and public services caused by increased personnel would result in a minor impact to these resources.<br>Minor adverse impacts to schools would result from the additional population in the FNSB. | Moderate increase in population in the communities surrounding FWA, FRA, and Eielson AFB would occur. Impact to population would be adverse.<br>Beneficial economic effects in FNSB would occur as a result of increased population. Moderate but beneficial economic impacts would result from additional persons located in the Anchorage Metropolitan Statistical Area. Moderate impacts on housing costs and availability may occur as a result of the additional demand on supply in FNSB. Adverse impact is expected in the Anchorage area.<br>Moderate adverse impacts to schools would result from the additional population in the FNSB.<br>Very low impacts to community services in the FNSB will occur due to increased population. No impact is expected in Anchorage. | No mitigation measures are proposed for Alternative 2. Under Alternative 3, moderate adverse impacts would result from longer wait times for Army family housing, higher housing expenses for military families at FWA, and indirect impacts on the Fairbanks housing supply and costs. A new Housing Requirements Market Analysis should be conducted to validate the change in housing requirements and potential deficits. |
| No impact to socioeconomics resulting from facilities construction, operations, and maintenance. | Short-term economic benefit resulting from construction of new facilities.<br>Ongoing minor but beneficial economic impact resulting from operations and maintenance of facilities. | Similar to Alternative 2 for FWA, however, economic impact of construction and maintenance will be proportionally greater given the increased facility construction. No economic impact will result in the Anchorage Metropolitan Statistical Area (MSA). | None required. |
| No impacts to socioeconomics resulting from training operations and maintenance. | No socioeconomic impacts are expected as a result of training exercises.<br>Ongoing minor but beneficial economic impact resulting from maintenance associated with training exercises. | Similar to Alternative 2, however, slightly higher beneficial economic impacts resulting from training maintenance activities would occur. | None required. |

TABLE 2.7.a
Summary of Environmental Impacts[a] and Mitigation Measures
*USARAK Aviation EIS*

| Alternative 1 No Action | Alternative 2 Aviation Task Force | Alternative 3 Combat Aviation Brigade | Mitigation[b] |
|---|---|---|---|
| **Soils and Permafrost** | | | |
| No change in current soil erosion from the construction, operations, and maintenance of additional facilities. | Construction of new facilities may result in direct short-term adverse impacts to top soils as a result of the removal of vegetation and disturbance of soils in the construction footprint and staging areas. Temporary soil erosion impacts may occur as a result of exposed soils during construction. No long-term adverse impacts. | Similar to Alternative 2, however, 21.7 acres of more soil would be temporarily disturbed under Alternative 3. | Ongoing implementation of standard construction best management practices (BMPs) established by FWA for construction- and soil disturbance-related activities would minimize impacts to soil resources. Storm water programs will be implemented during construction. Disturbed soils will be revegetated following construction of facilities. |
| No change in current permafrost resources would result from the construction, operations, and maintenance of additional facilities. | Construction of new facilities may result in direct short-term adverse impacts to permafrost as a result of the removal of vegetation and disturbance of soils in the construction footprint and staging areas. Temporary melting of permafrost may occur as a result of exposed soils during construction. No long-term adverse impacts. | Similar to Alternative 2, however, 21.7 acres of more soil would be temporarily disturbed under Alternative 3. | Ongoing implementation of standard construction BMPs established by FWA for construction- and soil disturbance-related activities would minimize impacts to permafrost resources. Areas with permafrost are avoided whenever possible. However, if a construction site is selected that has permafrost, then specific U.S. Army Corps of Engineers design guidelines or construction techniques are followed, which could include the use of driving piles for the foundation, removal of the permafrost, or other measures that are determined on a site-by-site basis. |
| **Water Resources (Surface Water and Groundwater)** | | | |
| No change in current water quality or water resources would occur because the existing 640 aviation personnel would remain. Additional Soldiers under the Proposed Action would not occur. | Increased water use at FWA will result from the stationing of additional personnel. Impacts to water quality are not expected. | Similar to Alternative 2, however, increased water use will be greater due to greater increase in personnel. | None required. |
| No change to current water quality or water resources would result from the construction, operations, and maintenance of facilities. | Construction of facilities could temporarily adversely impact surface water resources and water quality as a result of erosion and sedimentation from land disturbance and increased potential for the accidental release of hazardous materials.<br>Increased surface water runoff is expected as a result of operation of the new facilities. Loss of surface area for groundwater recharge resulting from impervious surfaces. | Similar to Alternative 2. | Continue to implement current permit requirements and associated SWPPPs and BMPs.<br>Implement the requirements of the Multi-Sector General Permit (MSGP) and the permit for the municipal separate storm sewer system (MS4) when they are issued.<br>Coordinate with ADEC and the EPA to implement additional measures, as deemed necessary, to address issuance of a total maximum daily load limit for the Chena River (anticipated 2010). |

TABLE 2.7.a
Summary of Environmental Impacts[a] and Mitigation Measures
*USARAK Aviation EIS*

| Alternative 1 No Action | Alternative 2 Aviation Task Force | Alternative 3 Combat Aviation Brigade | Mitigation[b] |
|---|---|---|---|
| No change to current water quality or water resources would result from training activities and maintenance. | Training activities, including flight operation and maintenance, would have little to no impact on water quality or water resources. | Similar to Alternative 2. | Continue to implement current permit requirements and associated SWPPPs and BMPs.<br>Implement the requirements of the MSGP and MS4 permit when they are issued.<br>Coordinate with ADEC and the EPA to implement additional measures, as deemed necessary to address issuance of a total maximum daily load limit for the Chena River (anticipated 2010). |
| **Subsistence and Recreation** | | | |
| No increased impact to subsistence and recreation use of USARAK lands | Adverse impact to access for subsistence and recreation use of USARAK lands is expected to occur as a result of increase military training. | Same as Alternative 2, although a greater frequency of USARAK land closure is expected for increased military training | Continued implementation of best management practices to inform the public of military training area restrictions for subsistence and recreation and to work cooperatively to provide subsistence and recreation access when not in conflict with military training activities. Please see Subsection 4.11.3 for a list of BMPs. |

[a] The following VECs have a very low to low potential to result in impacts as a result of the Proposed Action: Traffic/Transportation Systems, Vegetation, Wetlands, Fire Management, Geological Resources, Safety, Land Use/Energy/Utilities, and Environmental Justice. Existing best management practices will be sufficient to address any minor effects to these VECs, as outlined in Section 3.1.

[b] The mitigation measures would be implemented for both Alternative 2 and 3 unless otherwise noted in the table.

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## 2.8 Identification of the Preferred Alternative

The Army's Preferred Alternative is Alternative 2, Aviation Task Force. This alternative would augment existing aviation assets to create a new front-line aviation unit in the form of a Task Force. Alternative 2 meets the purpose and need for the Proposed Action and would be smaller in scope and impact than Alternative 3. Soldier and helicopter levels under Alternative 2 would be similar to current (2009) levels, in essence making permanent the temporary stationing that has occurred since 2006 in support of recent overseas deployments. These assets would be formally organized into a Task Force, and new facilities would be constructed to support the new unit's requirements. Alternative 2 is described in detail in Subsection 2.5.2.

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