

Finding of No Significant Impact / Anticipated Negative Determination

High-Altitude Mountainous Environment Training

September 2011

ACTION

Environmental Assessment (EA) for Training the 25th Infantry Division–25th Combat Aviation Brigade (CAB) in High-Altitude Mountainous Environment Flight Operations.

BACKGROUND INFORMATION

The need for well-prepared aviation brigades to conduct combat operations in Afghanistan led the U.S. Army Forces Command to prioritize the development of standardized training for high-altitude (up to 14,000 ft [4,267 m]) mountainous conditions. High-Altitude Mountainous Environment Training (HAMET) was developed to ready experienced helicopter pilots for success in combat operations as part of their train-up for deployment under Operation Enduring Freedom (U.S. Army 2009). HAMET adapts the National Guard's program for individual mountain helicopter training taught at the National Guard's training site in Gypsum, Colorado, with helicopter training that individual Army CABs have been conducting as part of their regular training operations for the past several years (Gould 2010).

On December 23, 2010, the USAG-HI released, for public comment, an EA and draft finding of no significant impact (FNSI) for the proposed action to conduct HAMET for 300-400 25th CAB aviators over the course of one year. The public comment period occurred from December 23, 2010, to January 23, 2011. After review of the comments, the USAG-HI revised its alternatives, expanded its agency and public outreach activities, collected additional information, and prepared a revised EA. The revised EA was published April 23, 2011 for a 30-day public comment period. The EA incorporated input received by the public and agencies of both the State of Hawaii and federal government. The proposed action was reduced to train 260 aviators for approximately 45 days over the course of three non-consecutive months.

In addition, the State of Hawaii requested that our EA not only meet Federal Regulations but also be compliant with Hawaii Revised Statutes (HRS) Chapter 343 and Hawaii Administrative Rules (HAR) §11-200.

In light of the comments received during the various public comment periods and the need to accomplish training in advance of the 25th CAB's impending 2012 deployment, the following changes were made to the Action Alternatives:

- Proposed HAMET alternatives would be conducted with two aircraft types (i.e., Black Hawks and Chinooks) rather than three types; the Kiowa Warrior would not be flown for HAMET

- Fewer flights are proposed, up to 90 aviators will be trained, total flying time at the 6 LZ's will average 180 hours, and training is projected to be needed between October 3 and October 31, 2011.
- Flight paths for the Proposed Action were redesigned to reduce the size of the flight path and also to avoid Mauna Kea State Recreation Area and to be farther from the Natural Area Reserve.
- All alternatives were re-examined.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

The Proposed Action is to train up to 90 helicopter pilots and crews for high-altitude missions in preparation for deployment to Afghanistan and to satisfy mandatory annual training requirements. HAMET would be taught in three phases. Phase I would consist of academic classroom instruction and simulator training conducted at Wheeler Army Air Field and Schofield Barracks, O'ahu. Phase II would be an element of annual and pre-deployment individual flight technique training conducted on high-altitude landing zones (LZs) in mountainous environments, with aviators in their assigned aircraft (approximately 180 hours). Phase III would be collective (group) training based at Bradshaw Army Air Field, Pōhakuloa Training Area (PTA), and Schofield Barracks, where tactical and mission flight training would be conducted inside military training areas. HAMET is an incremental training process that proceeds from lower to higher elevations, building upon skills acquired at each altitude.

The EA for HAMET for the 25th CAB (USAG-HI 2011) evaluates a range of alternatives considered to be reasonable under the following screening criteria; availability; the number of pilots that can be trained; feasibility (i.e., time and cost); and, quality of life for the Soldiers and their Families.

The Action Alternatives that were considered are as follows:

- Alternative 1 – Preferred Alternative. HAMET flights would be conducted from Bradshaw Army Airfield at PTA to three pre-existing Mauna Kea LZs and three pre-existing Mauna Loa LZs (USAG-HI 2011).
- Alternative 2 – Mauna Kea. HAMET flights would be conducted from Bradshaw Army Airfield at PTA to three pre-existing Mauna Kea LZs (USAG-HI 2011).
- Alternative 3 – Mauna Loa. HAMET flights would be conducted from Bradshaw Army Airfield at PTA to three pre-existing Mauna Loa LZs (USAG-HI 2011).
- Alternative 4 – Other High-Altitude Locations in the State of Hawai'i. HAMET would be conducted at other high-altitude state or federal lands located in the State of Hawai'i (USAG-HI 2011).

- Alternative 5 – Other High-Altitude Training Sites (Continental United States (CONUS)). HAMET would be conducted at an offsite flight training center in Gypsum, Colorado; Fort Carson, Colorado, or, El Paso, Texas (USAG-HI 2011).
- No Action Alternative. HAMET Phase II flight training would not be conducted if no action were taken (USAG-HI 2011).

After a screening process that considered facility availability, throughput, time and cost, and quality of life for the Soldiers, the Preferred Alternative (Alternative 1) and Alternatives 2 and 3 were analyzed in the EA for their potential environmental impacts.

Under Alternatives 1, 2 and 3, Phase II is the only phase that needs to be conducted outside the Army training area, and it is estimated that it would take 2 hours of training per pilot to complete. Under Alternatives 1, 2 and 3, HAMET Phase II would require no more than 180 flight hours and would be conducted during October 2011. Pilots would fly at high altitudes and land at designated high-altitude LZs using varying angles of approach, headings, and air speeds to reach proficiency in tasks such as, but not limited to, visual - metrological-conditions takeoff and approach, reconnaissance over high-altitude LZs, slope operations, and night-time operations. Pilots would be trained using the UH-60 Black Hawk and the CH-47 Chinook aircraft. All aircraft would be unarmed (i.e., no pyrotechnic devices, ordnance, etc.). The LZs are pre-existing, have been used for previous HAMET activities, and are in alpine stone deserts, with sparse vegetation scattered over lava and barren rock and cinders. No more than two aircraft would be in or around the LZs on Mauna Kea and not more than three aircraft on Mauna Loa at any given time

HAMET entails aviation aircrews only and would not be used in conjunction with ground-maneuver training activities. Aircraft landing in the LZs would not be picking up or dropping off troops or supplies. Aircraft will be spending a minimal amount of time in the LZs, and ground time should not exceed 10 minutes per landing.

SUMMARY OF ENVIRONMENTAL EFFECTS

The Proposed Action alternatives were evaluated with respect to their potential effects to the valued environmental components, which include climate, air quality, geology and soils, water resources, biological resources, cultural resources, socioeconomics and environmental justice, land use, recreation, noise, visual and aesthetic resources, human health and safety, traffic and circulation, and public services and utilities.

Through discussions with subject matter experts and after performing reconnaissance-level surveys at each LZ on Mauna Loa and Mauna Kea, it was determined that there are no historic properties within any of the LZs. Two rock mounds (of unknown nature) were found near LZ-5, one within 328 ft (100 m) and a second within 474 ft (144 m) from the center of the LZ. There is one rock mound located 183 ft (56 m) from the center of LZ-6. The rock mounds were monitored during, and once at the end of the March 2011 data collection training period, and it was found that there were no effects from the presence of helicopters. In the 2011 survey, no historic properties were found within 328 ft (100 m) of the Mauna Loa LZs. The flight paths that were chosen under the alternatives were designed to minimize the area of over flight and avoid

the vast majority of known cultural properties on both mountains. The helicopter presence will be infrequent and temporary, will not offer any modifications to the landscape, and therefore will not have an adverse effect or significant impact on the qualities that make Mauna Kea culturally significant to Native Hawaiians.

Federal- and state-listed threatened and endangered species, or sensitive species, that could potentially occur on Mauna Kea and Mauna Loa are: the Hawaiian goose or nēnē (*Branta sandvicensis*); the Hawaiian hawk or 'io (*Buteo solitaries*); the Hawaiian hoary bat or 'ope'ape'a (*Lasirus cineris semotus*); the Hawaiian Dark-rumped petrel or 'ua'u (*Pterodroma sandwichensis*); the Band-rumped storm petrel or 'ake 'ake (*Oceanodroma castro*); the Palila (*Loxioides bailleui*); the Wekiu bug (*Nysius wekiuicola*); and, the Mauna Kea Silversword (*Argyoxiphium sandwicense*). In February, March, May and June 2011, biological surveys were conducted at the Mauna Kea and Mauna Loa LZs to determine if any threatened and endangered species, or species of concern, occur within the operational areas of the LZs (Peshut 2011; Peshut and Doratt 2011a, 2011b, 2011c; Peshut and Evans 2011; Peshut and Schnell 2011a, 2011b). These surveys did not identify any threatened or endangered flora or fauna species, or any species of concern, within a survey area of up to 2,000 ft radius of the LZs. The nearest known population of the Mauna Kea Silversword (*Argyoxiphium sandwicense*) is approximately 8,202 ft (2,500 m) west of Mauna Kea LZ-5. HAMET operations are not expected to impact the Silversword. Overall, vegetation within the vicinity of all LZs is extremely sparse to absent, and consists of common natives and introduced species.

Due to the geography, elevation, and the lack of resources within the vicinity of the LZs, and based on biological surveys, encounters with wildlife are expected to be rare. The flight route to access the Mauna Kea LZs does cross occupied palila critical habitat, but the minimum 2,000 ft to 3,000 ft AGL path is a sufficient mitigation to minimize the impact of noise on that species. In accordance with Federal Aviation Administration Advisory Circular 91-36C *Visual Flight Rules (VFR) Near Noise Sensitive Areas*, there are no Federal Aviation Administration airspace restrictions over this area; therefore other aircraft may fly well below the HAMET self-imposed AGL altitude over flight mitigation over palila habitat. Additionally, the Army changed its flight route to access the LZ's away from the Mauna Kea State Recreation Area and the Mauna Kea Ice Age Natural Area Reserve. Airstrikes of palila is not considered likely because birds are expected to remain within close proximity of the forest canopy the majority of the time. Overall, airstrike of forest birds, sea birds, or bats is not considered likely because the density of these species is expected to be extremely low along flight paths and in the vicinity of the LZs, as indicated from a review of the scientific literature and the biological surveys.

Additional mitigation efforts include the inspection and washing of aircraft to minimize the spread of non-native ant and plant species. As an added protection, helipads at Bradshaw Army Airfield will have pesticide and herbicide applied in advance of HAMET.

The likelihood of a helicopter crash enroute to any LZ is considered to be extremely remote. This is based on the number of hours flown without a crash resulting in a wildfire and the fire safety technology built into the aircraft, the precedent of hundreds of tourist helicopters flying uncontrolled over palila critical habitat each year without incident, and the overall extreme rarity of aircraft crashes worldwide based on number of flight hours logged.

Existing hazards that could threaten human health and safety within the proposed LZs themselves are related to human factors (operator error) and include hazards associated with being at high elevation with high winds, extreme temperatures, and night/low visibility. HAMET would provide pilots experience in high-altitude night-time operations (i.e., flights); however, it should be noted that the pilots will already be proficient at night-time operations as a result of prior training accomplished apart from HAMET.

Impacts from noise on humans are not anticipated. Noise modeling was performed to determine day-night averages associated with the proposed helicopter training. In addition, noise sampling was conducted for areas of potential concern to recreationists, cultural practitioners, and biological resources. The anticipated noise levels are acceptable for current land uses in these areas. The noise sampling results did not measure maximum decibel level discernable above background levels for areas of concern to cultural practitioners or recreationists. Levels measured within the flight path did not show concerning levels for biological resources.

Particulate matter emissions resulting from helicopter rotor wash on the LZs was evaluated along with pollutants emitted from the aircraft. Based on modeling, the impact of fugitive dust from helicopter activity on either Mauna Loa or Mauna Kea LZ areas would be less than significant. Observation during training flights confirmed this conclusion.

Because there are scientific observatories located on the summits of both mountains, the HAMET flight paths were chosen to reduce the possibility of operating conflicts between aircraft pilots and observatory operations.

LZs have minimal vehicle and pedestrian use. That use is generally limited to intermittent and dispersed recreationists or cultural resource practitioners that happen upon them. The LZs are not destinations for either group. Both groups mostly use areas outside of the area identified for HAMET flights. HAMET flights may be perceived as a noise and visual distraction but will not result in any closures or cessation of activities or in any access restrictions to either group.

Overall, impacts were found to be less than significant or of no impact under all Action Alternatives. Valued environmental components would not be significantly affected by the Action Alternatives.

CONSERVATION MEASURES

The following conservation measures will be implemented:

- Have firefighting resources on standby while training, and have transportation available for firefighting personnel.
- Notify Mauna Loa Observatory air-quality instrumentation personnel prior to conducting HAMET missions (requested by National Oceanic and Atmospheric Administration personnel).
- Notify the public, through press releases, of training schedules.
- Notify the US National Park Service (USNPS)

- Maintain an altitude of 3,000 (915 m) and a minimum altitude of 2,000 ft (610 m) in the flight path (e.g., when flying over palila critical habitat).
- Inspect the exterior of the aircraft pre-flight and if need, clean the aircraft to reduce the potential for spread of invasive species.
- Apply pesticides and herbicides, if applicable, to helicopter landing pads at the Bradshaw Army Airfield.
- Continue to participate in open communication with Native Hawaiians, other land use groups, and other interested parties to identify resources and reduce impacts.
- Conduct cultural awareness training for all HAMET personnel, with particular emphasis on intangible resources and their importance to Native Hawaiians.

PUBLIC INVOLVEMENT

The public's participation is essential to a successful National Environmental Policy Act (NEPA) and HRS Chapter 343 analysis. The Council on Environmental Quality and 32 Code of Federal Regulations 651 and HAR § 11-200 provide for opportunities for the public to participate in the EA process. In accordance with these public notification requirements, the U.S. Army Garrison-Hawai'i provided the opportunity for the public to participate in the NEPA/Chapter 343 process to promote open communication and assist in the decision-making process.

All persons and organizations having an interest in the Proposed Action were encouraged to participate in the EA process. A public notice of availability (NOA) of the draft EA and draft FNSI/ Anticipated Negative Determination was published in the *West Hawaii Today* newspaper. An NOA was also published in the State of Hawai'i Office of Environmental Quality Control "Environmental Notice" on July 23, 2011, which started the 30-day period for formal public review and comment on the draft EA and draft FNSI/Anticipated Negative Determination.

The draft EA and draft FNSI/Anticipated Negative Determination documents were made available for public review at the Hilo Public Library, Kailua-Kona Public Library, and Thelma Parker Memorial Public and School Library. In addition an electronic copy was made available at the Office of Environmental Quality and Control (OEQC) website.

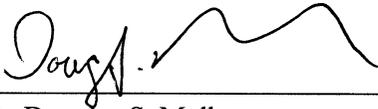
Copies were accepted by the NEPA Program Manager by mail at the Directorate of Public Works, Environmental Division (IMPC-HI-PWE), Attn: Mr. William Rogers, 948 Santos Dumont Avenue, Building 105, Wheeler Army Airfield, Schofield Barracks, 96857-5013.

CONCLUSION AND DECISIONS

The analysis fulfills the requirements of the NEPA and associated Council on Environmental Quality Regulations, as well as requirements of 32 CFR 651, *Environmental Analysis of Army Actions* and HRS Chapter 343. The EA supports the issuance of this FNSI/Negative determination. As such:

1. Based on careful review of the analysis and conservation measures set forth in the EA (USAG-HI 2010, Subsection 6.3), and public comments received as part of this process, implementing the Preferred Alternative would result in no significant direct, indirect, or cumulative impacts on the resources previously discussed. Thus, taking all the information into consideration, I have decided to select the preferred alternative to accomplish the CAB's HAMET requirement.
2. Implementing the Preferred Alternative is not a major federal or state action that would significantly affect the quality of the environment.
3. Accordingly, the preparation of an Environmental Impact Statement for this Proposed Action is not required and will not be undertaken.

Pursuant to 32 CFR 651



COL. Douglas S. Mulbury
U.S. Army Garrison, Hawaii
Commanding

6 SEP 2011

Date