CHAPTER 1 PURPOSE, NEED, AND SCOPE

1.0 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

The purpose for the Proposed Action is to construct and operate a modern Infantry Platoon Battle Course (IPBC) that is compliant with current Army training requirements, to ensure our Soldiers receive training in accordance with existing Army training standards. The proposed IPBC would support the live-fire collective training needs of Army, Army Reserve Component (RC), and Hawai‘i Army National Guard (HIARNG) units, as well as other Service components that are stationed or train in Hawai‘i. As explained below, the scope of the action has changed and the Environmental Impact Statement (EIS) is no longer programmatic.

On October 14, 2011, the Army published a Notice of Availability (NOA) of a Draft *Programmatic Environmental Impact Statement (PEIS) for the Modernization of Training Infrastructure and Construction and Operation of an Infantry Platoon Battle Area at Pōhakuloa Training Area (PTA), Hawai‘i* in the **Federal Register.** The Draft PEIS included a Tier 1 programmatic level analysis of future modernization of ranges, training and support infrastructure, and the Cantonment Area. The Draft PEIS only broadly assessed future modernization projects at PTA. The Draft PEIS also included a Tier 2 project-specific analysis of the construction and operation of an Infantry Platoon Battle Area (IPBA) at PTA, the first modernization project.

A number of factors caused the Army to carefully reconsider the programmatic portion of this analysis: the highly uncertain nature of the future projects in the modernization program, a rapidly changing austere fiscal environment, as well as the many public and agency comments received on the Draft PEIS. After thorough consideration of all of these factors, Army leadership has decided not to proceed with the programmatic portion of the EIS.

The Army’s most pressing need at PTA is an IPBC that meets current Army training standards. Soldiers training at PTA use an antiquated IPBC at Range 10 that does not meet current specifications for a modern IPBC as outlined in Training Circular (TC) 25-8 (HQDA, 2010b). In the Draft PEIS, the IPBC was analyzed as part of a larger IPBA, which included a Military Operations on Urban Terrain (MOUT) Assault Course and a live-fire Shoothouse facility; however, due to funding constraints, the MOUT Assault Course and Shoothouse are no longer part of the present project. Funding for a proposed, new IPBC project is programmed to be available in Fiscal Year (FY) 13, making it a project ready at this time for thorough environmental analysis, and a decision. In addition, funding for future range projects explained in the programmatic part of the Draft PEIS is increasingly speculative in this fiscal environment. Accordingly, the Army made the decision to down-scope this Final EIS to a site-specific analysis of the proposed IPBC only.

This Final EIS is now focused on constructing and operating an IPBC and required infrastructure. The proposed IPBC would improve the quality of training at PTA and reduce a current shortfall in collective (group) live-fire training capabilities for units stationed in Hawai‘i. This Final EIS assesses two alternative locations for building the IPBC. A third alternative in the Draft PEIS, Southwest of Range 20, is no longer considered reasonable. The Western Range Area Alternative and the Charlie Circle Alternative are both located on the western side of PTA within the approved impact area at PTA. The Army’s Proposed Action would not involve the acquisition of additional land, training off the current installation boundary, or live-fire training exercises conducted outside the approved/existing PTA impact area.

On January 18, 2013, the Army published a programmatic environmental assessment (PEA) for Army 2020 Force Structure Realignment (USAEC, 2013). The PEA looks at Army-wide transformation that would reduce Soldier strength from 562,000 to 490,000. Active Component training at PTA primarily includes the units of the 25th ID, composed of the 2/25th Stryker Brigade Combat Team (SBCT), 3/25th Infantry Brigade Combat Team (IBCT), and 25th Combat Aviation Brigade (CAB). The PEA document looks at possible loss of a Brigade Combat Team (BCT) in Hawai‘i other than the 25th CAB, but also looks at possible gains in Soldier strength if both Army brigades are made larger in the proposed transformation. Decisions made following PEA completion are not known at the time this document is being prepared. Under all scenarios, there will be Soldiers stationed in Hawai‘i who will require a modern IPBC range for training to ensure mission readiness. Army 2020 decisions therefore will not affect the IPBC project.

1.1 INTRODUCTION

PTA supports military training and training strategy for combined arms forces in the Pacific Region. PTA ranges and training areas have helped United States (U.S.) Army (Army), U.S. Marine Corps (Marine Corps), U.S. Air Force (Air Force), U.S. Navy (Navy), and Joint and multi-national forces in maintaining their combat readiness with realistic, relevant, and modern training opportunities. The Army is the primary owner, land manager, and user of the PTA.

Working under the auspices of the Joint Force, the Army plans and executes its operational and training missions by implementing complementary key policy documents: National Security Strategy (NSS) (May 2010); the Quadrennial Defense Review (QDR) (February 2009); and National Military Strategy (NMS) (February 2011). In order to execute its missions, the Army developed the Army Training Strategy (ATS) (December 2009 and October 2012) along with other supporting training doctrine and guidance. As the nation’s primary land-based military force, the Army is organized, trained, and equipped to support the nation’s global security and defense interests. The Army does this through prompt intervention and sustained combat, peacekeeping, and support and stability operations in key regions of interest.

1.1.1 National Security Strategy

The 2010 NSS and 2012 defense strategic guidance[3] reaffirmed America's commitment to retaining its global leadership role and defined our enduring national interests:

- The security of the U.S., its citizens, and U.S. allies and partners
- A strong, innovative and growing U.S. economy in an open international economic system that promotes opportunity and prosperity
- Respect for universal values at home and around the world
- An international order advanced by U.S. leadership that promotes peace, security, and opportunity through stronger cooperation to meet global challenges.

In defending and promoting these national interests the Joint Force makes critical contributions to U.S. leadership and national security. In conjunction with U.S. diplomatic efforts, the Joint Force must possess the reach, resolve, and ability to project decisive power.

1.1.2 Quadrennial Defense Review

The QDR took important steps towards institutionalizing reform in the Defense Department and rebalancing urgent needs of today with preparation for future challenges. The QDR also defined the main elements of U.S. force structure and provided guidance on sizing and shaping the Joint Force to accomplish the Nation's defense objectives (DoD, 2010b).

In accordance with the QDR "U.S. ground forces will remain capable of full-spectrum operations, with continued focus on capabilities to conduct effective and sustained counterinsurgency, stability, and counterterrorist operations alone and in concert with partners." In order to maintain that capability, the Army requires a trained and ready force, supported by a modern, realistic, and efficient training infrastructure.

QDR directives and guidance drive the improvement or development of training infrastructure such as enhancing the domestic capabilities to counter improvised explosive devices (IEDs); expanding manned and unmanned aircraft systems (UAS) that are remotely piloted aircraft for intelligence, surveillance, and reconnaissance; strengthening and expanding capabilities for training partner aviation forces; and to increasing the resiliency of U.S. forward posture and base infrastructure.

[3]New strategic guidance for the DoD is provided in *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense*. Department of Defense. January 2012.

1.1.3 National Military Strategy

The NSS and QDR guided the establishment of the National Military Objectives:

- **Counter Violent Extremism**
  The threat of violent extremism is not limited to South Central Asia, and the Joint Force will work with our Allies and partners to disrupt these operations. Through deterrence and direct response across the full spectrum of military capabilities, the Joint Force will protect the Nation's vital interests.
- **Deter and Defeat Aggression**
  In the role as security guarantor, the Joint Force will be prepared to deter and defeat regional aggression that would threaten national interests. This objective includes countering Weapons of Mass Destruction (WMD) proliferation, defeating adversary aggression, and maintaining joint assured access to the global commons, space, and cyberspace.
- **Strengthen International and Regional Security**
  Strengthening international and regional security requires that our military forces be globally available yet regionally focused. Missions can change rapidly and the Joint Force must be shaped to aggregate quickly the right capabilities. With partner nation support, our Joint Force will preserve its forward presence and access to the bases, ports, and airfields required to safeguard the nation's economic, and security interests worldwide.
- **Shape the Future Force**
  The NMS is focused on fielding modular, adaptive general-purpose forces that can be employed in the full range of military operations. Land forces will be capable of Unified Land Operations (ULO)[4] and be organized to provide a versatile mix of tailorable and networked organizations operating on a sustainable rotational cycle.

1.1.3.1 Pacific Command Support to NSS and NMS

The U.S. Pacific Command (USPACOM) is a joint combatant command (containing all military services) reporting directly to the National Command Authority (NCA). With Headquarters (HQ) in Hawai'i, its area of responsibility (AOR) includes over 50% of the earth's surface, stretching across the Pacific and from Antarctica to the Arctic Ocean. This area, known as the Pacific Theater, includes 39 countries. Among these are India, China, Japan, both Koreas, the Philippines, and Australia.

[4] ULO, from Army Doctrine Publication (ADP) 3-0, Unified Land Operations (October 2011), "describes how the Army seizes, retains, and exploits the initiative to gain and maintain a position of relative advantage in sustained land operations through simultaneous offensive, defensive, and stability operations in order to prevent or deter conflict, prevail in war, and create the conditions for favorable conflict resolution."

To support the NSS and National Military Objectives, USPACOM Commanders must be prepared to promote regional security and deter aggression, and to be prepared to respond to the full spectrum of military contingencies using the following methods (USPACOM Strategy from USPACOM Web site, January 2011):

- Synchronize USPACOM actions across the U.S. Government, associated Combatant Commands, regional Allies, and partners
- Continual forward presence enabled by an adaptive regional military posture and enhanced by synergy with capable partners, maintain security of the regional commons
- Provide conventional and strategic military capabilities for extended deterrence of aggression against the U.S., its territories, Allies, and interests
- Maintain ready forces and plan, train, and exercise to accomplish the full range of military contingencies
- Concentrate on five focus areas: Allies and Partners, China, India, North Korea, and Transnational Threats.

U.S. Army Pacific (USARPAC) Mission and Vision

"USARPAC postures and prepares the force for unified land operations, responds to threats, sustains and protects the force, and builds military relationships that develop partner defense capability in order to contribute to a stable and secure USPACOM area of responsibility."

USARPAC Commander's vision of "One Team, America's Theater Army in the Asia-Pacific, assuring security and stability" provides the focus for Army training in the Pacific. To accomplish USARPAC's mission and achieve the Commander's vision, all training efforts must provide the Combatant Commander a force of choice that stands ready to PREVENT conflict, SHAPE the environment and WIN at everything the Command does. As America's forward deployed Theater Army in the Asia-Pacific region directly supporting the attainment of national strategic, theater strategic, and operational objectives, USARPAC is uniquely designed and positioned to conduct a wide range of operations indispensable in enhancing the Joint Force's ability to gain and maintain access to areas throughout the region that would otherwise be denied. Training capacity to provide versatile, combat-ready, modern, expeditionary land forces capable of executing unified land operations is paramount. This capacity is central to USARPAC's core tenet of "Trained and Ready forces." USARPAC Training Strategy therefore centers on programmatic development to achieve an Army in the Pacific that has the facilities and enablers that leverage full capability Live, Virtual, Constructive, and Gaming (LVCG) integration that supports all full-spectrum training requirements, supports interoperability with our partners/allies in the region, and enables expeditionary capabilities.

Combat readiness, the ability to succeed in the execution of ULO, and fighting to win, depends on providing units and Soldiers with realistic training conditions and the full suite of challenging and doctrinally-to-standard live-fire training facilities and ranges.

1.1.4 Army Training Strategy

The ATS provides vision and guidance on ends, ways, and means for training leaders, Soldiers, civilians, and units to support operational adaptability and sustain readiness to conduct unified land operations. Per the current ATS, "the Army is transitioning to regionally aligned forces characterized by operational adaptability, an agile, responsive, tailorable force capable of responding to any mission, anytime, anywhere." (U.S. Army, 2012)

Cyberspace and space are emerging as areas of operations for nation states, and threats are likely to employ cyber operations and information warfare to either degrade mission command capabilities or to conduct global perception management and influence campaigns. The ATS must account for influences including non-combatants, global media, and non-governmental organizations. Therefore, the primary goal of the 2012 ATS is to train for operational adaptability "focusing on two central tenants of unified land operations: train to accomplish specific tasks and the requirements of decisive action and train for effective application of mission command in unified land operations." Decisive action replaces the term "full-spectrum operations." Decisive action operations are comprised of two core competencies as outlined in ADP 3-0, ULO: combined arms maneuver and wide area security (HQDA, 2011c).

The Army Training Vision provides an imperative to balance wartime requirements with building a more adaptive force through home station training, combat center training, and training support system (TSS) capabilities. Home station means where the units are stationed when they are not deployed into a theater of operations, where efficiencies and resources can be maximized. Home station training must reflect the range of prevent-shape-win operational scenarios and provide training for decisive action and unified land operations. Limitations in maneuver space, live-fire ranges, or training facilities must be overcome by effectively employing available virtual, constructive, and gaming capabilities. Home station training will transition to an Integrated Training Environment (ITE) that will improve the commander's ability to integrate LVCG capabilities. The home station must provide the training environment and infrastructure where units can train Mission Essential Task List (METL) tasks (live-fire and maneuver) for up to brigade-level in the Active Component (AC) and up to company level in the RC. CTCs provide realistic, doctrinally based, joint and combined arms training that approximates actual combat. Deploying units will train in an environment that replicates their anticipated deployment operational environment. TSS enables training in the operational, institutional, and self-development domains. The TSS facilities are ranges, training land, other live training capabilities such as urban operations training facilities, mission training complexes, training support centers, and simulations facilities.

Mission Essential Task Lists (METLs), Combined Arms Training Strategy (CATS), Standards in Training Commission (STRAC), and Event Menu Matrices (essential, sequential, and progressive training events) will help units understand and develop training plans required to meet Force Generation-defined proficiency levels.[5] Training on a standard METL matches what tasks a unit is organized and equipped for and provides a balance of offense, defense, and stability training. To enable and support unit METL proficiency, Army installations (to include those in Hawai'i) must provide Soldiers and units with a training infrastructure (training lands, ranges, and support facilities), a training network infrastructure that links to the operational network, and modernized training aids, devices, simulators, and simulations (TADSS). The foundation of METLs' proficiency begins with Soldiers and units training to standard on modern, doctrinally correct, and realistic training ranges and facilities, such as the proposed IPBC in this Final EIS.

Training and qualifying Soldiers and units typically requires three types of training ranges: individual weapons qualification ranges (crawl), live-fire range complexes that allow units to conduct live-fire training simultaneously as one team (walk), and maneuver areas for units to rehearse and train on the full complement of mission-essential tasks required by a unit's training doctrine (run). This crawl-walk-run progression is essential for units to attain unified land operations training proficiency prior to deployment.[6]

1.2 DETERMINING TRAINING AND RESOURCE REQUIREMENTS

There are several important Army publications that provide guidance on identifying live-fire training requirements and the facilities needed to meet these requirements and that explain the range modernization process from concept to completion. Army Regulation (AR) 350-1 *Army Training and Leader Development* provides policy and guidance on training and leader development that supports a full spectrum expeditionary Army to meet requirements of current operations and future missions (HQDA, 2007b). AR 350-19, *The Army Sustainable Range Program*, assigns responsibilities and provides policy and guidance for managing and operating Army ranges (HQDA, 2009b). The 2011 edition of Field Manual (FM) 7-0, *Training Units and Developing Leaders for Full Spectrum Operations* (FSO), reflected the Army's unit training and leader development concepts borne from a decade of persistent combat operations (HQDA, 2011a). Army Doctrine Publication (ADP) 7-0, *Training Units and Developing Leaders*, re-establishes fundamental training and leader development concepts and processes for the Army (HQDA, 2012b). Training doctrine is again based on the Army's operations and planning processes, now defined by ADP-3-0, *Unified Land Operations*, and ADP 5-0, *The Operations Process* (HQDA 2011c and 2012a). Department of the Army (DA) Pamphlet (DA PAM) 350-38 *Standards in Training Commission* (STRAC) contains procedures for planning, resourcing, and executing training to include weapons qualification standards, training programs, and ammunition standards (HQDA, 2009a). TC 25-8 *Training Ranges* provides information (including range capacity and standard range designs) about and guidance for developing and operating Army ranges (HQDA, 2010b).

[5] The force generation model is described in the October 2012 ATS and prescribes the level of proficiency required for post-mobilization training of Army units.

[6] The Chief of Staff of the Army verbal directive now refers to Army training progression as low-mid-high fidelity, versus the previous use of terminology, crawl-walk-run.

1.2.1 Range Planning Process

This process begins with a doctrinal analysis of the installation training load (requirements) driven by all assigned, tenant, and routine users' CATS and METL, the guidance in STRAC (May, 2009), and any school Programs of Instruction (POI). This is the installation's throughput requirement: the number of individuals, teams, crews, or units required to train during a single year on specific ranges and facilities. The next step is identifying the number, size and configuration, condition, and utilization of doctrinally-correct, standard ranges in order to determine throughput capacity - referring to the number of Soldiers, teams, crews, and units that can train on specific ranges in a single year.

The Army-wide standard for range availability is 242 days (the 365 day calendar year minus all weekends (104 days), federal holidays (10 days), and an additional nine days for range maintenance and inclement weather) (Headquarters, Department of the Army (HQDA), 2010b).

When comparing the annual throughput requirement versus throughput capacity, if the throughput capacity exceeds the throughput requirement of a given range, an excess capacity exists. If the throughput requirement exceeds the throughput capacity, a need exists for additional training capability. This additional capability can be achieved by expanding, reconfiguring, or modernizing existing ranges, or constructing new ranges.

If the existing ranges do not meet doctrinal standards in design, targetry, and infrastructure, do not support the Army's weapons systems and their Surface Danger Zones (SDZs), or do not provide realistic training conditions then the range modernization process is used to develop solutions to meet training requirements.

Range Division Hawai‘i, after calculating the operational and doctrinal requirements for units, will work with other installation staff to consider the environmental, safety, munitions, and facility management plans when considering the need for range facility modernization; and implement the range modernization process using the following planning and analytical tools.

1.2.2 Range Complex Master Plan

The Range Complex Master Plan (RCMP) depicts the installation's current range and training land assets, potential sites of future range projects, and the installation's requirements and constraints that may impact range modernization. The RCMP helps to identify and define the specific range modernization and land acquisition projects that will be integrated into the installation's Range Development Plan (RDP).

1.2.3 Range Development Plan

The RDP is the installation's prioritized list of range modernization projects and it is derived from the RCMP. The RDP generally identifies the range modernization projects by year when the range planners wish to implement each project. Range project requests are submitted as a Facilities Engineers Work Request (FEWR) for consideration, planning, and funding (if necessary). The RDP will also identify range costs, standard targetry, SDZs, and other related information. Once validated, the RDP is adjusted as needed, given operational requirements of the installation, training requirements that use the range assets, and funding requirements and funding constraints.

The RDP process has four major steps described below.

- **Doctrinal Analysis**
  This is a review of tenant and non-tenant users training requirements and Service School POI driven by Army standards and policies, training strategies and unit METL. The result is the total doctrinal requirement.
- **Operational Analysis**
  This is a review of the current and temporary range and training land assets, to include their condition and utilization history. The result is the installation's total assets and capabilities. The assets are compared to the requirements, and the shortfalls or excesses are identified. The unconstrained operational requirement, what ranges and other key facilities must be modernized or constructed without regard to available land, cost and other limitations, is then developed and analyzed.
- **Sustainability Analysis**
  Through an integrated planning process, the garrison staff will analyze other elements that affect potential range requirements. These elements are generated from environmental, safety, munitions, and facility management plans and programs such as: Installation Master Plan; Integrated Natural Resources Management Plan (INRMP); Threatened and Endangered Species Management Plan; and the U.S. Army Garrison-Hawai'i (USAG-HI) – Cultural Resources Program. Other considerations can include range security assessments, encroachment, utility and infrastructure, and economic impacts.
- **Analysis of Alternatives Study (AAS)**
  New or modernized range assets are listed in the RCMP. These assets are submitted to the USAG-HI for site approval. The AAS will be incorporated into an analysis of potential environmental and economic impact or feasibility studies for each alternative identified. The Army will then conduct a NEPA analysis, as appropriate.

1.2.4 Determining Training Support Infrastructure Requirements (Roads and Utilities)

The Under Secretary of Defense, in a Memorandum dated 29 May 2002, issued guidance to all Defense agencies requiring the use of Military Standard 3007 (MIL-STD-3007) unified facilities design and construction criteria in the planning, design, construction, sustainment, restoration, and modernization of Department of Defense (DoD) facilities. DoD developed criteria within the Unified Facilities Criteria (UFC) system as required by the Under Secretary of Defense Memorandum. The U.S. Army Corps of Engineers (USACE) is the lead Army agency for developing and updating planning, design, construction, sustainment, restoration, and modernization criteria for Army projects. The UFC program information, including specific codes for Military Construction (MILCON), is found at the Web site for Whole Building Design Guide,[7] online.

[7] http://www.wbdg.org/references/pa_dod.php

The UFC applies to training support infrastructure. The UFC for Aggregate Surfaced Roads and Airfield Areas presents criteria for determining the thickness, material, and compaction requirements, and drainage, maintenance, and dust control requirements for all classes of aggregate surfaced roads, and for the airstrips of airfields at Army installations (UFC 3-250-09FA, 16 January 2004). This UFC also prescribes a design life of 25 years for most roads. New roads are needed when:

- Existing roads are aged or dilapidated, or are beyond reasonable repair because the long-term cost of road maintenance is larger than the cost of road replacement; and when the existing road no longer meets the Army's unified criteria.
- Planned new facilities require new roads to be built to meet them.
- Building new infrastructure (such as ranges or cantonment facilities) and new roads are requirement to access those facilities.

Utilities, such as transformers or overhead power lines, for example, are typically installed by the power supplier that provides power to the Army installation. The design and maintenance of this infrastructure is inherently under the control of the power supplier. The age and operational effectiveness of this infrastructure is continually observed by the power supplier and the installation. As this infrastructure ages it is replaced with newer technology that may also require more space than the existing technology already occupies. Also, installation-planning staff continually monitors utility usage and conditions for a variety of reasons including:

- To conduct life-cycle, system-based economic assessments of existing infrastructure versus newer technology that may have a longer term beneficial impact to cost and to the environment.
- To meet energy goals set by Federal mandates, such as for energy performance (Executive orders (EO) 13514 and 13423).
- To meet the requirements of the installation mission by modernizing existing facilities or constructing new facilities in the General Range Area or the Cantonment Area, and to determine the impact of demand on existing infrastructure.

Installation planners, for these reasons, may request road and utility infrastructure modernization or replacement.

1.3 BACKGROUND FOR THIS FINAL EIS

As the Army Service Component Command to USPACOM, USARPAC provides forces, commands assigned forces, and enables ULO to deter aggression, advance regional security/cooperation, respond to crises, and fight to win. When directed, USARPAC provides mission command capabilities for small-scale contingency operations or serves as Combined or Joint HQ to support Humanitarian Assistance/Disaster Relief and peacekeeping operations. USARPAC units must be trained and prepared to deploy to execute USPACOM-directed missions across the Pacific Theater.

Part of PTA's mission is to provide modernized training facilities for USARPAC and other USPACOM units that train at PTA. USPACOM and USARPAC units require a full suite of live-fire ranges and maneuver training areas that meet doctrinal standards and area capable of supporting sequential/simultaneous training of units in both live and nonlive-fire tasks. Units must be able to conduct their doctrinally-required training and achieve their required readiness levels prior to deployment.

Three types of training areas support progressively higher levels of proficiency training that are required to support unified land operations. These are local training areas (LTAs), major training areas (MTAs), and combat training centers (CTCs). Table 1.3-1 provides an overview of each of these training areas.

Table 1.3-1. Training Areas Defined

Training Area	Overview
LTA	LTAs support individual Soldier and crew weapons proficiency training with the objective of qualifying Soldiers and small units on their weapon systems. Soldiers and units will also train on maneuver tactics, techniques, and procedures (TTP).[8] The training objectives focus on individual through platoon weapon systems proficiency and up to battalion level maneuver operations.
MTA	MTAs support larger unit collective live-fire training (platoon and higher) and maneuver training (battalion or brigade). MTA training builds on the training proficiencies achieved at LTAs and also integrates TTP as necessary.
CTC	The Army's premier training centers provide an enhanced maneuver training experience, a dedicated opposing force (OPFOR), robust instrumentation and formal evaluation and feedback process to brigade-sized combat teams. This is the final training event for large units and prepares them for their operational mission.

There is limited collective training capability and capacity on the island of O'ahu. In Hawai'i only PTA is classified as an MTA. PTA was established as a multi-functional training facility in 1956 and is the largest contiguous live-fire range and maneuver training area in Hawai'i and the primary tactical training area for units conducting military METL training.[9] PTA encompasses approximately 132,000 acres (ac) (53,418 hectares (ha) 5,051 meters squared ($m^{2)}$) to include a 566 ac (229 ha 521 m^2) Cantonment Area, Bradshaw Army Airfield (BAAF), maneuver training areas, live-fire training ranges, artillery firing points, and a centrally located 51,000 ac (20,638 ha 9,679 m^2) impact area (U.S. Army Environmental Command (USAEC), 2009b). Figure 1.3-1 illustrates the location of PTA.

[8] TTP, as discussed in FM 7-0, are also known as new conditions or tasks that may not have established standards, but where Commanders in the field redefine an existing task or may establish a standard to be successful in a new situation. TTP are usually integrated with standards so that Soldiers may both meet and exceed their ULO requirements.

[9] As discussed earlier in this section, PTA is a MTA, and while it does offer crawl and walk training capability, its primary purpose is large unit training. Ranges on O'ahu are all LTAs, and offer some unit training capability, but not large unit maneuver capability.

PTA supports the Army's Active and RC training missions by providing a variety of training and training support resources and facilities. PTA supports live-fire training (to include Joint and multi-national forces training) from Soldier to battalion level. Additionally, PTA supports up to battalion and brigade combat team force-on-force maneuver training under uniquely realistic conditions. Presently, PTA does not have any standard ranges that meet the requirements for conducting company level or above live-fire collective training.[10] Training begins at the individual and crew levels (referred to as crawl and walk), and progresses through collective (run-type) training exercises as the unit achieves METL proficiency and its designed operational/functional capabilities.

The PTA range complex consists of 31 separate direct-fire ranges[11] in the northern, eastern, and southern regions of the installation (Figure 1.3-2); the direct fire ranges are identified in Table 1.3-2. This range complex occupies approximately 30% of the PTA acreage, and supports a variety of training including weapons live-fire exercises, bivouac, and aviation training.[12] PTA also has over 100 artillery and/or mortar firing points and ammunition holding areas (AHA). Of the ranges listed on Table 1.3-2, "collective" (run-type) ranges at PTA include Ranges 1, 8C, 10, 11T, 12, 14, 21 and 22, the Convoy Live-fire (CLF) Range. Of these collective ranges, only Range 8C (Live-fire Shoothouse), Range 22 CLF, and Range 12 Battle Area Complex (BAX) (operational in the spring of 2013) are of standard design.

In addition to the direct-fire ranges, there are 23 training areas at PTA and the Ke'āmuku Maneuver Area (KMA) (Figure 1.3-2). These training areas are considered maneuver/training areas for light forces and allow for sufficient realistic live training conditions. Training Areas 1-4 and 9-16 are made available for recreational (public) hunting as training schedules and weather permit (see Section 3.1). Training Areas 17-23 are available for limited training and are restricted by large-scale fences in compliance with Federal requirements under the 2003 BO (USFWS, 2003). Training Area 23, or the Multi-Purpose Range Complex (MPRC), was constructed in 1988 but never used by the Army.

[10] In accordance with AR 350-19, paragraph 3-20b, standards associated with range designs are published in TC 25-8 *Training Ranges* and TC 25-1 *Training Land*. The definitions are based on concepts and recommendations developed by U.S. Army Training and Doctrine Command (TRADOC) schools, centers and individual Army Commands. TC 25-8 and TC 25-1 serve as the primary reference for generic range layout and targetry equipment. In addition, USACE design manuals provide the specifications and designs for approved Army standards.

11 The number of ranges listed in past EISs at PTA has varied, but frequently identifies only 22 ranges present at PTA. After careful consideration of the range inventory at PTA, it was determined that past EISs did not count all ranges within the specified range areas; for example, Range Area 8 (Table 1.3-2) includes five different ranges.

[12] In addition to aviation training, PTA conducts environmental flight surveys, which are used to monitor or obtain information about PTA, such as aerial surveys for natural resources and cultural resources. Flights for VIP visits are also conducted and may be combined with an environmental flight. Environmental and VIP flights are conducted using military helicopters over two days with a frequency of approximately six times per year. Small aircraft and C-130 aircraft have typically used BAAF and due to runway limitations, the airfield is used mostly by helicopters.

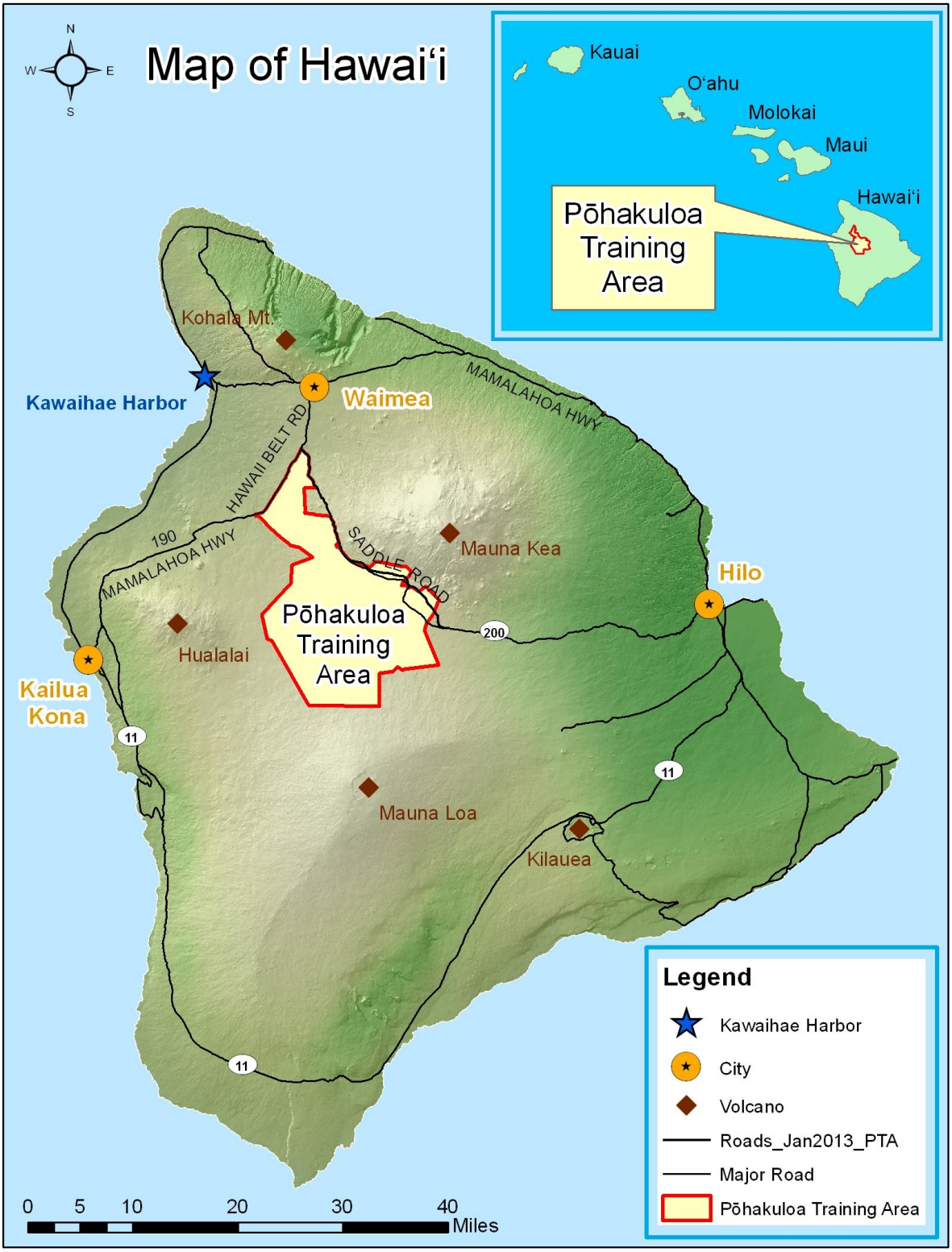

Figure 1.3-1. Map showing PTA on Hawai'i Island

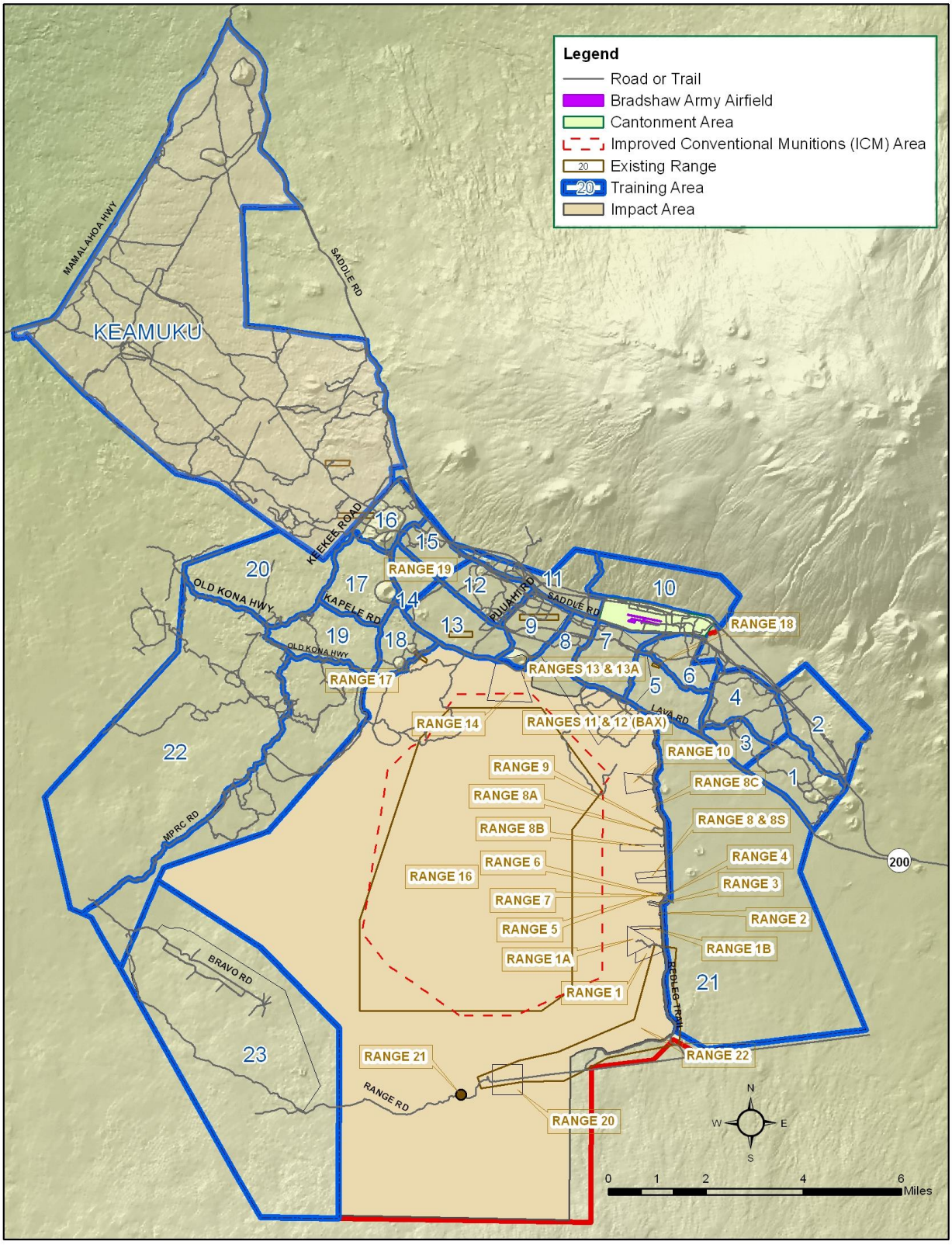

Figure 1.3-2. Existing direct fire ranges and training areas at PTA

Table 1.3-2. Direct Fire Ranges at PTA

Range Number	Type of Range	Purpose (Qualification or Familiarization)	Standard or Non-standard Range (TC 25-8)
1	Infantry Squad Battle Course (ISBC) with 25 meter (m) Zero	Qualification	Non-Standard[13]
1A	Modified Record Fire (MRF)	Qualification	Standard
1B	Known Distance (KD) Range	Familiarization and qualification	Under Construction (Standard)
2	Combat Pistol Course	Qualification	Standard
3	M203 Training Practice Tracer (TPT) Target Practice (TP)	Qualification	Standard
4	Rifle Range	Qualification and familiarization	Deactivated (Non-Standard)
5	Hand Grenade Confidence Course	Live grenade familiarization	Standard
6	Hand Grenade Qualification Course	M69 practice grenade only	Standard
7	Rifle Zero Range	Rifle qualification	Deactivated (Non-Standard)
8	Multipurpose Machine Gun (MPMG) with 10 Zero lane)	M2 Machine Gun Qualification	Non-Standard
8A	Anti-Armor (sub caliber (cal))	Anti-Armor qualification (restricted)	–Inactive (Standard)
8B	MK19 Machine Gun (MG)	MK19 Machine Gun (TP Only) Qualification	Non Standard

[13] Standard versus non-Standard Ranges: Ranges at PTA were built to the then current Army training standard; however, over time and changes in weapons used by Soldiers, these ranges no longer meet the new training doctrine for the new weapon platforms. Range 10, the existing non-standard IPBC, does not provide Soldiers with training up to current Army standards. As the above table illustrates, several other ranges at PTA are non-standard as well, and would benefit from modernization. The Army has determined a modern IPBC is the most immediate and critical need to ensure Soldier readiness.

Range Number	Type of Range	Purpose (Qualification or Familiarization)	Standard or Non-standard Range (TC 25-8)
8C	Live-fire Shoothouse	Urban Live-Fire/Close Quarters Marksmanship (CQM) (one-story) qualification	Standard
8S	Sniper Range	Sniper training familiarization	Non-Standard
9	Demolition Range	General and special demolition Familiarization	Standard
10	IPBC	Infantry platoon Live-Fire Qualification	Non-standard
11L	Anti-Armor	Qualification	Deactivated (Non-Standard)
11T	Gunnery Range (Ground mounted and Aerial Gunnery)	Live-Fire gunnery qualification	Non-Standard
12	BAX	Qualification	Under construction (Standard)
12A	Forward Arming and Refueling Point (FARP)	Hot rearming and refueling	Standard
13	Artillery Direct Fire Range	Artillery direct fire qualification	–Inactive (Non-Standard)
13A	MK19 Machine Gun Multipurpose Range	Qualification	–Inactive (Non-Standard)
14	Multipurpose (live-fire) Range	Familiarization	–Inactive (Non-Standard)
15	Interim Helicopter Gunnery (impact area)	Helicopter gunnery qualification (small cal up to .50 cal)	–Inactive (Non-Standard)
16	Aerial Bombing Range	Fixed-wing bombing and gunnery Familiarization	Non-Standard
17	Forward Area Arming and Refueling Point (FAARP)	Hot rearming and refueling	Non-Standard

Range Number	Type of Range	Purpose (Qualification or Familiarization)	Standard or Non-standard Range (TC 25-8)
18	FARP	Hot refueling only (see earlier designation)	Standard
19	Drop Zones	Container Delivery System (CDS)	Standard
20	Helicopter Door Gunnery	Helicopter gunnery qualification	Non-Standard
21	Multipurpose Range (including Anti-Armor Firing Point (AAFP) and mock runway)	Familiarization and qualification	Non-Standard
22	CLF	Qualification	Standard

Range operation personnel schedule all training events and other activities (e.g., range maintenance) on PTA through an automated system known as Range Facility Management Support System (RFMSS). Range control staff use RFMSS to manage a unit's use of the range complex by scheduling the required available ranges and training areas, verifying specific range SDZs matched with weapons systems planned for use during training, and to resolve scheduling, environmental, or safety conflicts.

Historically, the Army trained three Schofield Barracks-based infantry brigades at PTA, a cavalry squadron, aviation, logistical, and artillery assets. In addition, Army RC, HIARNG, Navy, Air Force, and Marine Corps units stationed in Hawai'i trained regularly at PTA. These units traveled to PTA and used it for live-fire and maneuver training. Equipment and supplies came by boat to Kawaihae and then by convoy to PTA. In particular, the 25th Infantry Division's (ID) (25th ID) brigades performed battalion-level training at PTA. Records are not complete and training varied according to the mission requirements and funding. The historical maximum level of training would generally have included 30-day exercises by nine infantry battalions and the cavalry squadron, accompanied by artillery, aviation, and logistical assets. Training also included Army RC, HIARNG, Navy, Air Force, and Marine Corps units. It is this level of training along with increases resulting from Stryker Brigade transformation (discussed below) occurring prior to the lengthy combat deployments of the last decade, that is referred to (in plural) as "historical levels" in this EIS.

Over the last decade, the 25th Division transformed into its current configuration. Two brigade combat teams (BCTs) formed, combining maneuver units with artillery, transportation, maintenance, and other units previously held at Division level. Aviation assets now are consolidated in a Combat Aviation Brigade (CAB). The 25th Division has one of its BCTs equipped with Stryker wheeled vehicles, a system that did not arrive in Hawai‘i until the second half of the last decade. The 2004 EIS for transformation of the 25th ID's second brigade to a Stryker Brigade Combat Team (U.S. Army and USACE 2004) addressed increases in the use of ordnance (live ammunition) as well as increased off-road vehicle travel at PTA that would result from training by the Stryker BCT.

Beginning in the early 2000s, USARPAC brigades and support units have repeatedly deployed to and returned from Iraq and Afghanistan, and this led to an overall decrease in training activities at PTA. This decrease in activity does not reflect the full anticipated use of PTA. The following section discusses the military use of PTA, and assumes all units are at home station. This provides a snapshot of the optimum training situation and allows the reader to understand the PTA's current training capability.

It should be noted that any resulting decision from this Final EIS will not increase training at PTA. Units would continue to deploy to PTA to conduct training on mission essential and required pre-deployment tasks. No additional units over historical levels would travel to PTA under the actions proposed in this Final EIS. While at PTA, some units may fire more ammunition (this correlates with Army-wide training requirements as defined in STRAC). Furthermore, the Proposed Action would not increase the average number of aircraft operations at BAAF beyond historical levels.

The Proposed Action does not include the stationing of additional Soldiers at PTA, the acquisition of any land, or the expansion of training beyond PTA's existing boundary. Furthermore, the Army does not anticipate a substantial increase in the number of Soldiers on an annual basis that would utilize all of the training ranges at PTA (the overall "throughput" of the training area) as a result of the Proposed IPBC. This Final EIS makes clear that the Army's utilization of PTA under the Proposed Action would continue to be based upon existing training requirements as set forth by the Army's STRAC and CATS strategies for units already utilizing PTA. In other words, the Army does not expect an increase in the number of Soldiers using the new proposed IPBC as compared with current levels on the existing, non-standard, IPBC Range 10. The Army must adapt to changes in future training requirements that result from emerging threats. If these requirements were to exceed the thresholds analyzed within this Final EIS, the Army would conduct additional NEPA analysis as appropriate.

1.3.1 Current Military Use of PTA

1.3.1.1 Current Army Use of PTA

PTA supports full-scale combined arms live-firing and field training military exercises at all levels from squad to brigade for units stationed in Hawai‘i and supports similar training up to company level for the Army RC and HIARNG units stationed in Hawai‘i. AC training at PTA primarily includes the units of the 25th ID, composed of the 2/25th SBCT, 3/25th IBCT, and 25th CAB. Other units that use PTA include the 94th Army Air and Missile Defense Command, 8th Theater Sustainment Command, 45th Sustainment Brigade, 8th Military Police (MP) Brigade, and the 130th Engineer Brigade. PTA is also used by Hawai‘i's Emergency First Responders and the Hawai‘i Police Department.

There are seven maneuver battalions/squadrons in the two BCTs; four in the Stryker and three in the infantry. There are five aviation/aviation support battalions in the CAB that train regularly at PTA. In accordance with their METL, these battalions may train at PTA twice per year for up to 30 consecutive days to meet their doctrinal collective training requirements.

BCT HQ units, and other brigade support elements (Combat Support (CS) and combat service support (CSS) units) deploy to PTA to establish command and control, communications, and logistics operations approximately one week in advance of the maneuver and aviation battalion's arrival at PTA. Some of these units also have a collective training requirement that would be performed at PTA. Brigade support elements remain at PTA a week after the maneuver and aviation battalion leaves to support redeployment and other post-operations activities. In other words, a maneuver and aviation unit deploys to PTA for approximately 30 days to accomplish its METL tasks, while supporting brigade elements deploy for approximately 45 days overlapping that same time period.

The Final EIS for the Permanent Stationing of the 2/25th SBCT discussed use of PTA for meeting SBCT annual training requirements. This is summarized in Table 1.3-3 below.

Table 1.3-3. SBCT Training at PTA

Training	Description
Mobile Gun System (MGS) Gunnery Training	The MGS platform, firing a 105 millimeter (mm) cannon, uses Range 11T to accomplish its annual gunnery training and qualification. Range 11T is partially located within the BAX construction site.
Combined Arms Live-fire Exercises (CALFEX)	Once operational, the BAX at PTA will support company-level CALFEX and reconnaissance and infantry units conducting collective operations and convoy live-fire training. When operational, the BAX will also support MGS gunnery training.
Anti-Armor Tracking	Units of the 2/25th ID use Range 8A to meet training requirements for medium and heavy anti-armor weapons systems. This range is used to train Soldiers in identifying, tracking, targeting, engaging, and defeating moving armor targets (MAT) individually or in tactical array.
Maneuver Training	Maneuver training for battalion and brigade-sized units occur at PTA. It is anticipated that each infantry battalion would train eight times annually at PTA and brigade-level maneuver rotations would occur every 12 to 18 months.

NOTE: No additional SBCT training is proposed to occur at PTA over the 2008 Record of Decision.

UAV/UAS are used by units of the 2/25th and 3/25th ID. Training involving UAS occurs at PTA within restricted airspace (RA). The 25th CAB conducts individual and collective training on the island of O'ahu and at PTA; at the National Training Center, California; and the Joint Readiness Training Center, Louisiana. During these training events, helicopter pilots and crews, train on their basic aviation skills and complete required annual training to maintain flight proficiency and certification. This training includes specific flight maneuvers, operations with night vision equipment, instrument evaluation, and collective flight training tasks. A separate NEPA document was prepared by the Army regarding training by the CAB at PTA, and using designated landing zones (LZ) on Mauna Loa and Mauna Kea. That document may be found on the USAG-HI Web site.[14] The action proposed in that document is considered in the cumulative impacts chapter (Chapter 5).

The 9th Mission Support Command and the 1/196th Infantry Brigade conduct METL training at PTA. Both units provide training support to RC and HIARNG units throughout USARPAC AOR; training assistance to ensure units meet pre/post mobilization readiness standards; and training support and assistance to USARPAC Theater Security Cooperation[15] Program exercises.

The Hawai'i HIARNG, primarily units of the 29th IBCT, conducts METL training at PTA to support its federal and state missions. Its federal mission is to serve as an integral component of the total Army by providing fully manned, operationally ready, and well-equipped units that can respond to any national contingency. Its stated mission is to "provide a highly effective, professional, and organized force capable of supporting and assisting civilian authorities in response to natural disasters, human-caused crises, or the unique needs of the state and its communities."
(http://Hawaii.gov/dod/hiarng)

Although PTA provides a number of ranges in support of unit collective training, the installation also contains several individual and crew served weapon ranges that are used to provide individual Soldiers or units with qualifying training opportunities if those opportunities were missed on O'ahu. When their battalion deploys to PTA the individual platoons, squads, or Soldiers can accomplish these basic qualifying training tasks.

[14] http://www.garrison.hawaii.army.mil/sites/nepa/default.asp

[15] Following the publication of the 1995 National Security Strategy of Engagement and Enlargement, the Office of the Secretary of Defense, regional commanders and the joint staff developed a formal peacetime engagement planning process. Through the process each Geographic Combatant Commander developed a regional strategic plan, now referred to as the Theater Security Cooperation Plan that described the security environment, identified engagement objectives and listed associated activities that supported those objectives.

When units began deploying to Iraq and Afghanistan, the frequency of home station training at PTA decreased. As the Army moves toward a sustainable operational tempo and begins to draw down forces overseas, units will redeploy to Hawai‘i. The “dwell time” (or time spent at home station to reset and retrain) will mean that training at PTA will return to the previous (historic) levels. In accordance with the Army Force Generation (ARFORGEN), AR 525-30 (5 May 2010), reset and retrain is the structured progression of increasing readiness units use after redeployment from an operational environment. It includes the receipt of new personnel, equipment, and other reconstitution tasks. Training begins at the individual and crew levels (crawl and walk), and progresses through collective (run-type) training exercises as the unit achieves its METL and its assigned mission capabilities. Training ranges, training infrastructure and training support facilities must be readily accessible, and up to standard so that units using PTA can meet their doctrinal training requirements.

1.3.1.2 Current Marine Corps Use of PTA

The Marine Corps prepared the Final Environmental Assessment (EA) for Development and Use of Military Training Facilities on Pōhakuloa Training Area, Hawai‘i (October 2008). The following text describes the Marine Corps’ use of PTA, but it does not include joint military exercises conducted there. Joint military exercises involving the Marine Corps are addressed in part in the Hawai‘i Complex EIS prepared by the Navy (2008) and discussed in Section 1.3.1.3.

The Marine Corps is the second largest user of PTA after the 25th ID. Marine Forces Pacific (MARFORPAC) is structured similarly to the Army having Marine Regiments that are similar to an Army brigade and consisting of battalions and smaller units mirroring similarly-sized Army units.

The 3rd Marine Regiment (3rd Marines) is permanently stationed in Hawai‘i and consists of three infantry battalions that operate on rotating deployments where one battalion is always deployed overseas and the other two are on a reset and retrain cycle getting ready for their next deployment. Training requirements and standards are similar between the Marine Corps and the Army. Marine Corps commands at Marine Corps Base (MCB) Hawai‘i (or MCBH) rely upon PTA to fulfill a large portion of their METL training requirements. Primary Marine Corps training exercises are live-fire training on existing PTA ranges, MOUT training, and CLF training.

Battalions of the 3rd Marines train at PTA once per quarter (every three months). Battalion composition varies, but typically consists of artillery batteries, as many as three infantry companies, an HQ company, and possibly one combat service company and a company-sized CSS Group. In addition, battalions deploy to PTA once per year to conduct large scale maneuvers. The entire mobilization and training takes approximately 30 days, with actual on-the-ground exercises occupying approximately 15 to 25 days at PTA (Marine Corps Personal Communication, November 2010).

PTA also supports training for Marine Corps units that are part of the Fleet Marine Forces afloat on transports in the Pacific, and includes transiting Marine Expeditionary Units from the U.S. Pacific coast to participate in training at the installation. These units conduct combined arms live-fire and maneuver (CALFAM) and Close Air Support (CAS) training at PTA.

The Marine Corps Aircraft Group 24, located at MCBH conducts aviation training at PTA that includes assault support training and CAS training. The MCBH 1st Battalion, 12th Marines (artillery battalion) conducts regular firing at PTA. Finally, the Marine Corps conducts UAS training at Cooper Airstrip near Forward Operating Base (FOB) Warrior, which is also located at PTA.

In 2012, the Navy issued a Record of Decision (ROD) for the basing and operation of up to two Marine Medium Tiltrotor (VMM) squadrons (24 MV-22 Tiltrotor Osprey aircraft) and one Marine Light Attack Helicopter (HMLA) squadron (27 H-1 Cobra and Huey attack helicopters) in Hawai‘i; MCBH Kaneohe Bay was selected (U.S. Navy, 2012b). To support the MV-22 and H-1 aircraft, physical improvements at PTA would focus on expanding the existing helipads at BAAF. Proposed aviation training activities at PTA may increase but would not change the installation's overall airspace management. For the planned 2018 aviation operations, there would be over 9,900 more annual operations when compared to present day; current flight operations are lower than normal due to deployments of the Army's and Marine Corps' aviation units (U.S. Navy, 2012b).

1.3.1.3 Current Navy Use of PTA

The Rim of the Pacific (RIMPAC) Programmatic Environmental Assessment (PEA) (June 2002) describes broadly how the Navy uses PTA to accomplish its multinational, sea control/power projection fleet exercises (training) that it performs biennially. The PEA discusses several types of training events, but those that occur at PTA or using PTA assets include Command and Control (C2) activities, Air Support Exercises including Close Air Support Exercises (CASEX) and Strike Warfare Exercises (STWEX), live-fire exercises (LFX), Special Warfare Operations (SPECWAROPS), Aircraft Operations Support (AIROPS), and Air-to-Surface Missile Exercises (ASMEX).

The Navy also prepared a Hawai‘i Range Complex EIS (2008) analyzing the continuation of RIMPAC exercises as its baseline of training and further analyzed training that currently occurs or could occur in the future. Table 1.3-4 summarizes the type of training planned at PTA.

Table 1.3-4. RIMPAC Exercises Planned at PTA

Training	Description
C2 Activities	Performed from both land and sea during the full exercise evaluation. Achieved through a network of communication devices strategically located at DoD installations (including PTA) around the islands to ensure positive communication with exercise participants.
STWEX / Bombing Exercise (BOMBEX) and CASEX / Air-to-Ground Exercise (GUNEX)	Basic training in air-to-surface missile firing; conventional ordnance delivery including bombing (MK80 series bombs, live and inert), gunnery, and rocket and precision guided munitions firing; and close air support techniques. STWEX/GUNEX activities include air-to-surface missile training occurs routinely. Air-to-surface missile training and live-fire exercises would be confined to Special Use Airspace (SUA) and impact area.

Training	Description
SPECWAROPS	Provides covert insertion and reconnaissance training for small Special Warfare units by Navy and Marine Corps. Includes training activities, however, only helicopter inserts (for three to six helicopters) used to transport troop units to take control of an area could occur at BAAF at PTA. Helicopters may land for refueling.
LFX	Provide ground troops with live-fire training and combined arms LFX training, including aerial gunnery and artillery firing. LFX operations would be conducted at PTA.
AIROPS	Provides operational support for maritime, Air Force, and other aircraft, including an airship. AIROPS support may be provided from Joint Base Pearl Harbor Hickam Coast Guard Air Station Barbers Point/Kalaeloa Airport, Marine Corps Base Hawai‘i, Wheeler Army Airfield (WAAF) on O‘ahu, BAAF on Hawai‘i, and Pacific Missile Range Facility (PMRF) on Kauai.

NOTE: Between the two documents, the type of training planned for PTA remained the same, but the terminology used for some training events changed. Both names are included in the table to allow for easier cross reference

1.3.1.4 Current Air Force Use of PTA

The Air Force trains regularly at PTA in conjunction with other military exercises, such as RIMPAC. The Air Force trains at PTA with their B-2 Spirit stealth bomber aircraft for squadrons deployed to theater in order to practice air strikes. For example, in 2007, the Air Force participated in Exercise Koa Lightning at PTA where tactical air control party members, or TAC-Ps, from the 25th Air Support Operations Squadron practiced their skills calling in air strikes for B-2 bombers during a week-long training event. B-2s flew from Andersen Air Force Base, Guam to PTA as part of the continuous bomber presence in the Pacific during the exercise. The TAC-Ps, as battlefield Airmen, were assigned to Army units as joint terminal attack controllers to call in CAS strikes, dropping training ordnance on enemy targets when needed. The TAC-Ps gain experience for close ground combat. For younger TAC-Ps, this training is essential to support ground forces and all elements of maneuvers and critical for the Air Force's ability to rapidly support ground troops in combat.

The Air Force trains its pilots to fly under Instrument Flight Rules (IFR) and Visual Flight Rules (VFR). When flying under IFR, altitude and routes are controlled by Air Traffic Control (ATC) allowing aircraft to operate under limited visibility conditions. When flying under VFR conditions, the pilot is responsible for his own routes and altitudes, but he must remain clear of cloud cover. While operating under VFR, C-17s are currently allowed to proceed into PTA at low altitudes that allow for accurate airdrop operations, but must operate on limitations based on terrain at the installation.

The Air Force is currently refining its air drop corridors to include two drop corridors – a 40 nautical mile (nm) corridor into and out of PTA and one over Kahoʻolawe. The revised corridor altitudes under IFR are also similar, yet slightly higher than VFR altitudes. The revised drop corridor elevation is between 5,000 to 6,000 feet (ft). The Air Force flies its C-17s across the shoreline (northeast of Kona) at an elevation between 7,000 ft to 9,000 ft. The terrain on Hawaiʻi Island rises to meet the aircraft therefore by the time the aircraft reaches the drop corridor, the aircraft is high above any developed areas making it barely noticeable both visually and audibly (personal communication, Captain Alan Partridge (U.S. Air Force (USAF)), email dated 3 Jan. 2011).

In addition, the Air Force conducted survey efforts prior to RIMPAC for seven new drop zones (one of them being the largest in the Hawaiian Islands) and the plan is to use these drop zones on a regular basis in the future. With the combination of these proposed new drop zones, the IFR drop corridors, and restricted areas, the 15th Wing would be able to establish a world class airdrop venue for joint operations while greatly enhancing 15th Wing training and all weather war-fighting capabilities.

1.4 PURPOSE FOR THE PROPOSED ACTION

The purpose for the Proposed Action is to construct and operate a modern IPBC that is compliant with current Army training requirements, to ensure our Soldiers receive training in accordance with existing Army training standards. The proposed IPBC would support the live-fire collective training needs of Army, Army RC, and HIARNG units, as well as other Service components that are stationed or train in Hawaiʻi.

1.5 NEED FOR THE PROPOSED ACTION

The Army needs an IPBC at PTA. Currently, PTA does not have a range capable of supporting standard collective Infantry Platoon Live-Fire Training that enables the unit to accomplish its METL tasks using one range to train battle tasks tied to its METL and accomplish its requirement of conducting platoon-level live-fire exercises twice per year. The proposed IPBC would improve the live-fire collective training capability for Army, Army RC, and HIARNG units, as well as other Service components that are stationed or train in Hawaiʻi.

The IPBC proposed for PTA could meet some but not all live-fire needs of the military community stationed in Hawaiʻi. It will remain very expensive and time-consuming to send units to PTA. For instance, Soldiers living on O'ahu will have live-fire training requirements that will have to be met on O'ahu, even if the PTA IPBC is built and used. Nevertheless, the IPBC will fulfill some of the live-fire requirements that might otherwise be conducted on ranges at O'ahu. The amount of this training cannot be calculated because so many factors are involved, including funding, future deployments, and availability of O'ahu ranges.

The existing IPBC at PTA located at Range 10 is a non-standard range and does not comply with the current requirements of Army training ranges described in TC 25-8. The range does not have the necessary distance to train fire and maneuver, support employment of all organic weapon systems of an Infantry/Stryker/Engineer platoon and supporting aviation during a platoon live-fire training exercise; and possesses obsolete targetry and instrumentation. The range cannot be expanded at this current location because its extension would fall within the Improved Conventional Munitions (ICM) Munitions and Explosives of Concern/Unexploded Ordnance (MEC/UXO) area of the impact area at PTA. Limited

entry is permitted into that area due to extremely hazardous conditions. The construction of a permanent range is beyond the scope of authorized actions in the ICM area. A standard IPBC has more objectives (e.g., targetry emplacements, bunkers, etc.) than what is found on Range 10. Training objectives would be considered enemy positions that Soldiers using the IPBC need to engage in order to simulate an actual situation in combat. Range 10 cannot accommodate these extra objectives due to its size; therefore, if it cannot be extended, Range 10 cannot meet the Army's current doctrinal range design and training standards.

Infantry platoons must train in a live-fire mode on tasks and in conditions they will execute in combat across the full spectrum of operations. The proposed IPBC is designed to meet the live-fire collective training needs of infantry platoons of the 25th ID through a variety of targets, objectives, and maneuver scenarios. This range would also support training for Marine Corps or other small units training at PTA, but primarily the IPBC is designed as an essential element of infantry platoon live-fire training. As described in more detail in Section 2.2.3, Army leadership in Hawai**ʻ**i received permission from higher Army Headquarters to include two features to enhance the design of the proposed IPBC. The first enhancement feature requested was permission to double the width of the standard range entry point citing a shortfall in standard IPBC ranges in Hawai**ʻ**i. Doubling the width of the range entry point will allow two platoons to advance simultaneously and create the possibility for more varied training scenarios.

The Army Range Requirements Model (ARRM) reflects a shortfall of 1.29 IPBC ranges on hand for Hawai‘i. If a standard IPBC were built, there would still be a shortfall of .29 IPBC ranges on hand in Hawai‘i. It is doubtful that the Army would fund construction of a full IPBC to make up this .29 shortfall. The Army therefore proposed a deviation from the standard IPBC design outlined in TC 25-8 by widening the range dimensions by 820 ft (250 m) on both sides at the entry point and adding three additional objectives. The change from a standard design to the proposed IPBC addresses this .29-IPBC shortfall. The design deviation was approved by the Army Training Support Center, Training and Doctrine Command on December 1, 2010.

The second enhancement feature requested was permission to harden target emplacements on the proposed IPBC for air-ground integration training. Air-ground integration training is the coordination of air-support for the Soldiers maneuvering on the IPBC. By increasing protective berm dimensions on the IPBC, target emplacements would meet aviation berm standards, and, with continuing maintenance, could withstand the firing of 2.75 in. training (inert, non-explosive) rockets from aviation assets. Hardening targetry to protect it from the training munitions used during aircraft live-fire engagements is an exception to the TC 25-8 standard design. The exception to standard was approved on April 1, 2011. These enhancements would provide commanders with maximum training flexibility.

1.6 SCOPE OF THE ANALYSIS

The Army is developing this Final EIS in accordance with the NEPA, Council on Environmental Quality (CEQ) regulations, 40 Code of Federal Regulations (CFR) Parts 1500-1508, and the Army's implementing procedures published in 32 CFR Part 651 Environmental Analysis of Army Actions. The Final EIS will analyze and disclose the human and environmental effects of a project-specific proposal to construct, operate, and maintain an IPBC.

1.6.1 NEPA Process

The purpose of this document is to inform Army decision makers and the public of the likely environmental consequences of the Proposed Action and its alternatives. This document evaluates the Proposed Action to construct and operate an IPBC at one of two alternative locations at PTA. An interdisciplinary team of biologists, hydrogeologists, air quality specialists, environmental scientists, noise experts, planners, engineers, archaeologists, historians, hazardous waste specialists, and military range experts prepared this document. The Army received public input on the issues to be analyzed during the scoping process and the public comment period for the Draft PEIS. Public input is detailed in Section 1.7.

The breadth of subject matter in this NEPA document and the nature of the environmental resources potentially affected require that the Army consider many laws, regulations, and EOs related to environmental protection. These authorities are addressed in various sections of this document where they are relevant to particular environmental resources and conditions as some of the regulations prescribe standards for compliance, whereas others require specified planning and management actions that protect environmental values potentially affected by Army actions.

1.6.2 Decision(s) to be Made

This Final EIS provides the decision maker and the public with the information necessary to evaluate the potential impacts associated with the Proposed Action and those supporting actions that the Army and other military services in Hawai‘i would undertake to fulfill the purpose and need of the Proposed Action at PTA. The Proposed Action consists of construction and operation of an IPBC. Chapter 2 contains detailed description of the proposed IPBC’s design, use, and function; and the IPBC two alternative locations. Alternative locations for the IPBC are presented for the decision maker and the public to consider when siting the range. The No Action Alternative is also presented as required by NEPA.

The decision being made in the ROD is whether to construct and operate an IPBC. The Army decision maker will choose from three alternatives:

- Western Range Area
- Charlie Circle
- No Action.

The Draft PEIS analyzed a third alternative location, Southwest of Range 20. The Army has since determined that this location is not operationally feasible and therefore this alternative has been eliminated from the Final EIS. Section 2.5 provides information alternatives considered but eliminated from analysis, including Southwest of Range 20.

Selection of alternatives by the decision maker will take into account environmental, economic, and social issues, as well as the alternative’s ability to meet the objectives of the military mission. Chapter 4 includes any practical mitigation measures available to avoid, minimize, or mitigate adverse environmental impacts.

1.6.3 Cooperating Agencies

CEQ defines the rights and responsibilities of cooperating agencies in Section 1501.6 of the CEQ regulations (CEQ, 1978) and in Question 14 of "The 40 Most Asked Questions (about NEPA)" (CEQ, 1981). Upon request of the lead agency, any other federal agency that has jurisdiction by law or that has special expertise with respect to any environmental issue, may become a cooperating agency. The Army worked closely with the U.S. Fish and Wildlife Service (USFWS) and Hawai'i State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources (DNLR), and the Advisory Council on Historic Preservation (ACHP), three agencies that have jurisdiction over or special expertise regarding resources at PTA.

1.7 PUBLIC INVOLVEMENT

The Army determined the range of issues and those significant issues to be addressed in the Final EIS by involving the public. Public involvement also allows for full and fair discussion of significant environmental impacts. The purpose of public involvement under NEPA is to provide open communication between the Army and the public, which results in better decision making.

The Army contacted numerous organizations to gather input on the NEPA process during scoping. Civic organizations consulted included Rotary International, chambers of commerce, the Military Affairs Committee, veterans groups, retired military members, state and city government officials, members of Congress, and neighborhood boards. Native Hawaiian and Pacific Islander groups also have been invited to participate in the NEPA process.

Several opportunities have been and are available for public involvement during the preparation of this Final EIS. CEQ regulations and Army's NEPA Implementing Regulations (32 CFR Part 651) provide guidance on public participation opportunities for Army actions. The Army's public participation outreach includes issuing in the **Federal Register** a Notice of Intent (NOI) to prepare an EIS, a public scoping process, a 45-day public review period for the Draft document, and publication of the Final EIS accompanied by a 30-day mandatory waiting period before a ROD is issued. The Notice of Availability (NOA) for the ROD will be published in the **Federal Register** before any Army action is taken. This section provides an overview of the scoping process and public comment period on the Draft PEIS.

The proposed IPBC was included as a site-specific project from the initial public scoping process through the Draft PEIS and public hearings.

1.7.1 Scoping

The NOI to prepare the PEIS was published in the **Federal Register** on December 23, 2010. The notice described that the Army will address the environmental impacts associated with modernization activities at PTA and specifically the proposed IPBC and its alternative locations. Included in the notice was an announcement of public scoping meetings on Hawai'i Island. The Army published notices in local newspapers *West Hawai'i Today* and *Hawai'i Tribune-Herald* on 28 and 29 December 2010.

The Army held public scoping meetings over a two-day period on January 11, 2011, at the Hilo Intermediate School cafeteria and on January 12, 2011, at the Waimea Elementary School cafeteria. Each public scoping meeting was preceded by an open information session that allowed attendees to review posters that described the Proposed Action, the EIS process, alternatives considered and cultural and natural resources concerns. In addition, the public was provided the opportunity to voice their concerns in either written or oral testimony to Army representatives. Approximately 97 people attended the scoping meetings with 46 individuals providing oral comments for the Army's consideration. The Army received written comments from 41 individuals and organizations. Army decision makers will consider these comments before any final decision is made. Major concerns identified in the public scoping comments included:

- Concerns about impacts on wildlife and protected species
- Surveys for caverns in the range area
- Depleted Uranium (DU) concerns related to radiation or dust control
- Noise impacts on wildlife, National Park visitors, and historical landmarks
- High Altitude Mountainous Environment Training (HAMET) helicopter training
- Native Hawaiian sovereignty
- Concerns about cultural and archaeological sites in the area
- Hunting restrictions at PTA
- MEC/UXO cleanup
- Cumulative impacts considering all military activities at PTA.

Appendix A in the Final EIS includes public scoping information such as the **Federal Register** notices, newspaper advertisements, and poster materials. Only a few comments offered specific concerns over topics of modernization presented during scoping. Rather, a majority of the public's concern regarded the impacts of all the Army's recent activities. This information is discussed in the cumulative impacts assessment (Chapter 5), and that analysis includes the recent actions proposed in the HAMET EA. In addition, many attendees raised concerns during scoping opposing the perceived expansion of PTA. This Final EIS does not propose expanding PTA outside its existing boundaries.

1.7.2 Draft PEIS Public Hearings

The NOA for the Draft PEIS was published in the **Federal Register** on October 14, 2011. The NOA described that the Army's Draft document addressed the potential environmental impacts associated with modernization activities at PTA. In addition, the NOA identified the dates and locations for the public hearings on Hawai'i Island and the 45-day comment period timeframe (October 14 – November 30, 2011). The Army published notices announcing the availability of the Draft PEIS for review and public hearing information in local daily newspapers to coincide with the publication of the NOA in the **Federal Register**. The notices were published in the *West Hawai'i Today* and *Hawai'i Tribune-Herald* on October 14-15, 2011.

The Army held public hearings over a two-day period on November 8, 2011, at Aunt Sally's Kaleohano's Luau Hale, and on November 9, 2011, at the Waimea Elementary School cafeteria. Similar to the scoping meetings, each public hearing was preceded by an open information session allowing citizens to review posters related to the project with EIS team members available for one-on-one conversations to discuss their concerns. Public comments were accepted by the Army in either written format or oral testimony. A total of 71 people attended the public hearings with 33 individuals providing oral comments or private testimony. The Army also received over 30 written comments during this public comment period. Appendix B includes the comments received.

The Army reviewed and evaluated all comments received during the Draft PEIS public comment period. Comments were grouped by topic. Table 1.7-1 summarizes the main concerns and identifies where in the final document the Army has addressed the concern. Comment responses from the Government are included in Appendix C.

Table 1.7-1. Topics of Concern Received on the Draft PEIS

Concern	Chapter
Makua and PTA training activities	2.4.1.1 Relationship Between Training at PTA and Makua Military Reservation (MMR)
Impacts on cultural resources at PTA	4.10 Cultural Resources Environmental Consequences and Appendix D Section 106 Consultation Materials (Programmatic Agreement)
Alternatives not fully reviewed or surveyed	2.3 and 3.0 Existing Environment
Protection of threatened and endangered species	4.9 Biological Resources Environmental Consequences and Appendix G USFWS Section 7 Consultation Materials (Biological Opinion (BO))
Noise from military activities	3.1.5 Land Uses Surrounding PTA and 4.5 Noise Environmental Consequences
DU (dust and contamination)	4.12 Depleted Uranium Environmental Consequences
Particulate matter emissions (air quality)	4.4 Air Quality Environmental Consequences
Renewable energy and energy usage at PTA	3.16.3 Baseline Energy Usage at PTA
Lack of supporting consultation documentation	Appendix G USFWS Section 7 Consultation Materials (BO) Appendix D Section 106 Consultation Materials (draft Programmatic Agreement (PA))
Cumulative impacts for all military activities at PTA	5.0 Cumulative Impacts

As explained above in Section 1.0, the Army decided to reduce substantially the scope of the Draft PEIS in part, as a result of all of the public and agency comments received on the Draft PEIS. This Final EIS focuses only on the construction and operation of the proposed IPBC.

1.8 ORGANIZATIONAL STRUCTURE OF THE FINAL EIS

This Final EIS is organized by chapters. Major issues and topics of each chapter are summarized below:

Chapter 2, Description of the Proposed Action and Alternatives, presents alternatives to accomplish the Proposed Action, to construct and operate an IPBC at PTA. Two alternative sites and the No Action Alternative are presented.

Chapter 3, Affected Environment, describes existing resources and environmental conditions at PTA. The conditions presented form the baseline for analyzing the environmental impacts of the alternatives. Resource categories addressed in the Final EIS include land use and recreation, airspace, aesthetic and visual resources, air quality, noise, traffic and transportation, water resources, geology and soils, biological resources, cultural resources, hazards and hazardous materials and wastes, DU, socioeconomics and environmental justice, public services and utilities, and sustainability.

The Army conducted project-specific resource studies to provide existing environment data for the IPBC as well as conducting technical studies. These studies included the following:

- The Army completed aerial surveys (from helicopters) of PTA to identify feasible site locations for the IPBC based upon terrain and maps of areas on PTA where limitations exist (see Section 2.5).
- Air quality estimates (Section 3.4); emissions of criteria pollutants calculated for construction activities, vehicle use, and ordnance use/weapons firing are presented in Section 4.4.
- Noise analysis for both IPBC alternatives was conducted by the Army and is summarized in Section 3.5, Noise.
- Biological resources surveys, including listed species, of both IPBC alternatives have been completed. Available results have been incorporated into the EIS. A detailed overview and results of the field investigations are included in Section 3.9, Biological Resources.
- Cultural resources inventory (Phase I) surveys of both IPBC alternatives have been completed. A detailed overview and results of the field investigations are included in Section 3.10, Cultural Resources.
- MEC/UXO surveys were conducted for both IPBC alternatives. Trained and certified contractors in ordnance identification accompanied surveyors of the cultural and biological field investigations. Discussion of these surveys is offered in Section 3.11, Hazardous Materials.
- The Army has conducted a number of studies for DU at PTA including literature searches, aerial surveys, soil sampling, and air monitoring. These studies are discussed in Section 3.12, Depleted Uranium.
- Economic impact assessment for constructing the IPBC (Section 3.13).

Chapter 4, Environmental Consequences, identifies and describes the adverse and beneficial environmental impacts expected to result from implementing the alternatives. Analyzing potential impacts identifies direct and indirect effects and mitigation measures that could reduce the intensity of adverse effects.

Chapter 5, Cumulative Impacts, presents other past, present, and reasonably foreseeable projects and identifies the cumulative environmental effects that could result from implementing the project along with the alternatives.

Chapter 6, Other Required Analyses, addresses other considerations required by NEPA, such as significant unavoidable adverse effects.

Chapter 7, References, lists the references used during preparation of the Final EIS.

Chapter 8, Consultation and Coordination, lists the agencies and individuals consulted during preparation of the document.

Chapter 9, List of Preparers, presents the preparers and contributors to the document.

Chapter 10, List of Acronyms, Abbreviations, and Measurements, defines acronyms, abbreviations, and measurements used in the document.

Chapter 11, Glossary of Terms, defines terms used in the document.